Segregation at an Early Age

2019 Update

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Report | November 2019

Center for Education and Civil Rights


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About the Center for Education and Civil Rights

The Center for Education and Civil Rights seeks to be a hub for the generation of knowledge and coalition-building among the education and civil rights communities to promote research-based actions that address the complicated nature of racial and ethnic inequality in the 21st century. The Center's collective work is intended to promote equity across the educational pipeline by supporting efforts that facilitate integration through an inter-disciplinary approach. The Center is directed by Erica Frankenberg. For more information, see www.cecr.ed.psu.edu or follow us on Twitter (@psu_civilrights).

Acknowledgments

The authors appreciatively acknowledge feedback from Andrew Grant-Thomas, Karen Babbs Hollett, Audry Thompson, and Alexa Frankenberg. Thanks to Lori Ross for her assistance with layout of report.

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Forward

Andrew Grant-Thomas, co-founder of EmbraceRace

In El Paso, Texas, a gunman opens fire in a Walmart store, killing 22 people and wounding more than two dozen.

ICE raids at seven Mississippi chicken plants lead to the detention of nearly 700 people, all of them Latinx.

On the 5-year anniversary of Michael Brown Jr.'s death in Ferguson, Missouri, Michael Brown Sr. demands a new investigation into the circumstances of his son's passing.

The leading candidate to represent the Democratic Party in the 2020 presidential election is excoriated for saying that "Poor kids are just as bright and just as talented as white kids" (thereby seeming to equate "poor kids" and children of color, on one hand, and "white kids" and affluent children, on the other).

The U.S. Census Bureau reveals plans to remove a question about citizenship from forms that will be used for upcoming census counts in several U.S. territories, signaling compliance with federal court orders blocking the use of the question in the 2020 Census.

These five developments have at least two features in common. Each took place in a one-week period in early August, 2019. And each was one in a seemingly endless series of flashpoints in the politics of race and racial anxiety in the United States.

At a time when six in ten Americans say that race relations are "generally bad,"[1] it's past time that more of us take seriously the challenge of envisioning and working toward a better multiracial future for ourselves and the children we love. A future in which, in your community as in mine, children of all races, ethnicities, and religions learn together in the same excellent schools, play together in the same beautiful parks, and live and grow strong in the same close-knit communities. A not-so-distant time in which the circumstances of one's birth no longer sharply delimit the course of one's life.

Delivering the Mandela Lecture in South Africa in July 2018, former President Barack

1. CBS News. (2019, Janurary 24). Americans optimistic about the economic, but pessimistic about country's direction. Retrieved from https://www.cbsnews.com/news/americans-optimistic-about-economy-cbs-news-poll/

Obama declared that "every generation has the opportunity to remake the world." We can go further: every generation does remake the world. The question is: What sensibilities, insights, and convictions around race and identity will today's children bring to their world-changing work tomorrow? What multiracial future will the rising generation of thinkers and doers make possible?

As parents and guardians, aunties, uncles, and grandparents, educators, administrators, and community members, we have an even more immediate question before us: How do we raise children who will mend our racial divide rather than exacerbate it?

These ruminations have everything to do with segregation and integration in U.S. preschools.

Schools—and public PK–12 schools, in particular—are by far the most promising venues we have in which to create the "integrative conditions that support children to see each other as fully human across lines of race and class" (Foreword to the first report). Preschools arguably are the crucial venue because it's easier to shape racial attitudes as they emerge in early childhood than to try to undo racial biases later in life, when they have greater hold on our hearts and minds.[2]

Moreover, we know something about the work we must do to shape the emergence of healthy racial attitudes in young children.

We must help expand young children's awareness of racial sameness and differences.

We must help them know and love who they are even as they learn about and respect others across lines of race, ethnicity, and other markers of difference.

We must help them see the reality of bigotry and discrimination, in developmentally appropriate ways, while also acknowledging and embracing stories of resistance, resilience, and their own capabilities as changemakers.

We must strengthen children's ability to think critically about and engage respectfully with race.

2. Killen, M., Rutland, A., & Ruck, M. (2010). Promoting equity, tolerance, and justice: Policy implications. Society for Research in Child Development (25), p. 1-33. Retrieved from https://www.researchgate.net/publication/277575306_Promoting_equity_tolerance_and_justice_Policy_implications

All of these challenges can be met more effectively in integrated settings, where, at least in principle, children of different racial and ethnic identities can interact as peers for purposes of learning and discovery under the guidance of informed educators.

Unhappily, the data reported in the 2019 update to *Segregation at an Early Age* make clear that in the United States, preschools fairly well-integrated across lines of race and class are the exception, not the rule. We also learn here that preschool segregation is largely multilateral, that different groups of children of color tend to be segregated from each other as well as from their white peers. Given that the country's future will surely depend as much on the relations among people of color as the relations between white-identified people and people of color, this is a dismaying finding.

The good news is that the policy landscape affords both expertise and opportunity. As Professor Frankenberg and Dr. Piazza note, recent years have seen a growing push toward expanding access to preschool, with municipalities and states from New York to California taking meaningful steps in that direction. The opportunity to create new preschools that depart sharply from existing patterns of segregation is before us!

This update to *Segregation at an Early Age* also builds on decades of thinking about how we can dismantle racial segregation in our public schools (and neighborhoods). The guidance we need to take advantage of the opportunity presented by preschool expansion is literally at our fingertips.

The crucial question, as is so often on issues of racial equity, is whether we have the will to make of our preschools the laboratories of healthy, inclusive multiracial democracy they could be.

It is my fervent hope that the information and arguments presented in this excellent report help propel us all toward a resounding YES.

Andrew Grant-Thomas and his partner, Melissa Giraud, co-founded EmbraceRace, a community of support for raising a generation of children who are thoughtful, informed, and BRAVE about race. Visit EmbraceRace online at www.embracerace.org.

Executive summary

Among sweeping demographic change in the United States, children of color now comprise the majority of the nationwide population under age five. However, the national dialogue regarding race and civil rights is polarized. In a survey of more than 500 high school principals, UCLA's Institute for Democracy, Education, and Access found that "in the age of Trump, America's high schools are greatly impacted by rising political incivility and division," with more than 80% of principals reporting their firsthand observation of student-initiated derogatory statements about others of different racial or ethnic groups.

In the midst of this social and demographic upheaval, Penn State's Center for Education and Civil Rights (CECR) presents data illustrating the current segregation of preschool children. After reviewing updated data on segregation trends, we outline a path toward preschool integration in an effort to tackle racial division at a critical time in the development of young children who, beginning at age two, "use race to interpret observed behavior and choose playmates."[3] Drawing on 2015–16 Civil Rights Data Collection (CRDC), this report analyzes 1.58 million children in 29,186 public educational institutions enrolling at least one preschool student. Comprising nearly 20% of all three- and four-year-olds in the country, CRDC data illustrate the varied racial composition of preschool students between states as a result of demographic differences and state policies supporting public preschool opportunities.

Although the 2015–16 data reflect an overall decrease in U.S. preschoolers who attend highly segregated schools, the aggregate rates of racial isolation remain high. While Asian students are generally the most integrated demographic, white preschool students, on average, attend a school in which the majority of other students are white in almost all 50 states. Additionally, in nearly half of all states, black preschoolers, on average, attend a school in which 25% or less of the students are white. These findings are particularly important in light of research which finds that racial and economic diversity in preschool and K-12 education is connected to positive academic and social outcomes.

3. Katz, P. A., & Kofkin, J. A. (1997). Race, gender, and young children. *Developmental psychopathology: Perspectives on adjustment, risk, and disorder*, *21*, 51–74.

This report also highlights evidence of segregation that goes beyond the usual conversation regarding school re-segregation: limited exposure for black and Hispanic children to both white students and one another. Our report finds no state where the average Hispanic preschool student attends a school in which most of the students are black, and that black preschoolers, on average, attend a school in which a majority of students are Hispanic in only two states: California and New Mexico. Instead, nearly 20% of Hispanic students go to preschools where 90% or more students are of their same race/ethnicity.

Overall, CECR aims to bring racial integration into the center of a nationwide conversation about using public funds to expand access to preschool. As policymakers seek to develop comprehensive early education and as the public becomes more concerned with school segregation, our report seeks to bring these conversations together. We conclude with short- and long-term policy recommendations to prevent expansion efforts from building on an already segregated system. Early childhood education is a critical time for a child's racial awareness, and advancements toward integrated learning communities will help prepare children for healthy participation in our multicultural democracy.

Introduction

The U.S. is currently experiencing tremendous demographic change in the youngest members of its population. Starting in 2011, children of color have annually outnumbered white children among new births each year,[4] and now account for the majority of the nationwide population under age five.[5] In light of these changes, the Center for Education and Civil Rights (CECR) at Penn State has been tracking trends in the segregation among the country's youngest public school students.[6] In October 2016, CECR published an analysis of racial segregation in preschools housed within public schools, based on Civil Rights Data Collection (CRDC) data from the 2013–14 school year.[7] Using data from the 2015–16 school year, CECR's new report provides an update on preschool segregation in public school-based preschools. As policy makers discuss—and, indeed, implement—expanded access to early education, we urge them to consider whether larger trends in racial segregation are evident in their program design. Otherwise, expansion efforts may end up merely adding capacity to a system riddled with segregation and inequity.

In the relatively short time since the publication of our October 2016 report, there have been multiple major changes affecting our national dialogue about race and civil rights. Of course, shortly following the release of our previous report, Donald Trump won election to the presidency of the United States. Both his candidacy and election have raised attention to the extent of our nation's racial division, and its pervasive effect on everything from U.S. politics to everyday conversation. UCLA's Institute for Democracy, Education and Access recently surveyed over 500 high school principals and found that "in the age of Trump, America's high schools are greatly impacted by rising political incivility and division."[8] In particular, more than 80% of surveyed principals reported that they

4. Barnett, W.S., Carolan, M.E., Squires, J.H., Clarke Brown, K., & Horowitz, M. (2015). *The state of preschool 2014: State preschool yearbook*. New Brunswick, NJ: National Institute for Early Education Research.

5. Morello, C., & Mellnik, T. (2012, May 17). Census: Minority babies are now majority in United States. *The Washington Post*. Retrieved from https://www.washingtonpost.com/local/census-minority-babies-are-now-majority-in-united-states/2012/05/16/gIQA1WY8UU_story.html

6. Frankenberg, E. (2016). *Segregation at an early age*. University Park, PA: Center for Education and Civil Rights.

7. The CRDC does not track data on non-public preschools that receive public funds.

8. Rogers, J., Ishimoto, M., Kwako, A., Berryman, A., Diera, C. (2019). School and society in the age of Trump. Los Angeles, CA: UCLA's Institute for Democracy, Education, and Access. Retrieved from https://idea.gseis.ucla.edu/publications/school-and-society-in-age-of-trump/

have heard students make harmful remarks about other racial or ethnic groups.

Given the extent of racial division in our country and the importance of preschool in the development of children's racial awareness, we aim to keep a regular spotlight on segregation in early education. It is important to note, however, that the Trump Administration has proposed changes that would threaten continued accounting of preschool segregation. In rule changes announced in late September 2019, the administration proposed plans to end the disaggregation of public preschool data based on race, as currently reported in the CRDC.[9] If this rule goes into effect, it will be much harder to track any changes—good or bad—in the trends described below.

Despite barriers to understanding and addressing segregation in early education, it is critically important to maintain a focus on racial segregation of very young children. Along these lines, our report builds on recent research on preschool segregation, such as a recent analysis from the Urban Institute which found that "segregation in early childhood programs is even more pronounced than in K–12 classrooms, and that separation can lead to missed opportunities for contact and kinship during a critical point in child development."[10] Specifically, this report—and CECR's work on this topic—is guided by the premise that the most effective response to racial division begins during the critical birth to five year-old period when children are developing the social awareness, interpersonal empathy, and racial understanding that will shape how they see the world as adults.

Why racial integration matters in preschool

Given that segregation is prevalent throughout K–12 education, housing, and much of American society, adults also tend to have largely homogeneous social networks. If young children, then, are not experiencing an integrated environment through the adults

9. Ujifusa, A. (2019, September 20). DeVos seeks more civil rights data on sexual violence, religious harassment. *Ed Week.* Retrieved from http://blogs.edweek.org/edweek/campaign-k-12/2019/09/devos-civil-rights-data-sexual-violence-religious-harassment-schools.html

10. Urban Institute. (2019, October 1). Segregated from the start: Comparing segregation in early childhood and K–12 education. Retrieved from https://www.urban.org/features/segregated-start

in their life, preschool becomes even more important as an opportunity for inter-group contact.

Previous research demonstrates that racial attitudes—whether accepting or otherwise—begin to take shape at the earliest stages of human social and cognitive development. For example, Kelly and colleagues found that babies as young as 3 months old look more at faces that match the race of their caregivers.[11] Meanwhile, other studies have found that children 24–30 months-old use race to interpret observed behavior[12] and choose playmates.[13] Particularly important for this report, research has found that expressions of racial prejudice can peak during the preschool ages.[14] Without opportunities to build relationships with children from different racial backgrounds, Dunham and colleagues found that white children can exhibit a strong bias towards whiteness before they even reach kindergarten.[15] Further, Kinzler argues that, without proactive intervention, kindergarteners may have already assimilated into dominant understandings of race and social status.[16]

In addition, research evidence strongly suggests that exposure to racial difference is instrumental in shaping awareness and inter-group attitudes in a healthy way. In their review of the literature on inter-group contact, Tropp and Saxena write that "providing youth with opportunities to experience meaningful intergroup contact is especially important because children's early life experiences can have long-term consequences for their developing intergroup attitudes."[17] Specifically, their review notes that inter-group

11. Kelly, D. J., Quinn, P. C., Slater, A. M., Lee, K., Gibson, A., Smith, M., & Pascalis, O. (2005). Three-month-olds, but not newborns, prefer own-race faces. *Developmental science*, *8*(6), F31–F36.

12. Hirschfeld, L. (2008). Children's developing conceptions of race. In S. Quintana & C. McKown (Eds.) *Handbook of race, racism, and the developing child* (pp. 37–54). Hoboken, NJ: John Wiley & Sons.

13. Katz, P. A., & Kofkin, J. A. (1997). Race, gender, and young children. *Developmental psychopathology: Perspectives on adjustment, risk, and disorder*, *21*, 51–74.

14. Aboud, F. (2008). A social-cognitive developmental theory of prejudice. In S. Quintana & C. McKown (Eds.) *Handbook of race, racism, and the developing child* (pp. 55–71). Hoboken, NJ: John Wiley & Sons.

15. Dunham, Y., Baron, A. S., & Banaji, M. R. (2008). The development of implicit intergroup cognition. *Trends in cognitive sciences*, *12*(7), 248–253.

16. Kinzler, K. (2016, October 21). How Kids Learn Prejudice, *New York Times*. Retrieved from https://www.nytimes.com/2016/10/23/opinion/sunday/how-kids-learn-prejudice.html

17. Tropp, L. & Saxena, S. (2018, May). Re-weaving the social fabric through integrated schools: How intergroup contact prepares youth to thrive in a multiracial society. NCSD Research Brief. Retrieved from https://school-diversity.org/wp-content/uploads/2018/05/NCSD_Brief13.pdf

contact can help reduce anxiety about difference, build a child's capacity for empathy, develop leadership characteristics, and even motivate students to work for social change. Further, these positive outcomes are strongly associated with learning environments that actively foster cross-racial friendships or promote cooperative learning, strategies well-suited for the preschool context.

Relatedly, research has found that children develop awareness of racial identity and the ability to make social comparisons by kindergarten.[18] In their review of the literature on diversity in early education, Reid and Kagan argue that "exposure to peers from a variety of racial, ethnic, and socioeconomic backgrounds can inform these perceptions."[19] Additionally, Reid explored the relationship between preschool diversity and language acquisition using a multilevel model that accounted for individual child differences and classroom quality. Data from nearly 3,000 preschool children in over 700 classrooms revealed that classroom level racial and socio-economic diversity "represent significant and independent components of preschool quality."[20] Even when accounting for differences in instructional quality, students isolated in highly segregated non-white and low-income programs were found to be at "a significant disadvantage"[21] when compared to counterparts in more integrated settings. Because this study controls for quality, its findings are particularly relevant to policy conversations about preschool expansion. Specifically, it indicates that even if a proposed policy was successful in raising the quality of existing public preschool programs, it may not reach its full potential without also making improvements in racial diversity.

18. Bigler R. S., & Liben, L. S. (2007). Developmental intergroup theory: Explaining and reducing children's social stereotyping and prejudice. *Current Directions in Psychological Science, 16*(3), 162–166; Chafel, J. A., & Neitzel, C. (2005). Young children's ideas about the nature, causes, justification, and alleviation of poverty. *Early Childhood Research Quarterly* 20, 433–450; Nesdale, D., & Flesser, D. (2001). Social identity and the development of children's group attitudes, *Child Development, 72*(2), 506–517.

19. Reid, J. L., Kagan, S. L., Hilton, M., & Potter, H. (2015). A better start: Why classroom diversity matters in early education. Retrieved from http://www.prrac.org/pdf/A_Better_Start.pdf

20. Reid, J. L. (2016). Racial/ethnic diversity and language development in the preschool classroom. In E. Frankenberg, L. M. Garces, & M. Hopkins (Eds.), *School integration matters: Research-based strategies to advance equity* (pp. 39—55). New York: Teachers College Press, p. 50.

21. Ibid.

Policy context: preschool expansion

Importantly, there is a critical disconnect in the conversation about public preschool: many support the expansion of publicly funded early education, though this support rarely mentions the importance of preschool in a child's development of racial awareness. In this report, we aim to bring these two strands of discussion closer into conversation with each other.

In the last decade, policy conversation and policymaking have embraced early childhood education as critical to personal and social development. Between 2011–13, the Obama Administration awarded Early Learning Grants to 20 states in a preschool version of Race to the Top that rewarded states for plans to expand and improve their public early education system. Later, in 2014, the administration awarded Preschool Development grants to 18 states to help fund development or expansion efforts. In addition, public preschool expansion was included in the administration's 2017 "Stronger Together" grant program, which offered $120 million for communities who wanted to pursue voluntary socio-economic school integration efforts.

Notably, state-level funding for early education programs more than tripled from $2.4 billion in 2002 to over $7.6 billion in 2017.[22] During the 2018 election, 18 elected governors promoted early education as part of their campaigns,[23] including, for example, Governor Gavin Newsom's plan to expand full-day preschool to all four-year-old children in California.[24] State and local governments have also recently moved beyond debate to enacting policy change. For example, New York City has recently implemented universal pre-kindergarten for all four-year-olds and announced plans to expand the program to all three-year-olds by 2021.[25] Recent news coverage identified continued challenges

22. National Institute for Early Education Research. (2018). The state of preschool 2017: State preschool yearbook. Retrieved from http://nieer.org/state-preschool-yearbooks/yearbook2017

23. Loewenberg, A. (2018, November 12). Newly elected governors make early education a priority. *New America*. Retrieved from https://www.newamerica.org/education-policy/edcentral/newly-elected-governors-make-early-education-priority/

24. Freedberg, L. (2019, January 7). Newsom wants universal preschool for low-income children in California to be phased in over three years. *EdSource*. Retrieved from https://edsource.org/2019/gov-newsom-wants-universal-preschool-for-low-income-children-in-california-to-be-phased-in-over-three-years/606738

25. Taylor, K. (2017, April 24). New York City will offer free preschool for all 3-year-olds. *New York Times*. Retrieved from https://www.nytimes.com/2017/04/24/nyregion/de-blasio-pre-k-expansion.html

in racially integrating the city's public preschool programs while also noting that these programs "offer the possibility to introduce kids and their parents of all backgrounds to diverse learning environments during their formative first few years together."[26]

Meanwhile, at the federal level, in February 2019 Democrats in the House and Senate announced the Child Care for Working Families Act, under the banner #ChildCare4All.[27] The bill would create cost-sharing arrangements between federal and state governments in an effort to double the number of children eligible for public early education. Upon its announcement, the bill had received co-sponsorship signatures from all six of the Senators seeking the Democratic nomination for President in 2020. In addition, after announcing her presidential campaign, Elizabeth Warren released a proposal to widely expand access to early education.[28] Specifically, Warren's plan includes a federal subsidy that provides free child care to those under 200 percent of the federal poverty line and caps expenditures for those earning more.[29]

However, as early education expands access to learning opportunities, racial segregation and quality education vary considerably across different preschool settings and providers. Public preschool programs in states with higher rates of residential segregation have greater variation in quality, and programs in low-income communities are more likely to operate with fewer resources and, relatedly, to be rated to be low quality.[30] These findings align with earlier research that has linked racial and socio-economic segregation

26. Hurley, K. (2019, September 12). Want diversity? Look at pre-K: If we want to begin mixing kids in classrooms, it should start in the early years. *New York Daily News.* Retrieved from https://www.nydailynews.com/opinion/ny-oped-want-diversity-look-at-prek-20190912-nt55mbfbind6lpx6ys25y6ktbu-story.html

27. Ujifusa, A. (2019, February 26). Child-care, early-learning bill gets backing from democrats seeking white house. *Ed Week.* Retrieved from http://blogs.edweek.org/edweek/campaign-k-12/2019/02/democrats-child-care-early-learning-bill-presidential-race-murray-scott.html

28. Kliff, S. (2019, February 22). Elizabeth Warren's universal child care plan, explained. *Vox*. Retrieved from https://www.vox.com/policy-and-politics/2019/2/22/18234606/warren-child-care-universal-2020

29. For a more detailed overview of Elizabeth Warren's universal child care plan, which also includes increases in salary for early childhood educators see footnote 27 above.

30. Valentino, R. (2018). Will public pre-K really close achievement gaps? Gaps in prekindergarten quality between students and across states. *American Educational Research Journal*, *55*(1), 79–116.

in preschools to lower ratings in instructional quality[31] and more limited resources[32] in programs that predominately serve children of color.

Conversely, research has found that economically integrated preschool programs are more beneficial to children from low-income families when compared to targeted programs aimed specifically at low-income children.[33] An assessment of preschool expansion in New York City found that, when compared to school-based pre-kindergarten programs, under-resourced community-based organizations (CBOs) served a disproportionately higher share of black and Latinx children and a disproportionately lower share of white children.[34] Importantly, community-based organizations often struggled to fully implement all aspects of the preschool expansion plan because "CBOs are being asked, in effect, to do more with less,"[35] when compared to the resources available to school-based pre-school programs.

As demonstrated in the research here, access and integration are both distinct aspects of American public preschool. While access to early education is surely important, we may be missing its full potential if expansion occurs without also providing avenues towards racial integration. Our analysis presented below suggests caution in expanding upon the current system of public early education. When detailing policy recommendations, we offer short-term considerations for policy makers regarding improvements to the learning experiences of students within a highly segregated system. Additionally, we describe how policy can make larger systemic changes that, over time, move the country towards meaningful preschool integration.

31. Reid, J. L. (2016). Racial/ethnic diversity and language development in the preschool classroom. In E. Frankenberg, L. M. Garces, & M. Hopkins (Eds.), *School integration matters: Research-based strategies to advance equity* (pp. 39–55). New York: Teachers College Press.

32. Reid, J. L., Kagan, S. L., Hilton, M., & Potter, H. (2015). A better start: Why classroom diversity matters in early education. Retrieved from http://www.prrac.org/pdf/A_Better_Start.pdf

33. Miller, P., Votruba-Drzal, E., McQuiggan, M., & Shaw, A. (2017). Pre-K classroom-economic composition and children's early academic development. *Journal of Educational Psychology*, *109*(2), 149–165.

34. Reid, J. L., Melvin, S. A., Kagan, S. L., & Brooks-Gunn, J. (2019). Building a unified system for universal Pre-K: The case of New York City. *Children and Youth Services Review*, *100*, 191-205.

35. Ibid, p. 203.

Data and methods

This report draws on the 2015–16 Civil Rights Data Collection (CRDC), a regular survey of schools and districts by the U.S. Department of Education since 1968.[36] Specifically, the CRDC aims to count all children ages three through five in a school that "receives public funds as its primary support," which, in nearly all cases, is limited to pre-kindergarten programs housed in public schools.[37] In 2015–16, the CRDC database included more than 17,300 school districts and more than 96,000 individual schools. Because we used 2013–14 CRDC data in our October 2016 report, we make regular comparisons between 2013–14 and 2015–16 throughout our presentation of findings.

This report analyzes the 29,186 public schools or educational entities that enrolled at least one preschool student between the ages of three and five. The CRDC includes children served by a publicly funded program in a local education agency (LEA, typically a school or district office) as well as "non-LEA facilities," such as a social service center, hospital or residential facility.[38] The CRDC does not include children enrolled in private centers, home-based care, or community-based organizations offering preschool programs. However, it does include students who attended part-day and full-day programs, and provides a snapshot of the range of school environments these young children are experiencing.[39] Altogether, 1.58 million preschool children are enrolled in schools counted by the CRDC.[40]

According to the National Center for Education Statistics (NCES), the total overall population of three and four year-olds in the United States is roughly 8.03 million. Of these children, approximately 3.97 million are enrolled in a preschool program of some

36. For more information, see Public-Use Data File User's Manual for the 2015–16 Civil Rights Data Collection, https://ocrdata.ed.gov/Downloads/2015–16-Public-Use-Data-File-Manual.pdf

37. For more information, see 2015–16 Civil Rights Data Collection LEA Form, https://www2.ed.gov/about/offices/list/ocr/docs/crdc-2015–16-lea-form.pdf

38. Ibid.

39. Ibid.

40. State pre-K programs in 2015 enrolled 1.4 million students, according to the National Institute for Early Education (NIEER)'s annual report, in a mix of schools and CBOs. Head Start also enrolled just under 1 million students, most in CBOs.

kind (i.e., full-day or part-day, public or private).[41] Using these figures, children enrolled in public preschool programs counted by the CRDC compose nearly 40% of the country's total preschool enrollment, and nearly 20% of all three and four year-olds in the country. NCES also reveals the following data on proportion of each racial subgroup enrolled in a preschool program of some kind: 41% white, 43% black, 31% Hispanic, 35% Asian, 34% American Indian/Alaska Native, 41% two or more races.[42] Although it is a lower share of children than are enrolled in the nation's public K–12 schools, this figure represents a substantial portion of children enrolled in public preschools, with relatively equivalent proportions across all racial sub-groups.

As with our October 2016 report, majorities of preschools in this sample were in LEAs that provided either full- or partial-day preschool program at no cost (see Table 1). More than 40% were also in districts that provided programs for children ages two or younger, an increase from roughly one-third in our earlier report. LEAs could operate more than one type of preschool program, e.g., some with eligibility criteria to participate and some without, or different options depending on child's age. Approximately 45% were also in LEAs that charged tuition; of this 45%, roughly half were full-day programs and slightly more than half were partial day programs. Further, over 60% of preschool programs were in LEAs that did not have any eligibility criteria. More than one-third were in districts with programs restricted to students with disabilities and 30% with restrictions for low-income students. These details are likely influential in who enrolls in these programs.

41. For more information, see the National Center for Education Statistics, Enrollment of 3-, 4-, and 5-year-old children in prep-rimary programs, by age of child, level of program, control of program, and attendance status: Selected years 1970–2017, https://nces.ed.gov/programs/digest/d18/tables/dt18_202.10.asp

42. For more information, see the National Center for Education Statistics, Enrollment of 3 to 5-year-old children enrolled in pre-school programs, by race/ethnicity and attendance status: October 2017, https://nces.ed.gov/programs/coe/indicator_cfa.asp#info

Table 1: Types of early childhood programs and student eligibility at district level

	Number of programs in sample	Percentage in sample
Types of early childhood programs provided		
Provides early childhood program (ages birth–2 years)	12,402	42.5%
Provides early childhood program for non-IDEA students	7,497	25.7%
Full-day, free tuition preschool	18,585	64.9%
Full-day, charges tuition preschool	5,987	20.9%
Part-day, free tuition preschool	17,491	61.1%
Part-day, charges tuition preschool	6,619	23.1%
Student eligibility for preschool programs in district		
All students	17,855	61.2%
Children with disabilities (IDEA)	10,446	35.8%
Children in Title I schools	7,325	25.1%
Children in low-income families	9,059	31.0%

Note: LEAs could operate multiple types of programs/student eligibility, thus the percentages sum to more than 100%; Percentage calculated from the entire sample of schools, including those that were "unknown" for a particular indicator.[43]

Consistent with our earlier report, we utilize the racial/ethnic counts of students from seven different groups as listed by the CRDC. We are unable to examine relationship between racial composition and family economic background because the CRDC does not include a measure of family socioeconomic status (SES) at the school level.

To facilitate easy comparisons between the 2013–14 data the 2015–16 data, we rely on the same descriptive and statistical measures of segregation as we did in the earlier report.[44] Specifically, after providing descriptive counts of the racial and linguistic composition of preschool enrollment, we detail preschool segregation according to the exposure index as well as a measure of racial concentration at the school level. The exposure index illustrates the extent to which students of a particular group (such as black students) are exposed to students from different racial backgrounds in their school. If all schools were

43. Ideally, such information would be reported at the school level (not district level) to be able to assess how different types and eligibility for early childhood programs relates to patterns of segregation and integration.

44. As we describe in the October 2016 report: "Because these data are only a subset of preschool children—many others are enrolled in private centers/programs or in home-based care—it did not seem appropriate to use measures like the index of dissimilarity, which looks at sorting of students across units (e.g., schools) to understand whether they are evenly distributed across a given geography (such as metro area or state)" (p. 9).

perfectly integrated, the average black student would be exposed to the same racial composition of students as the average white student. Isolation is the exposure a child has to other children of his/her own race/ethnicity.

Pre-school Diversity Measures

	Description	
Composition	Descriptive counts of total enrollment	
Isolation	The school-level composition of the average student in each racial sub-group.	
Concentration	The percent of students enrolled in highly segregated white schools (90-100% white) or highly segregated non-white schools (90-100% students of color)	 

Meanwhile, concentration measures the extent to which students are enrolled in highly segregated schools. Highly segregated, non-white schools are defined as schools having an enrollment of 90% or more students of color, which is taken from studies of K–12 segregation. Decades earlier, this definition primarily referred to schools that were 90–100% black.[45] As the population has shifted dramatically since the civil rights era, such a school today might actually have a mixture of black, Latinx, or Asian[46] students, and still be classified as a 90–100% non-white school. Our research continues using the "non-white" category both to be consistent with earlier studies, but also because schools that serve white students are more likely to enjoy higher funding and more educational resources.

It is important to note however, that our definition of highly segregated non-white schools includes schools that provide limited inter-group contact among non-white stu-

45. Orfield, G., & Yun, J. T. (1999). Resegregation in American schools. UCLA Civil Rights Project. Retrieved from https://escholarship.org/uc/item/6d01084d

46. Because the CRDC considers "Asian" as a monolithic sub-group, we are unable to report on trends in the many diverse groups that fall under this demographic category.

dents as well as schools that provide students with more opportunities to reap the social benefits of intergroup contact than would a 90% black school—illustrating the variety of schools captured within this measure of segregation. As a standalone statistical measure, concentration cannot tell us much about the opportunities for interaction between the various sub-groups that compose the larger category of non-white students. Of course, a school composed of 90% black students is very different, from the perspective of racial integration, than a school composed of 90% black, Latinx and Asian students. To capture this important distinction, we also estimate the extent to which black, Latinx, and Asian preschool children have opportunities to interact with each other, and our findings reveal troubling trends in their isolation from each other. Meanwhile, highly segregated white schools are schools in which 90% of students are white; these students are attending schools with few students of color, who are now a majority of the public school enrollment at lower grades.

Unlike K–12 education, preschool is not compulsory and enrollment can vary widely from state-to-state and year-to-year. Often, state patterns are the result of overall state demography as well as policy decisions at the state and local levels, among other factors. Although it is outside the scope of this report to identify specific driving factors behind state trends, we report the data here in order to highlight important overall trends for further analysis and to highlight important state-to-state variations that might otherwise lay hidden in a national-level analysis.

As an example, in our data, Alabama's preschool enrollment is nearly double that of its neighbor, Mississippi. In this case, the difference is largely due to Alabama's First Class Pre-K initiative to provide high-quality preschool options through a diverse delivery system. The gap between these two states will only widen as Alabama added 107 preschool classrooms for the 2018–19 school year, expanding preschool access to an additional 18,500 children.[47] Of course, these states resemble each other in the composition of their state legislatures and their funding for public K–12 education, yet differences in preschool access illustrate that this issue is rare in its ability to at least occasionally garner

47. Office of the Governor. (2018, April 30). 107 New first-class pre-K classrooms to be added in the 2018–2019 school year. Retrieved from https://governor.alabama.gov/press-releases/107-new-first-class-pre-k-classrooms-to-be-added-in-2018-2019-school-year/

bi-partisan support.

In each section below, we first describe national trends in our three measures of segregation. We then provide an overview of key state-level trends for each measure, offering additional points of comparison between the current report and the 2013–14 data. Please refer to the appendix for more detail on state-level trends.

Findings

After describing overall changes in enrollment since our previous report, we highlight a positive change: across various sub-groups, the 2015–16 data show an overall decrease in the preschoolers who attend highly segregated schools. Nonetheless, multiple sources of concern remain in the more recent figures. Although rates of isolation have decreased, they remain extraordinarily high. In addition, we found evidence of a form of segregation not often a part of the conversation about school re-segregation: limited exposure for black and Hispanic[48] children to both white students and one another.

Racial composition of preschool enrollment

In 2015–16, public schools enrolled 1.58 million preschool children, an increase of roughly 150,000 children from the 2013–14 school year.[49] The largest racial group of students were white students, who numbered more than 661,000 and accounted for 42% of all students (see Figure 1), which represents a slight increase from the 2013–14 school year when white students numbered roughly 600,000 and comprised 41% of all students.[50]

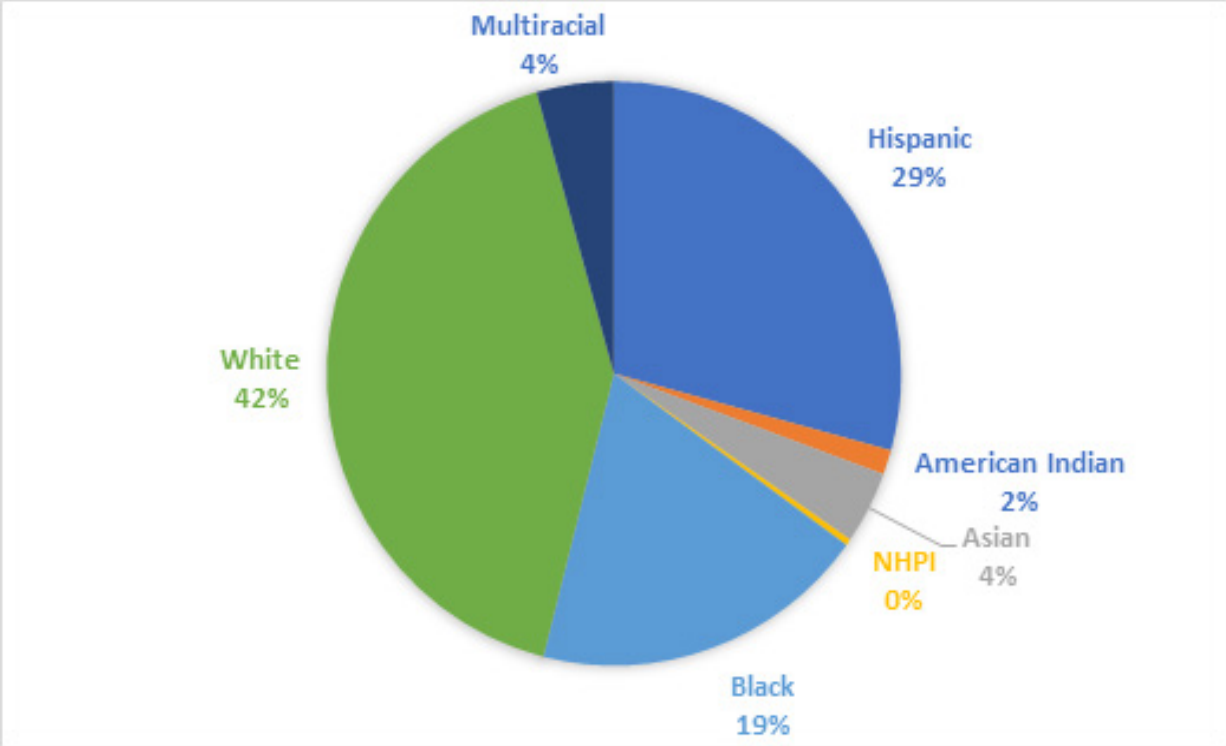
48. In this report, we used the term Hispanic to mirror the terminology used by the CRDC.

49. Much of the increase in the 2015–16 figures is due to a large increase in the number of students in public preschool in Florida. Between the 2013–14 and 2015–16 school years, Florida gained more than 133,000 preschool students. In 2013–14, Florida preschool students accounted for about 4% of all public preschool students in the U.S., but, in 2015–16, Florida's share of the total national preschool enrollment grew to more than 12%. All other states experienced relative minor increases or decreases in their preschool enrollment, overall contributing an additional 17,000 students beyond the increased enrollment in Florida.

50. Orfield, G., Ee, J., Frankenberg, E., & Siegel-Hawley, G. (2016, May 16). *Brown* at 62: School segregation by race, poverty and state. Retrieved October 8, 2016, from Civil Rights Project / Proyecto Derechos Civiles, https://civilrightsproject.ucla.edu/research/k-12-education/integration-and-diversity/brown-at-62-school-segregation-by-race-poverty-and-state/Brown-at-62-final-corrected-2.pdf

Hispanic students were the second largest group approximating 29% of the enrollment, a 1% decline from the 2013–14 school year. Black student enrollment remained constant at 19% of all school-based preschool students. Also unchanged since the 2013–14 school year, Asian and multiracial students each comprise approximately 4% of the public school enrollment. In 2015–16 there were more than 63,000 students in each of the Asian and multiracial subgroups, an increase of roughly 13,000 students for each group. In 2015–16 American Indian students were 1.2% of the school-based preschool population, a decrease of 0.2% from 2013–14. Lastly, Native Hawaiian and Pacific Islander students were 0.4% of the school-based preschool enrollment in 2015–16, an increase of 0.1%.

Figure 1: Racial composition of students enrolled in school-based preschools, 2015–16



Source: CRDC, 2015–16; Note: NHPI stands for Native Hawaiian or Pacific Islander

Additionally, one-eighth of students were classified as Limited English Proficient (LEP); this percentage is consistent with the 2013–14 school year and represents an increase of more than 12,000 total LEP students.

The racial composition of students in preschools varies considerably across states due to the demographic differences of the population as well as the state provisions for offering school-based preschools.[51] States in northern New England had high shares of white preschool students. In Vermont, Maine and New Hampshire, the percentage of white preschool students reached between 80–90% (see Table A-1 in Appendix). In addition, West Virginia had the second-highest share of white preschool students at roughly 89%. Of course, these states are home to a high share of white preschool enrollment because their statewide demography is overwhelmingly white. These states typically have high percentages of white students among the K–12 enrollment as well. Consistent with the 2013–14 enrollment numbers, California, Hawaii, Texas and D.C. had the lowest percentages, as these states were the only in the country with less than 20% white preschool enrollment.

Meanwhile, D.C. and Mississippi were the only places that serve a majority of black students in their preschool enrollments, at 68% and 62% respectively. In particular, Mississippi had the largest share of black students of any state in 2013–14 at 59.6%, and that percentage increased further in the 2015–16 data to 61.6%. Also consistent with the 2013–14 enrollment data, California (62%), Texas (62%) and New Mexico (60%) had a majority of Hispanic students among all preschool children in each state. These are all states where the Hispanic preschool population is much higher than the nationwide average of 29%. As one might expect, then, it appears that a state's overall racial composition is related to the diversity of its public preschool enrollment. Please see Appendix A-1 for a detailed breakdown of preschool racial composition at the state level.

Exposure to students by race/ethnicity

A common measure of school segregation is examining the experience of a group of students—on average—both in terms of interaction with students of other races and isolation with one's own race. Exposure measures the average experiences of a group which

51. See Table 3 in Frankenberg, E., Ee, J., Ayscue, J., & Orfield, G. (2019, May 10). Harming Our Common Future: America's Segregated Schools 65 Years After *Brown*. *UCLA Civil Rights Project-Proyecto Derechos Civiles*. Retrieved from https://escholarship.org/uc/item/23j1b9nv

obscures considerable variation within each group. Nevertheless, it has been used widely as an indication of the opportunities for interaction with children from different racial backgrounds, and has been associated with a range of important educational outcomes in the K–12 context.[52] Importantly, it pushes scholarship and political discourse beyond a racial binary to examine interracial exposure. For example, if black students who have low exposure to white students are in schools that, on average, have high percentages of Asian and Hispanic children, their inter-group contact would be quite different than schools in which black students are in preschools largely with other black children.

If all schools were perfectly integrated, student exposure to students of other races would be equivalent to the overall racial composition. For example, black students, on average, would be in a classroom that is 42% white, 29% Hispanic, 19% black, 4% Asian, 4% multi-racial, 2% American Indian, and less than 1% Native Hawaiian and Pacific Islander (as drawn from Figure 1). In addition, white, Hispanic and Asian students, on average, would likewise attend a classroom whose demographic breakdown matches the overall racial composition of the preschool universe covered in this report.

Historically, interaction or exposure to white students was a means of assessing progress towards desegregation, particularly for black students in the South. However, in today's multiracial context, it is useful to understand the extent to which students are exposed to those from different racial/ethnic backgrounds.[53] As seen below, analysis of exposure indicates that in addition to being separated from white students, black and Hispanic students are also largely segregated from each other.

White preschool students have the highest racial isolation of any group. Specifically, in 2015–16, white preschool students, on average, attended a school that has roughly 67% students of the same racial background and only about one-third students of color (Figure 2). That number represents only a slight improvement from 2013–14 when white

52. Gándara, P. C. (2011). Latinos, language, and segregation. In E. Frankenberg & E. DeBray (Eds.), *Integrating schools in a changing society: New policies and legal options for a multicultural generation* (pp. 265–277). Chapel Hill, NC: University of North Carolina Press

53. E.g., authors found using the CRDC data used in this report along with other data sources that segregation measured by the exposure index explained nearly 30% of variation in school-level discipline rates. See Freeman, K. J., & Steidlt, C. R. (2016). Distribution, composition and exclusion: How school segregation impacts racist disciplinary patterns. *Race & Social Problems 8*:171–185.

students, on average, attended a preschool that had just less than one-third students of color. The isolation of white students is much higher than their overall share of the preschool enrollment (42%), and white preschool students, on average, have considerably fewer black and Hispanic students in their school than is their prevalence among the entire enrollment; these findings remain consistent from 2013–14 to the 2015–16 school year.[54]

Similar to white students, black and Hispanic students, on average, have experienced a slight decline in racial isolation from 2013–14 to 2015–16, but levels of segregation for students of color remain quite high. Specifically, the racial isolation of black students declined to 52.6% in 2015–16 from 55% in 2013–14, and the racial isolation of Hispanic students declined to 59.3% from 62%. Since our previous report, the overall share of Hispanic and black children remained roughly the same, respectively at 30% and 19% of the total public preschool enrollment.

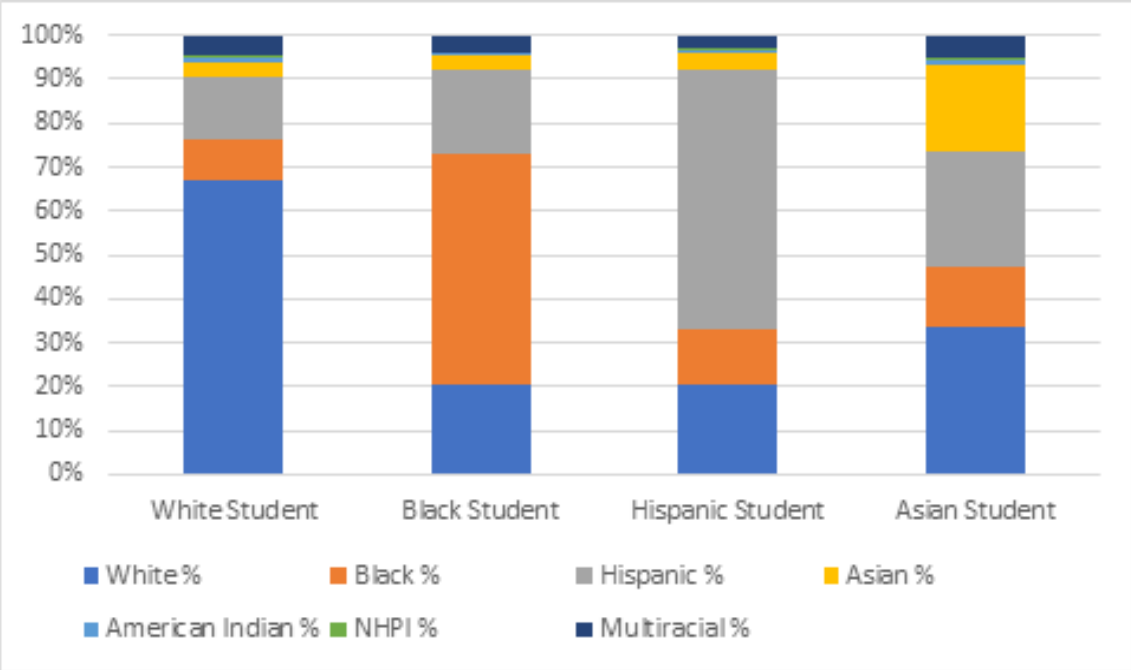
Because the total number of children in each racial sub-group increased, the total number of students in segregated schools increased, despite the percentages remaining roughly the same. Approximately 280,000 black students were enrolled in public preschool in the 2013–14 school year, and that number increased to nearly 299,000 in the 2015–16 school year. Similarly, approximately 428,000 Hispanic students were enrolled in public preschool in the 2013–14 school year, and that number increased to more than 460,000 in the 2015–16 school year. In the 2015–16 data, isolation figures for black and Hispanic students reflect considerably higher shares of same-race students than their overall percentage among school-based preschool students (19% black students, 29% Latino students).

Also consistent with the earlier report, black and Hispanic students, on average, have low percentages of white students in their schools: 20.4% for each racial sub-group. Taken together, patterns over time indicate the persistence of fairly stark segregation for the largest three racial/ethnic groups among our nation's youngest public school students at a critical period in their social and emotional development.

54. Please see Appendix A-2 for a full breakdown of white student exposure by state.

Asian students, whose total enrollment is considerably smaller than the other groups discussed here, remain less isolated (19.7% in racially isolated schools) and have higher exposure to white students on average (33.8%, compared to 20.4% for black students and for Hispanic students). In the aggregate, Asian preschool students appear less segregated than white, black, or Hispanic preschool students.

Figure 2: Racial Composition of Schools Attended by the Average Student of Each Race, 2015–16



Source: CRDC, 2015–16; Note: NHPI stands for Native Hawaiian or Pacific Islander ; figures for students of other races available from authors.

In 2015–16, white preschool students, on average, attended a school that had a majority of white students (see Appendix A-2) in all but just four states: California, Hawaii, New Mexico, and Texas, as well as D.C. Relatedly, those five places had relatively small overall percentages of white students enrolled in preschool programs: California (16% white), Hawaii (16%), New Mexico (22%) Texas (17%) and D.C. (14%). In eleven states with high overall white populations, mainly in New England and the upper Midwest, white students, on average, attended a preschool with 80% or more other white students, or nearly twice the percentage of white students among the overall preschool enrollment. Again,

as outlined in Appendix A-1, these are all places with high overall enrollment shares of white students. For example, white students make up more than 80% of the preschool enrollment in New Hampshire and account for nearly 90% of preschool students in Vermont. Further west, white students account for 89% of preschool students in West Virginia, 70% of preschool students in Ohio, and roughly 71% in Kentucky.

Consistent with the 2013–14 data, in many states, white preschool students have low exposure to students of color. On average, during 2015–16, white students attended preschools with less than 10% black students in 37 states, representing just a small increase from 35 in the 2013–14 data. Meanwhile, by the same measure, there was marginal improvement in white student exposure to Hispanic students. In 2015–16, white students attended preschools with less than 10% Hispanic students, on average, in 22 states; that number improved from 26 states in the 2013–14 data. As above, these trends are due both to a combination of overall state demographics as well as state level policy decisions. Although it is outside the scope of this report to untangle these factors, the state-level data in the appendix provides further information for those who would like to conduct further analysis on a state or region of particular interest.

In contrast to white students, black preschool students, on average, are enrolled in a school with a majority of white students in only ten states (see Appendix A-3), which is an increase from nine states in 2013–14. In eighteen states, black students, on average, attended a school where at least 50% of the enrollment is composed of other black students, which remains unchanged from 2013–14. During 2015–16, black students, on average, attended a school where their exposure to white students was limited to 20% of the population in nine states. Although that number has improved from 12 states in 2013–14, the more recent figures do not indicate large scale integration. For example, black students, on average, attended a school with an average of 25% white students or less in 22 states.

Individual states can exhibit sharp differences in black-white student exposure compared to that of white student exposure to other white peers. For example, in Pennsylvania, white preschool students, on average, attended a school with more than 77% white

students but just 8% black students. By comparison, the overall preschool enrollment in Pennsylvania is 45% white students and 27% black students. Exposure levels, then, illustrate stark segregation over and above state-level demography. In many states, stark differences arise (albeit, in reverse) in preschoolers' exposure to black students. In Mississippi, for example, black preschool students, on average, attended a school with about 17% white students but nearly 80% black students. Again, these numbers deviate from overall state demography in Mississippi, where white students compose 31% of the preschool population and black students compose 62% of the preschool population. Taken together, these discrepancies illustrate how black and white students who, from very early ages, are just beginning to form relationships with others, attend public preschools with remarkably different compositions.

At the state level, Hispanic preschool students appear slightly less segregated than black preschool students. In the 2015–16 data, there were fourteen states where Hispanic preschool students, on average, attended a school in which a majority of students were white, a figure roughly consistent with the 2013–14 data. Hispanic students in ten states attended preschools with a majority population composed of other Hispanic students, and in one state, Texas, Hispanic preschool students, on average, attended a school with up to three-quarters of the student population comprised of same-race peers (see Appendix A-4). As noted above, differences in exposure are due to both the overall racial composition of the state as well as the particular policy decisions of state and local law makers. In states with high Hispanic student populations, patterns of segregation suggest that not only are Hispanic students likely to attend racially isolated non-white schools, but such schools also offer little exposure to other students of color.

Across the country, Asian students have generally been the most integrated group of students.[55] In 2015–16, no Asian preschool students in any state attended a school with a majority of same-race peers; the highest share was New York at 34.8% (see Appendix A-5). In eighteen states, Asian students, on average, attended a school with approximately half or more students who were white; these figures are consistent with the earlier data.

55. See Orfield, G. & Frankenberg, E. (2014). *Brown* at 60: Great progress, a long retreat and an uncertain future. Retrieved October 7, 2016, from The Civil Rights Project / Proyecto Derechos Civiles, https://civilrightsproject.ucla.edu/research/k-12-education/integration-and-diversity/brown-at-60-great-progress-a-long-retreat-and-an-uncertain-future/Brown-at-60-051814.pdf

Also unchanged from the 2013–14 report, no Asian preschool students in any state were exposed to a school population with more than 50% black or Hispanic students.

Data on black and Hispanic student isolation highlight an important, yet perhaps overlooked, issue in contemporary school segregation. The discussion about segregation commonly focuses on separation between white students, on one hand, and black and Hispanic students, on the other. The data here, however, illustrate that black and Hispanic students are also often separated from each other. Consistent with the 2013–14 report, there were no states in which the average Hispanic student attended a school where most of the students were black students. Similarly, black preschoolers, on average, attended a school with a majority of Hispanic students in only two states (California and New Mexico) whose preschool enrollment was majority Hispanic. Meanwhile, there are several states where black students are unlikely to attend school with many Hispanic students, and vice versa. Specifically, in 37 states, black students, on average, attended a school with less than 25% Hispanic students. Further, in 43 states, Hispanic students, on average, attended a school with less than 25% black students. In 23 states, Hispanic students, on average, attended a school with less than 10% black students.

Racial concentration

While the exposure index measures the experience of an average student from each demographic category, the concentration index measures the percentage of students who are concentrated either in highly segregated white schools (90–100% white students) or highly segregated non-white schools (0–10% white students). Although it is possible for students in highly segregated non-white schools to have opportunities for intra-group exposure (e.g., black student exposure to Hispanic students), our data again reveal that even non-white sub-groups are generally segregated from each other. In the 2015–16 school year, nearly 35% of preschoolers enrolled in public schools attended highly segregated schools of either variety. That number represents an improvement from approximately 40% of preschoolers who attended highly segregated schools in the 2013–14 school year. As expected, then, the total number of preschool students in highly

segregated schools decreased to 548,000 students in the 2015–16 school year from approximately 572,000 in 2013–14. Although decreasing concentration is surely a positive development, overall numbers remain high.

In addition, underlying percentages decreased for each type of highly segregated school. Specifically, in 2015–16, 26.2% of students attended highly segregated non-white schools, defined as schools with more than 90% non-white students (Table 2), representing an improvement from 28.2% in 2013–14. Likewise, in 2015–16, less than one-tenth of students (8.6%, or 135,500 total) were enrolled in schools on the opposite end of the spectrum: highly segregated white schools, which have fewer than 10% students of color. In the 2013–14 school year, that percentage was higher, at 9.7%. However, in 2015–16, such schools represented 14% of all public schools enrolling preschool students, and were located in every state except D.C.

The share of students in each type of highly segregated school varies by race. In the 2015–16 school year, just under half of all black (47.7%) and Hispanic (49.1%) preschool students were enrolled in schools with 90% or more students of color. Although each percentage is a decrease from 2013–14, the overall numbers, totaling more than 142,800 black students and 224,300 Hispanic students, represent extremely high racial segregation. Of all groups, Hispanic students continue to represent the highest percentages of enrollment in public preschool programs (49.1%). Also, in 2015–16, of all groups of non-white students, multiracial students have, by far, the lowest enrollment in highly segregated non-white schools (12.7, compared to 11.7 in 2013–14). By contrast, slightly fewer than one in five white preschool students is enrolled in a highly segregated white school, which decreased to 19.8% (roughly 131,000 total) from 22.5% of white students in 2013–14. In addition, of all other groups, multiracial students have higher shares of enrollment in schools comprised largely of white students (2.9%, compared to 3.3% in 2013–14). All of these figures are roughly consistent with the 2013–14 report.

Despite an overall decrease in preschool segregation, we found that the number of children in highly segregated preschools remains troublingly high. Our analysis of racial isolation demonstrates that white preschool students experience high levels of isolation

with other white students, but are largely segregated from students of color. In both 2013–14 and 2015–16 data, white students were more racially isolated than any other group (see Figure 2). These data are supported likewise by our analysis of racial concentration, which found that white students are concentrated in highly segregated white schools at a higher rate than black students are concentrated in highly segregated same-race schools (e.g., students where at least 90% of students are of the same race; Table 3). Hispanic preschool students also attended schools with very high concentrations of same-race students.

Black and Hispanic students also frequently attend highly segregated non-white schools where less than 10% of students are white, which may limit their educational opportunities. Further, in addition to being segregated from white students, black and Hispanic students experience high levels of segregation from students of other racial backgrounds as well. Our analysis of 2015–16 CRDC data indicates that on average, black preschool students attended programs largely populated by other black preschool students and Hispanic children attended programs with a majority of other Hispanic preschool students. Each group of students experiences relatively lower exposure to white students as well as other-race students of color (e.g., lower black exposure to Hispanic children). Such isolated environments inhibit the development of racial awareness at a time when young children are becoming more aware of social messages about race.

Table 2: Percentage of preschool students in highly segregated schools, by race/ethnicity, 2015–16

School Racial Composition	Hispanic	American Indian	Asian	NHPI	Black	White	Multi-racial	Total
0–10% white	49.1%	25.5%	22.9%	26.3%	47.7%	2.1%	12.7%	26.2%
90–100% white	0.5%	1.2%	0.9%	1.4%	0.4%	19.8%	2.9%	8.6%

Source: CRDC, 2015–16; Note: NHPI stands for Native Hawaiian or Pacific Islander

While schools with low percentages of white students (0–10% white), may not offer students exposure to white students—and have historically had fewer educational resources and opportunities— they might provide cross-racial experiences among different groups of students of color. Thus, to explore racial concentration in more depth, we also

looked at the number and percentage of students in schools in which students of their same race comprised at least 90% of the enrollment. White students are the most likely students of any race/ethnicity to attend schools with very few other-race students (in more than 4,000 schools nationally), while Hispanic students are the most highly concentrated group among students of color by this measure as well. Nearly 20% of Hispanic preschool students, representing over 90,000 children, attend schools with 90–100% Hispanic enrollment (Table 3). Likewise, one-sixth of black preschool students, or approximately 50,000 children, attend 90–100% black schools. These figures represent more than 1,000 schools in 28 states for black students and more than 1,400 schools in 31 states for Hispanic students. These findings illustrate substantial racial concentration for preschool children from the largest three racial/ethnic groups in terms of minimal numbers of other-race children in their schools. Consistent with data presented throughout this report, these results are further evidence that, not only are many white students taught separately from students of color, but also, Hispanic and black students are likewise segregated from each other. Taken together, this data represents over one-quarter of a million children out of the 1.58 million who attend preschool in public schools.

Table 3: Number and percentage of preschool students attending schools with 90–100% of same-race students, 2015–16

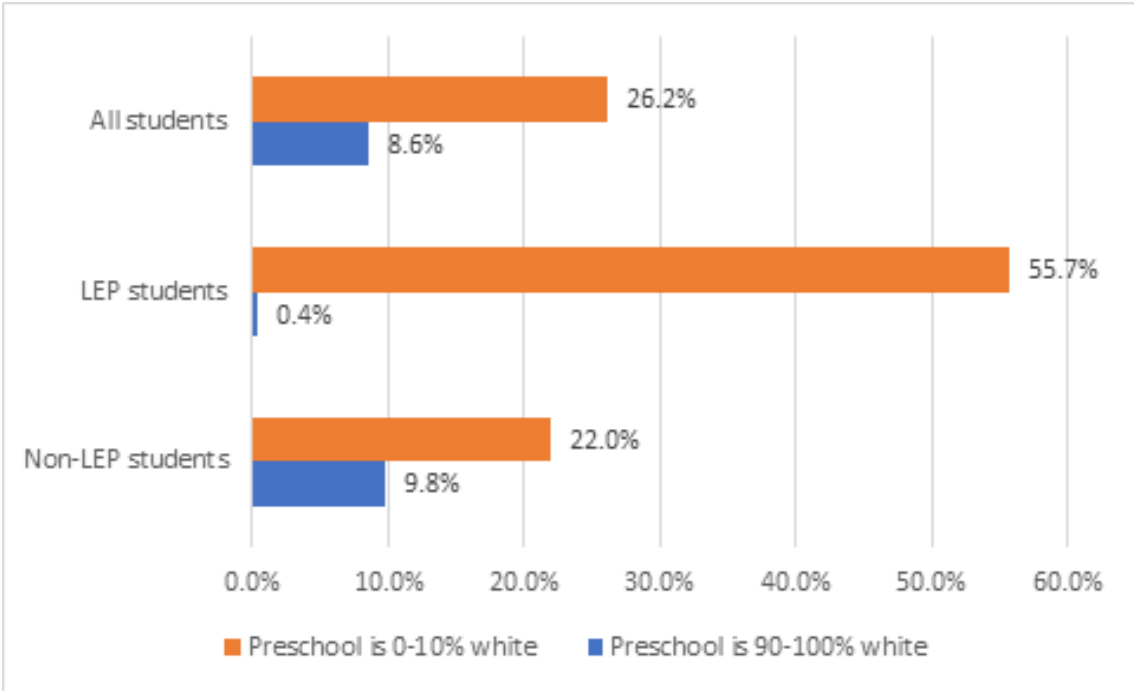
	Number of students	Percentage of same race students
White	129,827	19.8%
Black	49,917	16.7%
Hispanic	90,787	19.7%
Asian	247	0.4%
American Indian	2,562	11.9%

Source: CRDC, 2015–16

Preschool students with Limited English Proficiency (LEP) were also enrolled in segregated non-white schools at a very high rate. In 2015–16, of all subgroups analyzed, the highest percentage of LEP preschool students were enrolled in highly segregated non-white schools: nearly 60% percent (see Figure 3). By contrast, at an overall share of 0.4%, fewer than 1% of such students were enrolled in 90–100% white schools. As in the

2013–14 school year, non-LEP students were much less likely to be enrolled in 90–100% non-white schools (22% in 2015–16) and more likely than LEP students to attend highly segregated white schools (9.8% in 2015–16).

Figure 3: Percentage of preschool students in highly segregated schools by LEP status, 2015–16



Source: CRDC, 2015–16 ; results for students of other races available from authors.

Not surprisingly, given the wide variation in state racial composition of school-based preschool students, considerable differences persist between states in the shares of students attending highly segregated schools. In 2015–16, only four states had no preschool students enrolled in highly segregated non-white schools: Maine, New Hampshire, Vermont and West Virginia. These data point to the intuitive notion that highly segregated non-white preschools are less likely to exist in places with relatively low non-white populations. Unchanged from the 2013–14 data, the majority of preschool students in three states (D.C., Texas, and California) attended schools with less than 10% white students (see Appendix A-6). In 2015–16, data on white students in highly segregated non-white schools remained unchanged since 2013–14 (i.e., less than one in eight), but the percent-

ages of black and Hispanic students in such schools decreased in states with high overall levels of segregation. For example, in D.C., the share of black students in highly segregated non-white schools dropped from 86% to 82%, which is notable given the overall increase in the preschool population numbers, described earlier. Relatedly, roughly 68% of Hispanic students in Texas and California attended highly segregated non-white schools. In addition, in 2015–16, eight states had one percent or fewer preschool students in highly segregated white schools, a slight improvement from seven states in the 2013–14 data. Conversely, three states had a majority of preschool students in 90–100% white schools: West Virginia, Maine, and Vermont (see Appendix A-7). Again, these are places where preschool diversity is challenged by an overwhelmingly white statewide composition. Lastly, in 2015–16, fourteen states in various parts of the country had at least one-third of white students who attended highly segregated schools, representing a slight improvement from 16 states in the 2013–14 data.

Summary and policy recommendations

Our report illustrates substantial numbers of segregated preschool students, despite a decrease in the overall share of preschoolers attending segregated schools. While racial division has long been a presence in American political history, it has recently taken on a stature in the highest levels of American politics that few imagined nearly fifty years after the Civil Rights Era. With American racial division as the backdrop, the persistent segregation of our youngest learners is cause for concern.

Because preschool children are also developing foundational building blocks of their racial awareness, early inter-group contact in a supportive learning environment can promote more inclusive attitudes and reduce racial prejudice. This fact is particularly important now, as the country simultaneously faces a new wave of racial divisiveness and as influential politicians call for wide expansion of publicly funded preschool. In addition, attention to preschool diversity is more important than ever, as students of color are now the majority of the public school enrollment.[56] In preschool expansion, there is an op-

56. Maxwell, L. A. (2014, August 19). U.S. School Enrollment Hits Majority-Minority Milestone. *Education Week.* Retrieved from https://www.edweek.org/ew/articles/2014/08/20/01demographics.h34.html

portunity to provide our youngest students with the types of learning environments that contribute to reduced racial prejudice and increased inter-group friendships in the K–12 setting.

In outlining policy recommendations, we interpret the findings above in light of major changes—affecting schools as well as our national dialogue about race and civil rights—since the publication of our October 2016 report. Most importantly, policymakers looking to expand preschool access must consider existing levels of preschool segregation presented in our data. If policy were to expand preschool access in the context of the current system, additional children will enter a segregated system that robs early education of its fullest potential.

Short-term recommendations

The persistence of high levels of school segregation requires a multi-faceted solution. In the short term, before larger systemic changes have the time to take shape, there are comparatively smaller changes that could have a big impact on the school experiences of our youngest learners. We start, then, with recommendations for improving on the current system and conclude with long term policy changes that no longer effectively separate young children according to race.

- Efforts can be made within existing programs, as well as potential new policies, to provide more access for students of color. Given widespread residential segregation, accessibility barriers are likely a major contributor to the segregation trends described above. The following changes can substantially reverse these trends.
    - ◊ Existing programs should consider transportation services or strategies that could open their doors to children from various parts of their communities. For example, equipping school buses with the necessary safety features to transport young children could make use of current district-wide transportation services. Also, programs should fund options – such as family or caregiver carpool arrangements or existing public transportation – as alternatives to using buses for student transportation.

- ◊ Locating new preschool programs at sites that serve students from diverse neighborhoods or creating inter-district partnerships could promote integration as preschool is expanded.
- ◊ States and/or districts should devote more funding and training to improve dual language instruction to ensure that these programs do not inadvertently contribute to increased racial segregation.
- ◊ Voluntary integration strategies like those in place in K–12 education could boost preschool integration efforts by ensuring that a certain portion of seats will be filled by students from low-income families or children from various communities. For example, programs could conduct lotteries with seats reserved for students who receive subsidies.
- ◊ Because mandatory school enrollment laws do not include the preschool years, programs need to be flexible in providing options to families who value keeping children in the home for as long as possible. As a result, policies should offer parents a variety of choices to best meet family needs and expectations, including partial day programs and access to high quality home-based care. In addition, proposals to increase preschool funding should consider funding partnerships with child care providers as ways to extend school hours in order to accommodate families with variable and non-traditional work hours or families who need childcare coverage during the K-12 school breaks.

- New and existing school-based programs may be able to improve classroom-level diversity by ensuring equitable access to information about program design and enrollment policies.
  - ◊ Reaching out to parents from different communities, including providing informational material in different languages, partnering with community-based organizations to reach out to families from different racial backgrounds, or holding informational events in low-income and/or racially isolated communities could provide more equitable distribution of program

information. Of course, different strategies are needed for different types of families, and programs must maintain flexibility and find creative approaches to expand their outreach strategies to engage families from historically disadvantaged communities.

- Quality guidelines should be written with explicit attention to racial inequity.
  - ◊ As described above, research demonstrates that racial integration, separate from program quality, is a distinct contributor to the learning experiences of preschool students.[57] This research is an important guide for preschool improvement efforts. Specifically, it illustrates that policies that aim to drive improvements in preschool quality may not reach their full potential without policy mechanisms explicitly designed to promote racial integration. For example, states or municipalities could offer incentives to preschool providers who actively recruit for racial and/or socio-economic diversity or performance standards could include specific guidelines for recruitment and enrollment practices. Further, guidelines must be comprehensive, such as including consideration of staff diversity as a way to create a welcoming and affirming environment for students of all backgrounds. Of course, these sorts of policies would have to be designed in a way that doesn't unfairly penalize programs that are unable to recruit for diversity because they are located in demographically homogeneous areas. And, policymakers must be careful to ensure that educator entry requirements do not interfere with teacher diversity for our youngest students. For example, an Urban Institute report on early educator diversity recommends that policies include financial and programmatic supports to help aspiring educators meet new requirements.[58] As is the case in programs to enhance teacher diversity

57. In their analysis of language acquisition in preschool settings, Reid and colleagues reviewed data from nearly 3,000 preschool children in over 700 classrooms and found that classroom-level racial and socio-economic diversity "represent significant and independent components of preschool quality." Reid, J. L. (2016). Racial/ethnic diversity and language development in the preschool classroom. In E. Frankenberg, L. M. Garces, & M. Hopkins (Eds.), *School integration matters: Research-based strategies to advance equity* (pp. 39–55). New York: Teachers College Press, p. 50.

58. Urban Institute. (2018, January 17). Will stricter education requirements for early childhood educators hurt teacher diversity? Retrieved from https://www.urban.org/urban-wire/will-stricter-education-requirements-early-childhood-educators-hurt-teacher-diversity

in K-12 schools, effective programs to enhance diversity in the preschool workforce could offer financial support for educator training and/or paid time off for professional development opportunities.

- Review guidelines that appear to be race-neutral for unintentional racial bias, especially guidelines related to curriculum or school discipline, that could be impediments to racial integration.
    - ◊ K–12 research finds academic standards often exhibit cultural bias.[59] Evidence suggests that this is also the case in the preschool setting. In particular, a recent review of NAEYC guidelines found that, although presented as culturally neutral, the organization's conception of quality privileges white, Eurocentric ways of knowing.[60] The authors write that NAEYC guidelines view non-white students through an "ideology of pathology" that "[seeks] to fix or remedy them as if they were broken or behind."[61] They call on professional organizations, like NAEYC, to redefine quality standards to include greater affirmation of the assets that students of color bring the early education context. As part of this effort, groups writing new quality guidelines should actively seek the participation of advocates and families from communities of color.

59. Valenzuela, A. (2010). *Subtractive schooling: US-Mexican youth and the politics of caring*. Albany: SUNY Press.

60. Souto-Manning, M., & Rabadi-Raol, A. (2018). (Re) Centering Quality in Early Childhood Education: Toward Intersectional Justice for Minoritized Children. *Review of Research in Education*, *42*(1), 203–225.

61. Ibid, p. 209.

Long-term recommendations

There is a strong educational and social imperative for policymakers to work, over the long-term, towards reducing the number of highly segregated preschools. Of course, the demographic profile of each state varies widely. Nonetheless, data suggests that all states have room for growth in creating more racially integrated learning environments for pre-school students. As politicians consider the appropriate policy levers to expand preschool access, it is critical that they consider strategies to tie funding or expansion to programs that provide racially integrated learning experiences for young children.

Many of the long-term recommendations highlighted here rely on funding from state or federal government. Because preschool grants and subsidies targeting low-income children can inadvertently promote racial and/or socio-economic segregation by clustering targeted students into the same classrooms or service providers, states need to be careful to review funding restrictions and find ways for low-income families to attend preschool in the same classrooms or providers as wealthier families. For example, in Washington, D.C., Head Start has become more integrated into public preschool classrooms through the use of a lottery system that includes Head Start students along with all other three- and four-year-olds in the city's universal preschool program.

- As policymakers consider expansion efforts, they must include opportunities to create racially and/or socio-economically integrated programs.
    - ◊ It is important that states pay attention to policies that may have differential impact on various service providers, especially those that disproportionately serve students of color. In some cases, constraints in federal funding prevent some programs from enrolling a diverse group of students.[62] Conversely, as recommended by the Century Foundation, the federal government could promote preschool integration by creating an "equity" set aside that is similar to the "quality" set-aside currently required by the Head

62. The Century Foundation and the Poverty and Race Research Action Council. (2015, April). A better start: Why classroom diversity matters in early education. Retrieved from https://www.prrac.org/pdf/A_Better_Start.pdf

Start and Child Care Development Block Grant.[63] As noted earlier, a recent study of preschool expansion in New York City found that community-based organizations—which serve a disproportionately non-white study body—struggled to meet the mandates of the city's Pre-K for All initiative. Researchers found that community-based organizations "are asked to do more with less."[64] When constructing preschool expansion efforts, policymakers can avoid similar pitfalls by ensuring that non-school based settings, like community-based organizations, receive an adequate amount of funding and resources to meet the needs of the students they serve and attract students from other communities to enhance integration. Put simply, because preschool education is provided in a wide range of settings, different strategies are needed to ensure racial integration across various contexts of preschool education. Further, it is important that any subsidy provided by the government is sufficient to offset costs or that new policies provide incentives for high quality programs to bypass willing payers for students who receive subsidy.

- ◊ As outlined in a recent Century Foundation report on preschool segregation in New York City,[65] blended funding models can be a strong driver of preschool integration. In particular, new policies at the federal, state, and local level should work towards blending Head Start funding with other sources of funding in order to integrate programs that currently serve different populations of students, especially blending public enrollment with private-pay seats.
- ◊ In addition, state and local government can boost integration efforts with policies that separate preschool enrollment from segregation built into housing and/or K–12 school attendance zones. There is particular potential

63. Ibid.

64. Reid, J. L., Melvin, S. A., Kagan, S. L., & Brooks-Gunn, J. (2019). Building a unified system for universal Pre-K: The case of New York City. *Children and Youth Services Review*, *100*, 191–205, p. 203.

65. The Century Foundation. (2019, October). Creating Integrated Early Education in New York City. Retrieved from https://tcf.org/content/report/creating-integrated-early-childhood-education-new-york-city/?mc_cid=19dd81d766&mc_eid=24320f82fc

in leveraging a mixed-delivery system free from existing patterns of social segregation. In addition, expansion policies could target service providers likely to draw on an integrated constituency, such as large employers and major community-based organizations.

- ◊ Finally, given concerns about transporting young children on long commutes to preschool, careful consideration should be given to where preschools are sited, including preferences for school locations in close proximity to racially and economically diverse households.

- The federal government can drive state level integration by providing matching funds to expand preschool integration.
  - ◊ The Child Care for Working Families Act introduced in the Senate provides matching funds for states that provide expanded preschool access. To further preschool integration, we recommend that the federal government provides matching funds to state programs that meet a minimum threshold for racial integration.
- The federal government and individual states can expand integration efforts by providing incentives for low-income parents to send their children to preschools in middle- and upper-income neighborhoods.
  - ◊ Senator Warren's plan provides a model that can be scaled down to the state and local levels.[66] In particular, her plan provides subsidy dollars to places where low-income parents enroll their preschool children in middle- and upper-income neighborhoods, which are more likely to serve a predominantly white student body.
- The federal government should launch a grant program aimed at increasing preschool diversity.
  - ◊ In the final years of the Obama Administration, the Department of Education launched a grant program called "Opening Doors, Expanding Opportunity," which provided funds to districts with innovative K–12 integration

66. For more information, visit: https://medium.com/@teamwarren/my-plan-for-universal-child-care-762535e6c20a

programs. The program was canceled during the first months of the Trump Administration, though similar ideas have been reintroduced in new legislation in Congress. However, states that want to expand preschool integration may find success in implementing a state-level grant program specific to racial integration in early education.

In addition to the recommendations provided here, there is something that all of us can do to help make positive change in preschool education: in everything from informal interactions at the playground to conference presentations, we must engage in greater conversation about why the preschool time period is so critical for a child's racial awareness. Too often, preschool is described as an academic intervention that supplements perceived school readiness gaps of black, Latinx and/or low-income families. It can and should be so much more. Integrated preschool environments provide benefits to all students in the form of meaningful, early inter-group contact that sets the stage for healthy participation in a multicultural democracy. There is an important opportunity now, in the widespread public support for preschool expansion, to set change in motion. Subtle changes in how we think and talk about the importance of preschool can eventually yield lasting impacts, ultimately leading to policy changes that push back against persistent segregation and spark the development of integrated learning environments that prepare all young people for thoughtful participation in our multicultural democracy.

Appendices

A-1: Preschool racial composition, 2015–16, by state

State	Total Students	White Students	Black Students	Hispanic Students	Asian Students	Native Hawaiian and Pacific Islander Students	American Indian Students	Multiracial Students
AK	3,498	32.2%	3.1%	5.8%	2.9%	2.5%	41.4%	12.0%
AL	14,281	46.0%	40.2%	7.8%	1.6%	0.2%	1.4%	2.8%
AR	15,685	50.6%	29.0%	15.1%	1.4%	0.8%	0.5%	2.8%
AZ	21,016	39.2%	4.5%	41.7%	3.7%	0.4%	6.4%	4.0%
CA	84,243	16.4%	6.1%	62.3%	8.6%	0.8%	0.6%	5.2%
CO	33,149	47.3%	5.2%	38.1%	4.1%	0.2%	0.8%	4.3%
CT	18,822	44.5%	16.1%	28.0%	6.2%	0.2%	0.6%	4.4%
DC	12,743	13.5%	68.4%	13.3%	1.7%	0.2%	0.2%	2.7%
DE	2,257	43.2%	27.1%	20.8%	4.8%	0.4%	0.4%	3.2%
FL	192,024	36.3%	24.9%	31.5%	2.6%	0.3%	0.4%	4.0%
GA	51,169	40.8%	36.6%	14.8%	2.6%	0.2%	0.3%	4.8%
HI	2,667	15.9%	3.0%	20.6%	19.3%	22.5%	0.2%	18.6%
IA	22,315	77.0%	5.4%	9.7%	3.0%	0.3%	0.4%	4.3%
ID	2,921	73.0%	0.9%	18.4%	1.2%	0.3%	2.4%	3.8%
IL	83,175	42.0%	19.6%	29.6%	4.3%	0.2%	0.3%	4.0%
IN	19,387	60.9%	15.6%	14.0%	2.7%	0.2%	0.3%	6.4%
KS	18,049	59.8%	6.1%	23.8%	3.2%	0.3%	1.3%	5.5%
KY	27,944	70.8%	13.4%	8.4%	1.8%	0.2%	0.2%	5.2%
LA	33,548	38.9%	47.0%	7.8%	1.8%	0.1%	0.8%	3.6%
MA	35,049	53.0%	12.1%	21.2%	7.5%	0.2%	0.4%	5.7%
MD	33,191	26.0%	40.9%	22.1%	5.3%	0.2%	0.7%	4.8%
ME	5,688	87.4%	4.7%	2.6%	1.1%	0.0%	1.1%	3.1%
MI	42,884	64.4%	19.1%	8.4%	2.8%	0.2%	0.7%	4.4%
MN	30,898	70.1%	8.7%	8.8%	5.9%	0.2%	2.0%	4.3%
MO	35,030	67.8%	18.5%	6.3%	2.5%	0.3%	0.4%	4.2%
MS	7,097	30.9%	61.6%	4.7%	1.2%	0.2%	0.3%	1.2%
MT	1,119	71.9%	1.1%	5.3%	1.3%	0.2%	15.6%	4.7%
NC	24,990	33.4%	29.6%	25.7%	4.1%	0.2%	2.1%	4.9%
ND	2,859	74.1%	4.6%	5.4%	1.5%	0.8%	11.0%	2.6%
NE	14,709	61.3%	8.3%	20.4%	3.3%	0.4%	2.4%	3.9%
NH	3,992	80.3%	3.1%	7.9%	5.1%	0.1%	0.3%	3.3%
NJ	50,845	32.4%	20.3%	34.5%	8.8%	0.3%	0.2%	3.5%
NM	9,779	21.6%	1.8%	60.3%	1.1%	0.3%	12.8%	2.1%
NV	6,898	39.3%	9.9%	36.8%	3.2%	1.6%	1.2%	8.0%
NY	56,102	38.5%	19.1%	28.2%	8.8%	0.5%	1.4%	3.6%

OH	39,645	70.7%	15.5%	5.6%	2.2%	0.2%	0.2%	5.7%
OK	44,029	48.8%	7.7%	16.5%	2.2%	0.5%	14.7%	9.7%
OR	2,665	49.5%	6.6%	24.6%	5.9%	0.9%	2.3%	10.1%
PA	9,453	44.8%	26.7%	15.7%	3.7%	0.2%	0.5%	8.4%
RI	2,445	66.0%	6.5%	16.6%	3.8%	0.0%	1.5%	5.6%
SC	35,762	40.8%	40.4%	11.4%	1.8%	0.1%	0.6%	5.0%
SD	3,830	65.3%	6.2%	7.3%	2.0%	0.2%	13.9%	5.1%
TN	28,985	57.3%	26.4%	10.9%	2.1%	0.2%	0.3%	3.0%
TX	241,802	16.5%	14.6%	62.1%	3.7%	0.2%	0.5%	2.4%
UT	15,951	71.9%	2.0%	17.0%	2.7%	2.1%	2.0%	2.5%
VA	34,432	37.8%	33.1%	17.7%	4.8%	0.2%	0.4%	6.1%
VT	4,713	89.6%	2.4%	1.9%	2.8%	0.1%	0.3%	3.0%
WA	20,754	45.2%	7.2%	29.4%	5.6%	1.3%	1.7%	9.6%
WI	55,255	65.4%	11.0%	13.1%	4.5%	0.2%	1.2%	4.7%
WV	15,424	89.0%	4.3%	1.8%	0.9%	0.0%	0.1%	3.9%
WY	679	60.5%	3.1%	19.3%	0.6%	0.9%	10.9%	4.7%
Total	1,575,847	41.7%	19.0%	29.2%	4.0%	0.4%	1.4%	4.3%

Source: CRDC, 2015–16; Note: the numbers of students in some states and racial groups may be small.

A-2: White preschool student exposure, 2015–16, by state

State	Percentage of students in the school of the typical white student						
	White	Black	Hispanic	Asian	Native Hawaiian and Pacific Islander Students	American Indian	Multiracial
AK	56.2%	3.2%	6.9%	2.5%	2.2%	15.5%	13.5%
AL	69.3%	17.8%	6.6%	1.7%	0.2%	1.8%	2.5%
AR	72.7%	12.6%	9.9%	1.2%	0.4%	0.4%	2.8%
AZ	55.7%	3.7%	28.3%	4.5%	0.5%	2.9%	4.5%
CA	38.4%	4.9%	39.7%	9.1%	0.8%	1.0%	6.1%
CO	61.2%	3.3%	25.8%	4.0%	0.2%	0.8%	4.7%
CT	62.3%	8.8%	17.6%	6.0%	0.2%	0.6%	4.5%
DC	43.1%	30.3%	16.1%	4.4%	0.2%	0.2%	5.8%
DE	52.2%	21.7%	17.8%	4.6%	0.3%	0.4%	3.0%
FL	55.7%	14.3%	21.3%	2.9%	0.3%	0.5%	5.0%
GA	58.4%	21.7%	12.0%	2.4%	0.1%	0.2%	5.1%
HI	33.9%	5.7%	19.1%	13.6%	12.8%	0.4%	14.5%
IA	82.3%	3.7%	7.4%	2.2%	0.2%	0.4%	3.9%
ID	78.0%	0.8%	14.2%	1.0%	0.3%	2.1%	3.6%
IL	70.0%	6.9%	14.1%	3.8%	0.2%	0.3%	4.6%
IN	75.2%	7.2%	9.3%	2.2%	0.1%	0.3%	5.6%
KS	73.2%	4.2%	13.7%	2.3%	0.4%	1.3%	4.9%
KY	80.5%	6.4%	6.8%	1.5%	0.1%	0.2%	4.5%
LA	61.4%	25.0%	6.7%	1.7%	0.1%	1.0%	4.1%
MA	71.6%	5.5%	11.1%	6.2%	0.1%	0.3%	5.1%
MD	55.2%	19.4%	12.5%	4.9%	0.2%	0.7%	7.2%
ME	89.9%	3.0%	2.3%	1.0%	0.0%	1.0%	2.7%
MI	77.2%	9.0%	6.5%	2.5%	0.2%	0.7%	3.9%
MN	80.4%	4.8%	6.2%	3.2%	0.2%	1.5%	3.7%
MO	80.5%	7.5%	5.0%	2.2%	0.3%	0.4%	4.1%
MS	57.2%	33.5%	5.7%	1.6%	0.3%	0.3%	1.5%
MT	83.0%	0.9%	4.4%	1.1%	0.2%	7.0%	3.4%
NC	52.2%	19.0%	19.2%	3.0%	0.2%	1.2%	5.2%
ND	80.0%	4.1%	5.1%	1.4%	0.7%	6.4%	2.3%
NE	75.8%	4.3%	12.8%	2.2%	0.4%	1.3%	3.3%
NH	84.6%	2.2%	5.8%	4.2%	0.0%	0.3%	3.0%
NJ	58.3%	9.7%	18.5%	8.9%	0.3%	0.2%	4.1%
NM	34.6%	1.9%	50.6%	1.4%	0.4%	8.5%	2.6%
NV	51.4%	7.2%	28.1%	3.0%	1.5%	1.2%	7.5%
NY	72.0%	5.8%	12.3%	5.1%	0.2%	0.6%	4.1%
OH	81.5%	6.7%	4.4%	1.9%	0.1%	0.2%	5.1%
OK	57.8%	5.0%	11.9%	2.0%	0.4%	13.7%	9.1%

OR	61.5%	2.9%	18.0%	4.0%	0.8%	2.4%	10.4%
PA	77.3%	7.9%	6.7%	2.2%	0.2%	0.4%	5.4%
RI	76.4%	4.2%	10.2%	3.6%	0.0%	1.1%	4.4%
SC	56.0%	26.3%	10.0%	1.9%	0.1%	0.5%	5.2%
SD	78.3%	3.9%	5.6%	1.3%	0.2%	6.7%	4.1%
TN	77.1%	10.1%	7.8%	1.8%	0.1%	0.3%	2.7%
TX	40.4%	10.8%	39.8%	4.1%	0.3%	0.7%	4.0%
UT	77.8%	1.7%	13.0%	2.2%	1.7%	1.3%	2.3%
VA	58.1%	18.6%	12.6%	4.0%	0.2%	0.4%	6.1%
VT	91.3%	1.8%	1.7%	2.0%	0.1%	0.3%	2.7%
WA	58.0%	4.6%	21.9%	4.2%	1.0%	1.5%	8.8%
WI	77.6%	4.0%	9.0%	3.8%	0.2%	1.0%	4.4%
WV	90.8%	3.4%	1.6%	0.8%	0.0%	0.1%	3.3%
WY	70.9%	2.9%	18.1%	0.6%	0.8%	1.9%	4.8%
Total	67.0%	9.3%	14.3%	3.3%	0.3%	1.2%	4.7%

Source: CRDC, 2015–16; Note: the numbers of students in some states and racial groups may be small.

A-3: Black preschool student exposure, 2015–16, by state

State	Percentage of students in school of the typical black student						
	Black	White	Hispanic	Asian	Native Hawaiian and Pacific Islander Students	American Indian	Multiracial
AK	14.0%	33.1%	10.8%	5.6%	7.0%	14.9%	14.6%
AL	69.9%	20.3%	5.9%	1.0%	0.1%	0.5%	2.3%
AR	64.4%	22.0%	9.6%	1.2%	0.1%	0.2%	2.4%
AZ	10.3%	32.0%	45.7%	3.5%	0.7%	3.4%	4.5%
CA	16.7%	13.2%	54.6%	8.6%	1.2%	0.6%	5.1%
CO	19.1%	30.4%	39.4%	5.0%	0.2%	0.9%	5.1%
CT	35.1%	24.3%	30.4%	5.6%	0.2%	0.5%	3.8%
DC	84.4%	6.0%	6.8%	0.7%	0.2%	0.2%	1.7%
DE	40.1%	34.6%	16.5%	4.1%	0.3%	0.5%	3.9%
FL	51.6%	20.8%	21.7%	1.9%	0.3%	0.5%	3.3%
GA	58.8%	24.2%	10.6%	1.8%	0.2%	0.3%	4.2%
HI	13.8%	30.5%	19.0%	13.7%	11.4%	0.5%	11.1%
IA	20.6%	52.5%	13.8%	5.3%	0.7%	0.5%	6.5%
ID	9.9%	62.9%	15.5%	3.0%	1.2%	3.7%	3.9%
IL	63.4%	14.8%	15.9%	2.0%	0.2%	0.2%	3.5%
IN	45.1%	28.2%	17.4%	1.8%	0.1%	0.3%	7.0%
KS	17.2%	41.3%	27.9%	5.4%	0.4%	1.1%	6.6%
KY	46.8%	33.9%	9.8%	2.1%	0.2%	0.3%	6.9%
LA	68.5%	20.7%	6.1%	1.5%	0.1%	0.4%	2.7%
MA	33.3%	24.3%	28.7%	7.1%	0.3%	0.6%	5.8%
MD	62.8%	12.3%	16.7%	3.9%	0.2%	0.6%	3.4%
ME	32.1%	56.7%	3.5%	1.6%	0.0%	1.5%	4.5%
MI	53.9%	30.4%	8.3%	2.5%	0.1%	0.4%	4.4%
MN	28.6%	38.9%	13.7%	11.7%	0.1%	1.2%	5.7%
MO	60.1%	27.7%	6.1%	2.3%	0.2%	0.3%	3.3%
MS	77.9%	16.8%	3.3%	0.8%	0.1%	0.3%	0.8%
MT	19.1%	61.6%	4.8%	2.9%	1.3%	10.3%	0.0%
NC	46.3%	21.5%	22.6%	3.6%	0.2%	1.4%	4.3%
ND	10.4%	65.7%	6.3%	3.2%	1.6%	9.6%	3.2%
NE	34.8%	31.8%	18.7%	6.3%	0.4%	1.0%	6.9%
NH	14.6%	56.7%	16.3%	9.0%	0.1%	0.1%	3.2%
NJ	48.1%	15.4%	28.2%	4.6%	0.3%	0.2%	3.1%
NM	7.7%	23.1%	61.2%	1.0%	0.3%	4.2%	2.5%
NV	21.4%	28.6%	36.1%	3.9%	1.7%	0.4%	7.9%
NY	50.1%	11.7%	27.3%	5.4%	0.6%	1.6%	3.3%
OH	54.2%	30.7%	6.6%	1.6%	0.1%	0.3%	6.5%
OK	29.0%	31.7%	19.0%	2.2%	0.5%	7.8%	9.9%

OR	22.9%	21.9%	33.1%	9.8%	1.3%	1.7%	9.3%
PA	67.1%	13.3%	6.9%	3.3%	0.1%	0.4%	9.0%
RI	14.8%	43.0%	29.5%	3.9%	0.0%	2.2%	6.7%
SC	58.3%	26.6%	8.9%	1.5%	0.1%	0.5%	4.2%
SD	21.4%	41.2%	14.9%	6.1%	0.5%	7.7%	8.3%
TN	63.5%	21.9%	10.1%	1.7%	0.2%	0.2%	2.4%
TX	38.3%	12.2%	42.1%	3.7%	0.3%	0.5%	2.8%
UT	5.9%	60.0%	22.3%	4.8%	2.8%	1.3%	2.9%
VA	57.0%	21.3%	12.5%	3.2%	0.2%	0.4%	5.4%
VT	15.8%	66.6%	1.6%	12.3%	0.1%	0.3%	3.3%
WA	20.1%	28.8%	26.7%	9.8%	2.0%	1.1%	11.4%
WI	54.5%	24.0%	12.3%	3.9%	0.3%	0.8%	4.1%
WV	17.3%	70.4%	2.3%	1.4%	0.0%	0.1%	8.4%
WY	9.4%	57.1%	23.5%	1.1%	1.2%	2.4%	5.2%
Total	52.6%	20.4%	19.3%	2.9%	0.3%	0.6%	3.8%

Source: CRDC, 2015–16; Note: the numbers of students in some states and racial groups may be small.

A-4: Hispanic preschool student exposure, 2015–16, by state

State	Percentage of students in school of the typical Hispanic student						
	Hispanic	White	Black	Asian	Native Hawaiian and Pacific Islander Students	American Indian	Multiracial
AK	18.3%	38.5%	5.9%	4.6%	5.5%	10.6%	16.7%
AL	24.1%	38.8%	30.2%	1.8%	0.1%	0.9%	4.1%
AR	40.4%	33.3%	18.5%	1.7%	2.8%	0.8%	2.3%
AZ	59.2%	26.6%	4.9%	2.7%	0.3%	3.1%	3.2%
CA	73.7%	10.5%	5.4%	5.8%	0.6%	0.4%	3.6%
CO	55.3%	31.9%	5.4%	3.3%	0.2%	0.6%	3.3%
CT	44.7%	27.9%	17.5%	5.3%	0.2%	0.6%	3.8%
DC	41.5%	16.4%	35.1%	2.7%	0.3%	0.3%	3.8%
DE	33.7%	36.9%	21.5%	5.0%	0.4%	0.4%	2.2%
FL	52.5%	24.5%	17.1%	2.4%	0.2%	0.3%	2.9%
GA	33.8%	33.0%	26.0%	2.7%	0.1%	0.2%	4.1%
HI	28.9%	14.7%	2.7%	16.1%	19.4%	0.2%	18.0%
IA	23.2%	59.1%	7.7%	4.7%	0.4%	0.5%	4.4%
ID	37.7%	56.3%	0.8%	1.0%	0.2%	1.4%	2.7%
IL	62.0%	20.1%	10.5%	4.1%	0.2%	0.3%	2.8%
IN	30.2%	40.6%	19.4%	2.5%	0.1%	0.3%	6.9%
KS	49.2%	34.4%	7.1%	3.7%	0.2%	1.0%	4.4%
KY	18.3%	57.2%	15.6%	2.4%	0.2%	0.2%	6.1%
LA	21.9%	33.5%	36.8%	2.7%	0.3%	0.9%	3.9%
MA	45.4%	27.7%	16.3%	5.7%	0.2%	0.3%	4.3%
MD	44.4%	14.6%	30.9%	5.5%	0.2%	0.8%	3.5%
ME	9.3%	78.2%	6.4%	1.8%	0.0%	1.0%	3.3%
MI	23.3%	49.7%	18.8%	2.4%	0.2%	0.5%	5.0%
MN	22.5%	49.9%	13.7%	7.7%	0.2%	1.4%	4.7%
MO	18.5%	53.6%	17.8%	3.5%	0.5%	0.5%	5.5%
MS	16.4%	37.6%	42.7%	1.3%	0.1%	0.8%	1.2%
MT	17.2%	60.2%	1.0%	1.9%	0.3%	14.7%	4.7%
NC	39.7%	25.0%	26.1%	3.7%	0.2%	1.2%	4.2%
ND	14.6%	70.0%	5.4%	2.1%	0.7%	5.6%	1.6%
NE	46.1%	38.6%	7.6%	2.9%	0.4%	1.3%	3.2%
NH	21.7%	59.1%	6.4%	7.9%	0.0%	0.2%	4.6%
NJ	57.2%	17.3%	16.6%	6.2%	0.3%	0.2%	2.3%
NM	72.5%	18.1%	1.8%	0.9%	0.3%	4.8%	1.5%
NV	48.9%	30.0%	9.7%	2.4%	1.4%	0.9%	6.8%
NY	52.1%	16.8%	18.5%	8.1%	0.6%	1.3%	2.5%
OH	16.0%	56.3%	18.4%	2.6%	0.1%	0.2%	6.3%
OK	37.0%	35.4%	8.9%	2.2%	0.6%	7.4%	8.6%

OR	36.2%	36.2%	8.9%	7.6%	1.0%	2.0%	8.1%
PA	57.4%	19.3%	11.8%	3.5%	0.1%	0.5%	7.3%
RI	36.5%	40.5%	11.6%	3.9%	0.0%	2.3%	5.2%
SC	24.8%	35.9%	31.5%	1.9%	0.2%	0.6%	5.1%
SD	15.5%	50.3%	12.6%	3.7%	0.5%	9.9%	7.4%
TN	27.8%	41.1%	24.5%	2.8%	0.1%	0.3%	3.4%
TX	75.0%	10.5%	9.9%	2.4%	0.1%	0.4%	1.6%
UT	31.8%	55.1%	2.7%	3.6%	2.9%	1.6%	2.4%
VA	37.2%	26.9%	23.4%	6.7%	0.2%	0.4%	5.2%
VT	7.6%	83.8%	2.0%	2.6%	0.1%	0.7%	3.1%
WA	44.5%	33.5%	6.5%	4.7%	1.2%	1.5%	8.1%
WI	34.9%	44.8%	10.3%	4.1%	0.2%	0.9%	4.8%
WV	8.4%	78.6%	5.7%	1.0%	0.1%	0.2%	6.1%
WY	31.4%	56.7%	3.8%	0.6%	1.1%	1.4%	4.9%
Total	59.3%	20.4%	12.5%	3.6%	0.3%	0.7%	3.1%

Source: CRDC, 2015–16; Note: the numbers of students in some states and racial groups may be small.

A-5: Asian preschool student exposure, 2015–16, by state

State	Percentage of students in school of the typical Asian student						
	Asian	White	Black	Hispanic	Native Hawaiian and Pacific Islander Students	American Indian	Multiracial
AK	14.6%	27.9%	6.1%	9.1%	6.5%	19.2%	16.7%
AL	8.6%	51.1%	25.9%	8.8%	0.4%	1.3%	3.8%
AR	6.0%	43.5%	25.7%	19.4%	0.9%	0.6%	3.9%
AZ	10.8%	46.8%	4.2%	29.6%	0.4%	3.2%	5.0%
CA	26.5%	17.3%	6.1%	42.2%	0.9%	0.6%	6.3%
CO	10.6%	46.4%	6.3%	30.7%	0.3%	0.6%	5.2%
CT	12.7%	43.3%	14.6%	23.9%	0.2%	0.6%	4.7%
DC	7.5%	35.4%	29.2%	21.6%	0.4%	0.4%	5.5%
DE	9.3%	41.8%	23.3%	21.8%	0.5%	0.5%	2.9%
FL	6.6%	41.0%	18.0%	29.2%	0.3%	0.4%	4.5%
GA	16.9%	36.6%	25.5%	15.4%	0.2%	0.4%	5.0%
HI	32.5%	11.2%	2.1%	17.2%	19.2%	0.2%	17.6%
IA	12.4%	56.7%	9.6%	15.2%	0.3%	0.4%	5.4%
ID	11.3%	64.1%	2.3%	15.4%	0.4%	1.9%	4.6%
IL	20.4%	37.0%	9.2%	28.2%	0.3%	0.4%	4.5%
IN	17.7%	50.8%	10.4%	13.2%	0.3%	0.2%	7.2%
KS	11.3%	43.1%	10.4%	28.2%	0.4%	0.8%	5.7%
KY	9.2%	57.7%	15.0%	10.9%	0.3%	0.4%	6.6%
LA	7.9%	36.2%	39.7%	11.5%	0.2%	0.8%	3.8%
MA	21.8%	43.6%	11.4%	16.2%	0.2%	0.4%	6.4%
MD	16.9%	23.9%	30.0%	23.2%	0.2%	0.9%	4.7%
ME	8.3%	75.4%	7.0%	4.1%	0.0%	2.5%	2.7%
MI	14.2%	56.6%	16.5%	7.1%	0.1%	0.5%	4.9%
MN	26.8%	37.6%	17.2%	11.4%	0.1%	1.0%	5.8%
MO	8.3%	60.3%	17.0%	8.8%	0.4%	0.6%	4.7%
MS	6.4%	42.3%	43.7%	5.1%	0.4%	0.4%	1.7%
MT	8.5%	62.0%	2.5%	7.8%	0.0%	13.5%	5.6%
NC	21.3%	24.5%	26.0%	23.5%	0.2%	0.6%	4.0%
ND	7.2%	65.8%	9.7%	7.4%	1.5%	6.9%	1.4%
NE	16.9%	40.9%	16.0%	18.1%	0.4%	1.4%	6.3%
NH	13.5%	65.3%	5.4%	12.0%	0.0%	0.4%	3.3%
NJ	27.8%	32.9%	10.6%	24.3%	0.4%	0.2%	3.8%
NM	6.4%	26.8%	1.6%	47.9%	0.3%	14.2%	2.9%
NV	12.7%	36.6%	12.1%	27.2%	1.7%	0.6%	9.1%
NY	34.8%	22.2%	11.7%	25.9%	0.6%	1.6%	3.1%
OH	11.8%	64.0%	11.4%	6.7%	0.2%	0.4%	5.6%
OK	12.4%	44.9%	7.8%	16.6%	0.5%	8.5%	9.4%

OR	12.5%	33.1%	10.9%	31.6%	1.1%	2.0%	8.8%
PA	20.4%	25.8%	23.3%	14.6%	0.4%	0.8%	14.8%
RI	7.8%	62.6%	6.7%	16.9%	0.0%	1.3%	4.8%
SC	6.2%	42.3%	33.0%	12.1%	0.2%	0.7%	5.6%
SD	10.1%	42.5%	18.6%	13.3%	0.4%	8.4%	6.7%
TN	9.2%	49.9%	21.8%	15.1%	0.2%	0.3%	3.5%
TX	22.4%	18.2%	14.6%	40.3%	0.3%	0.8%	3.3%
UT	8.3%	58.7%	3.6%	22.5%	2.8%	1.2%	2.9%
VA	16.0%	31.2%	22.0%	24.6%	0.2%	0.5%	5.4%
VT	18.1%	65.5%	10.7%	1.8%	0.1%	0.1%	3.8%
WA	16.7%	33.6%	12.5%	24.4%	1.4%	1.0%	10.4%
WI	17.4%	55.0%	9.6%	12.0%	0.2%	0.8%	5.1%
WV	6.2%	77.5%	7.0%	2.0%	0.1%	0.4%	6.8%
WY	11.4%	62.9%	5.7%	20.0%	0.0%	0.0%	0.0%
Total	19.7%	33.8%	13.7%	26.2%	0.6%	0.9%	5.0%

Source: CRDC, 2015–16; Note: the numbers of students in some states and racial groups may be small.

A-6: Percentage of students in highly segregated non-white preschools, 2015–16, by state and race/ethnicity

State	White Students	Black Students	Hispanic Students	Asian Students	Native Hawaiian and Pacific Islander Students	American Indian Students	Multiracial Students	Total Students
AK	1.8%	14.5%	7.9%	32.4%	25.8%	66.6%	18.1%	32.8%
AL	1.1%	52.1%	15.0%	5.4%	0.0%	3.0%	14.3%	23.1%
AR	0.9%	29.2%	16.6%	5.7%	30.3%	8.2%	9.0%	12.0%
AZ	2.1%	21.4%	37.1%	8.1%	2.2%	58.0%	7.9%	21.6%
CA	11.5%	54.7%	68.2%	47.7%	47.1%	30.7%	43.8%	54.7%
CO	1.4%	26.6%	24.4%	10.5%	8.1%	7.2%	6.2%	12.1%
CT	1.1%	30.8%	22.8%	5.4%	13.6%	5.1%	4.6%	12.4%
DC	6.2%	82.4%	47.4%	18.7%	69.2%	64.3%	25.9%	64.8%
DE	0.4%	20.9%	5.7%	0.0%	0.0%	20.0%	13.7%	7.6%
FL	2.7%	47.0%	37.5%	10.2%	14.1%	23.1%	8.9%	25.3%
GA	1.7%	39.9%	27.8%	21.4%	16.5%	25.0%	13.8%	20.8%
HI	6.6%	15.2%	44.5%	48.1%	58.8%	0.0%	50.3%	42.5%
IA	0.0%	2.1%	1.3%	0.3%	0.0%	0.0%	0.2%	0.3%
ID	0.0%	0.0%	4.8%	0.0%	0.0%	0.0%	0.0%	0.9%
IL	1.5%	63.1%	46.2%	11.4%	21.9%	14.4%	10.9%	27.7%
IN	0.5%	34.7%	17.2%	6.9%	6.7%	6.9%	6.5%	8.7%
KS	0.9%	19.9%	19.6%	19.7%	3.2%	5.5%	11.0%	7.7%
KY	0.3%	21.7%	3.0%	0.8%	0.0%	9.1%	4.5%	3.6%
LA	2.4%	49.0%	21.4%	15.9%	16.7%	9.2%	11.9%	26.4%
MA	1.3%	44.5%	36.4%	13.9%	27.7%	27.5%	8.2%	15.5%
MD	5.5%	65.7%	61.4%	32.7%	45.7%	40.5%	16.3%	44.8%
ME	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MI	0.3%	30.3%	8.7%	1.6%	5.3%	4.0%	2.6%	6.9%
MN	0.4%	18.4%	15.3%	20.5%	0.0%	16.4%	6.2%	5.0%
MO	0.4%	42.1%	12.4%	8.1%	5.9%	5.4%	3.2%	9.2%
MS	2.8%	60.9%	20.7%	17.1%	0.0%	36.4%	16.9%	39.9%
MT	0.2%	0.0%	3.4%	0.0%	0.0%	31.4%	17.0%	6.1%
NC	2.5%	32.2%	28.1%	29.3%	21.4%	40.8%	12.4%	20.3%
ND	0.0%	0.0%	0.0%	0.0%	0.0%	30.3%	0.0%	3.3%
NE	0.4%	10.3%	15.1%	5.4%	3.4%	48.2%	5.7%	5.8%
NH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NJ	4.4%	62.3%	56.8%	18.5%	31.6%	26.8%	14.7%	36.0%
NM	5.8%	22.9%	37.9%	19.8%	0.0%	52.3%	15.6%	31.7%
NV	1.4%	12.7%	17.2%	5.5%	5.5%	12.2%	8.7%	9.2%
NY	3.1%	69.3%	59.9%	42.1%	70.1%	71.3%	19.7%	37.0%

OH	0.3%	30.7%	6.0%	3.0%	3.3%	9.8%	4.8%	5.7%
OK	0.7%	19.1%	16.7%	3.1%	5.8%	2.4%	4.2%	5.4%
OR	0.2%	5.7%	2.6%	0.0%	8.0%	0.0%	0.7%	1.2%
PA	2.4%	65.3%	45.9%	35.9%	10.0%	31.8%	33.3%	30.0%
RI	0.6%	20.8%	16.8%	8.5%	0.0%	11.1%	21.0%	6.2%
SC	1.7%	31.7%	13.9%	10.8%	25.5%	7.1%	9.1%	15.8%
SD	0.0%	0.0%	0.7%	0.0%	0.0%	22.0%	0.0%	3.1%
TN	0.9%	49.7%	18.4%	7.7%	20.8%	8.8%	8.1%	16.1%
TX	10.8%	61.3%	68.4%	37.9%	32.2%	40.7%	25.7%	55.5%
UT	0.0%	1.9%	1.1%	0.9%	1.8%	18.2%	0.5%	0.7%
VA	1.7%	29.0%	23.3%	11.2%	33.3%	15.1%	7.7%	15.5%
VT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
WA	1.1%	14.7%	19.9%	8.5%	6.5%	18.0%	7.8%	9.0%
WI	0.6%	52.4%	22.7%	11.9%	12.0%	19.2%	5.0%	10.1%
WV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
WY	1.0%	0.0%	0.0%	0.0%	0.0%	89.2%	0.0%	10.3%
Total	0.6%	52.4%	22.7%	11.9%	12.0%	19.2%	5.0%	26.2%

Source: CRDC, 2015–16; Note: the numbers of students in some states and racial groups may be small.

A-7: Percentage of students in highly segregated white preschools, 2015–16, by state and race/ethnicity

State	Total Students	White Students	Black Students	Hispanic Students	Asian Students	Native Hawaiian and Pacific Islander Students	American Indian Students	Multiracial Students
AK	1.1%	3.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
AL	6.0%	12.7%	0.1%	1.1%	0.0%	7.7%	0.0%	0.5%
AR	20.7%	38.9%	1.0%	2.7%	4.7%	0.0%	8.2%	9.2%
AZ	1.8%	4.3%	0.0%	0.1%	0.0%	0.0%	0.3%	0.7%
CA	0.2%	1.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%
CO	2.1%	4.1%	0.0%	0.2%	0.4%	0.0%	1.6%	0.7%
CT	3.5%	7.5%	0.2%	0.2%	0.9%	0.0%	1.7%	1.0%
DC	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
DE	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FL	0.6%	1.7%	0.0%	0.1%	0.1%	0.0%	0.2%	0.3%
GA	2.0%	4.7%	0.1%	0.3%	0.0%	0.0%	0.0%	1.1%
HI	0.1%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
IA	30.4%	37.4%	3.0%	7.9%	3.3%	3.0%	6.6%	12.2%
ID	19.4%	25.6%	0.0%	1.9%	0.0%	0.0%	5.6%	7.2%
IL	12.1%	27.5%	0.5%	0.6%	1.4%	4.4%	1.6%	6.3%
IN	15.7%	24.5%	0.7%	2.0%	1.5%	6.7%	10.3%	4.5%
KS	11.8%	18.8%	1.1%	1.0%	0.4%	6.5%	4.3%	3.0%
KY	28.2%	38.0%	1.4%	7.6%	5.0%	4.2%	9.1%	6.4%
LA	4.4%	10.9%	0.2%	0.8%	0.3%	0.0%	0.7%	1.5%
MA	9.9%	17.6%	1.1%	0.8%	0.9%	0.0%	6.1%	2.5%
MD	2.1%	7.6%	0.1%	0.1%	0.2%	0.0%	0.8%	0.9%
ME	57.5%	63.0%	13.5%	25.9%	9.5%	0.0%	15.4%	30.7%
MI	21.2%	31.0%	1.6%	4.3%	5.4%	13.3%	11.3%	7.5%
MN	28.4%	38.4%	2.9%	6.2%	2.6%	6.1%	6.3%	9.6%
MO	24.4%	34.6%	1.2%	4.2%	4.1%	2.0%	6.8%	6.7%
MS	2.5%	7.6%	0.1%	0.0%	2.4%	0.0%	0.0%	0.0%
MT	33.2%	46.0%	0.0%	3.4%	0.0%	0.0%	0.0%	0.0%
NC	1.9%	5.4%	0.0%	0.2%	0.0%	0.0%	0.0%	0.5%
ND	23.6%	31.1%	0.0%	3.9%	0.0%	0.0%	0.6%	8.1%
NE	19.7%	30.8%	1.8%	2.5%	0.0%	3.4%	3.9%	2.1%
NH	36.3%	43.2%	6.5%	5.1%	6.8%	0.0%	0.0%	18.3%
NJ	2.2%	6.4%	0.1%	0.2%	0.1%	0.0%	0.0%	0.7%
NM	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NV	1.3%	3.3%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%

NY	12.0%	30.2%	0.2%	0.7%	0.5%	0.0%	0.5%	3.9%
OH	27.9%	37.5%	1.4%	8.0%	4.9%	6.6%	4.9%	10.8%
OK	0.5%	1.0%	0.1%	0.1%	0.0%	0.0%	0.1%	0.0%
OR	2.8%	5.5%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%
PA	23.3%	50.2%	0.7%	0.8%	2.3%	10.0%	13.6%	4.0%
RI	11.8%	16.6%	2.5%	2.0%	4.3%	0.0%	0.0%	4.3%
SC	1.9%	4.2%	0.1%	0.4%	0.0%	0.0%	0.0%	0.8%
SD	23.8%	35.2%	3.4%	5.8%	2.6%	0.0%	0.8%	0.0%
TN	20.9%	34.9%	0.8%	4.2%	3.7%	4.2%	6.6%	4.4%
TX	0.2%	1.3%	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%
UT	18.4%	24.3%	7.1%	1.2%	5.1%	5.5%	3.8%	9.9%
VA	6.2%	15.7%	0.2%	0.5%	0.0%	5.1%	1.4%	1.4%
VT	56.9%	61.3%	15.9%	11.5%	18.5%	66.7%	12.5%	24.5%
WA	2.3%	4.9%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%
WI	15.3%	22.0%	1.0%	3.2%	2.3%	8.0%	4.1%	5.9%
WV	60.4%	65.7%	12.6%	22.1%	16.5%	0.0%	20.0%	21.1%
WY	8.2%	12.7%	0.0%	3.1%	0.0%	0.0%	0.0%	0.0%
Total	8.6%	19.8%	0.4%	0.5%	0.9%	1.4%	1.2%	2.9%

Source: CRDC, 2015–16; Note: the numbers of students in some states and racial groups may be small.