

Participation in State-Funded Prekindergarten in Oklahoma

REL 2021-044
U.S. DEPARTMENT OF EDUCATION

A Publication of the National Center for Education Evaluation and Regional Assistance at IES



Participation in State-Funded Prekindergarten in Oklahoma

Katie Dahlke, Lynn A. Karoly, Rachel Perera, Michael Little, Chad Henry, Shannon Lasserre Cortez, and Dean Gerdeman

December 2020

This study examined participation in Oklahoma’s state-funded prekindergarten (preK) program for five cohorts of first-time public school kindergarten students (2014/15 through 2018/19) and compared the percentages of students who participated in the program by geographic locale and student characteristics. Across the five years examined, 74 percent of first-time public school kindergarten students had attended state-funded preK in the prior year. A substantially greater percentage of students in rural school districts participated than students in nonrural school districts. A substantially greater percentage of students identified to receive special education services in kindergarten participated in state-funded preK than students not identified to receive such services. Students eligible for reduced-price lunch participated at a moderately greater rate than students eligible for free lunch and students not eligible for free or reduced-price lunch. Compared with White students, a moderately greater percentage of American Indian students participated, while a substantially smaller percentage of Pacific Islander students and a moderately smaller percentage of Black students participated. The study also examined relationships between participation and geographic measures of access to early learning and care. Students who lived farther from a state-funded preK site were less likely to participate in state-funded preK, and students who lived farther from a Head Start center were more likely to participate. The differences in student participation across geographic areas and student characteristics reveal an opportunity for policies and strategies to promote greater awareness of state-funded preK or other early learning and care options.

Why this study?

Since 1998 Oklahoma has offered half-day or full-day state-funded prekindergarten (preK) education to all four-year-old children.¹ The program is offered through public school districts and funded as part of the state’s school finance formula. Parents may choose to enroll their child in state-funded preK alone or in combination with other available early learning and care programs.

Research conducted in Tulsa, Oklahoma, found that the state-funded preK program improves children’s early literacy and math skills as well as later education outcomes, such as middle school math achievement, enrollment in honors courses, and grade retention (Gormley & Phillips, 2005; Gormley et al., 2008; Gormley et al., 2018). A statewide analysis of the effect of the program on children’s cognitive skills showed gains in early literacy and math skills similar to those found in the Tulsa study (Wong et al. 2008).

Members of the Regional Educational Laboratory (REL) Southwest Early Childhood Education research partnership in the Oklahoma State Department of Education partnered with the REL Southwest to develop more comprehensive evidence on disparities in student participation in state-funded preK that might indicate challenges in program access or use. Annual reporting on preschools includes the percentage of four-year-olds who participated in preK at the state level (Friedman-Kraus et al., 2019). This study extends that information by providing evidence about participation in Oklahoma’s state-funded preK program over the five-year period 2013/14–2017/18 and differential participation by geographic locale and by student characteristics. In addition, the study provides evidence about the

For additional information, including background on the study, technical methods, and supporting analyses, access the report appendixes at <https://go.usa.gov/x77jE>.

1. Children who have reached age 4 on or before September 1 are eligible to attend this voluntary state-funded preK program.

relationship between participation in state-funded preK and local access to alternative early learning and care programs.

Although Oklahoma’s state-funded preK program does not charge tuition, other factors might affect parents’ choices and create barriers to enrolling their four-year-olds in the state-funded program or an alternative such as Head Start (when families are eligible) or a private early learning and care program. Families of various demographic and economic backgrounds might have different opportunities for or barriers to participation. Geographic factors and travel distance to state-funded preK might be particularly important in Oklahoma both because there are no tuition costs, which might otherwise influence enrollment decisions, and because in several rural areas, early learning and care programs are farther from children’s homes than they are in nonrural areas. In making choices about early learning, parents also might consider the public or private status of programs, perceived quality, or operational characteristics, among other features. The study findings can inform efforts by state and local child-serving agencies to increase parent awareness of preK options and enrollment, particularly among groups with lower participation in state-funded preK even when access to other early learning and care options is accounted for.

Research questions

This study addressed two research questions:

1. What percentage of first-time kindergarten students in the 2014/15 through 2018/19 school years had participated in Oklahoma’s state-funded preK in the prior year? How did student participation in state-funded preK vary over time, by geographic locale, and by student characteristics?
2. To what extent was students’ participation in state-funded preK related to travel time to state-funded preK and alternative preK options?

Key terms used in this report are defined in box 1. The data sources, study population, methods, and limitations are summarized in box 2 (see appendix A for additional information).

Box 1. Key terms

Head Start program. A federal program sponsored by the U.S. Department of Health and Human Services that awards grants to local public and private organizations to provide free prekindergarten (preK) to three- and four-year-old children. Head Start is generally made available only to children from households below the federal poverty line; however, up to 10 percent of a center’s enrollment can come from higher-income families. A Head Start site may collaborate with a district to offer state-funded preK and can receive state licensure as a licensed center-based child care site.

Oklahoma licensed center-based child care sites. Center-based early learning and care programs that have received licensure from the state. The Oklahoma Department of Human Services administers licensure to center-based child care sites, out-of-school-time programs, and family-based child care programs that meet minimum requirements set by the state. The following programs are exempt from licensure in Oklahoma: care provided in a child’s own home or by relatives, programs in which children attend on a drop-in basis and parents are on the premises, single-activity programs, and programs operating for 15 hours or less per week. A licensed center-based child site can collaborate with a school district to offer state-funded preK. A licensed center-based child care site may also be a Head Start site.

Oklahoma state-funded preK. Free, voluntary preK (half-day or full-day) offered to four-year-old children regardless of household income and provided through public school districts. The Oklahoma State Department of Education has accreditation requirements for state-funded preK programs, including certified teachers, a 10:1 child-to-teacher ratio, state-adopted curriculum standards, and space and facility requirements (Oklahoma State Department of Education, n.d., 2017a). School districts offer

state-funded preK on the basis of available resources and local needs. Nearly all (99 percent) Oklahoma districts offer state-funded preK. Districts can offer preK to all students or enroll students using a first-come, first-served policy or lottery. State-funded preK can be offered as a full-day or half-day program, depending on district decisions, with a minimum of 2.5 hours per day for half-day preK. Students eligible for the national school lunch program receive one or more meals, depending on the length and schedule of the school day. Students identified for special education services attend the same minimum number of hours per day as other preK students in their districts, though they may receive supplemental instruction depending on their individualized education program. State guidelines do not require transportation or afterschool care for preK students, but some districts choose to offer these services. Districts may collaborate with licensed center-based child care sites, Head Start, faith-based organizations, tribal early childhood centers, technology centers, community-based programs, or universities to house state-funded preK classrooms (Friedman-Kraus et al., 2019; Oklahoma State Department of Education, 2017b). Some state-funded preK sites also are Head Start sites or licensed center-based child care sites.

Box 2. Data sources, population, methods, and limitations

Data sources. The study team obtained student-level records from the Oklahoma State Department of Education for kindergarten students in public schools from the 2013/14 through 2018/19 school years. Data used for the study included records of enrollment in kindergarten and in state-funded prekindergarten (preK), student characteristics recorded in the administrative data, public school and district enrollment, and home addresses for the kindergarten year (a proxy for home addresses in the preK year, because home addresses in the preK year were available only for students who had participated in state-funded preK). The Oklahoma State Department of Education also provided the physical school address.

The study team obtained additional geographic data for the 2013/14 through 2017/18 school years to supplement data provided by the Oklahoma State Department of Education. Head Start center directories provided center names and addresses, and child care facility locator records provided facility names and address. The National Center for Education Statistics Common Core of Data provided school district urban-centric locale codes (U.S. Department of Education, n.d.). The U.S. Office of Management and Budget Metropolitan-Micropolitan Statistical Areas delineation files provided county indicators to designate rural/nonrural status to support geocoding (U.S. Census Bureau, 2018). Additional information on the data used in this study is in appendix A.

Study population. The study examined five statewide cohorts of students enrolled in public kindergarten in Oklahoma in the 2014/15 through 2018/19 school years (see tables A1 and A2 in appendix A). The data included 245,319 first-time kindergarten enrollment records across the five years. The study team used school administrative records to identify all first-time public school kindergarten students (181,711) who had participated in state-funded preK in the prior year, 2013/14 through 2017/18.

Methods. To address research question 1, the study team calculated the statewide percentage of first-time public school kindergarten students who participated in state-funded preK in the prior year across the five kindergarten cohorts overall (that is, pooling cases across all five years) and separately by year (2014/15 through 2018/19). The study team also calculated the percentages of students who participated in state-funded preK by geographic locales (rural or nonrural), county, school district, and the following student characteristics: gender, race/ethnicity, free or reduced-price lunch eligibility status, English learner status, and special education status.

To address research question 2, the study team employed statistical models to estimate the relationships between local travel time to alternative early learning and care program sites and students' participation in state-funded preK, controlling for student characteristics, district rural or nonrural status, and district and time fixed effects. The study team estimated student travel time to three types of program sites: state-funded preK, Head Start centers, and licensed center-based child care sites. Estimated travel time was calculated as the travel time (in minutes) to the closest site based on driving time for each type of site (see table A3 in appendix A). The statistical models also provided supplemental findings related to research question 1, defined as estimated subgroup differences in participation in state-funded preK, after other differences between students and between districts were accounted for. Footnotes highlight instances in which estimated subgroup differences from the statistical models indicated findings that differed from the primary findings presented for research question 1.

Presentation of group differences. This study used population-level data for first-time public school kindergarten students. The report presents unadjusted group differences from this population for the primary findings. Standardized differences in participation between groups were estimated using the Cox index. Standardized differences of at least 0.25 standard deviation units were designated as substantial differences. Standardized differences of at least 0.12 standard deviation units and less than 0.25 standard deviation units were designated as moderate differences.

Limitations. The study has several limitations. First, the study did not have information on the full population of four-year-olds in Oklahoma. The study population was limited to first-time public school kindergarten students. This limitation excluded children who moved out of state between the preK year and kindergarten and children who attended kindergarten at a private school or were home schooled.

Second, participation in preK as measured in this study was specific to the Oklahoma state-funded preK program. The study could not determine whether students participated in other early learning and care programs, such as Head Start or private centers. The study therefore underestimates prior enrollment in any preK program among public school kindergarten students. To provide additional context on early learning and care program participation, the study team used program-level data on Head Start enrollment in Oklahoma to estimate Head Start participation among the population of children in the study years and the combined enrollment in state-funded preK and Head Start (see appendix C). This method provides an approximate upper-bound estimate of public early learning and care program participation because some children counted as state-funded preK participants might also have been included in the counts of Head Start participants.

Third, the study team relied on students' home address as of kindergarten as a proxy for their address during preK, and a small percentage of addresses used for geocoding relied on zip codes rather than complete addresses. This introduced measurement error in the distance calculations that, in the context of linear regression, likely attenuated the relationships between travel time and participation in state-funded preK.

Fourth, the available administrative data did not capture other hypothesized determinants of participation in state-funded preK, such as parents' employment status and work schedules or the cost and availability of all alternative early learning and care programs. As such, the findings offer a starting point for considering opportunities to increase awareness and participation in preK.

Findings

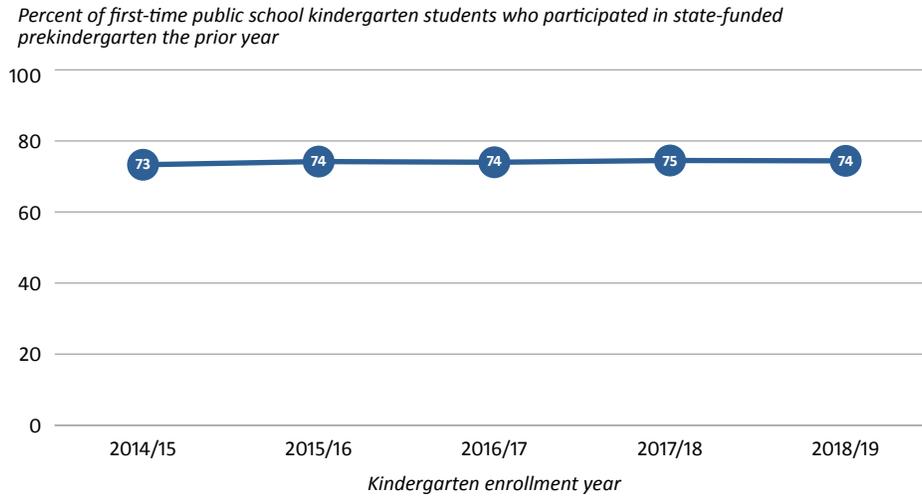
This section summarizes the key findings of the study on participation in state-funded preK in Oklahoma.

A large majority of first-time public school kindergarten students had attended state-funded preK in the prior year

Among first-time public school kindergarten students in Oklahoma in the 2014/15 through 2018/19 school years, 74 percent had attended state-funded preK in the prior year.² Participation remained stable across the five years examined, ranging from 73 percent in 2014/15 to 75 percent in 2018/19 (figure 1; see table B1 in appendix B).

2. Consistent with this finding, a supplemental analysis based on aggregate program enrollment and population data showed that 75 percent of Oklahoma four-year-olds had participated in the state-funded preK program. Another supplemental analysis including program-level enrollment data from Head Start programs estimated that 74–87 percent of kindergarten students in 2018/19 had participated in state-funded preK, Head Start, or both in the prior year as four-year-olds (see appendix C). This is considered an upper-bound estimate of publicly funded preK through Oklahoma state funding and federal Head Start funding because some children may be counted as enrolled in both programs.

Figure 1. A majority of 2014/15–2018/19 Oklahoma public school kindergarten students in each year had participated in state-funded prekindergarten the prior year



Source: Authors' analysis of data from the Oklahoma State Department of Education.

Participation in state-funded preK varied by geographic locale

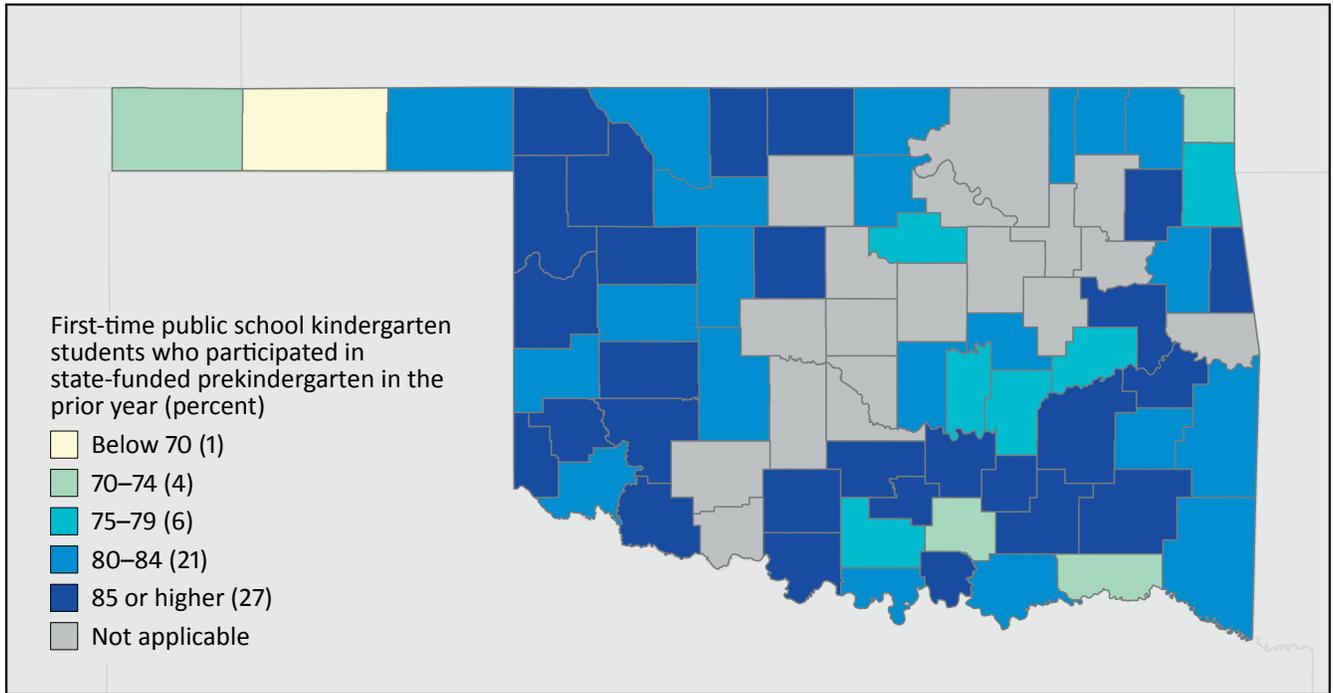
Participation in state-funded preK varied across counties and school districts. Median county participation in state-funded preK was 82 percent of first-time kindergarten students. Participation ranged from 61 percent to 93 percent across counties (map 1) and from 21 percent to 100 percent across school districts (see map B1 in appendix B).

Greater percentages of students in rural areas than in nonrural areas participated in state-funded preK. Overall statewide, students in rural school districts participated in state-funded preK at a substantially greater rate (82 percent) than students in nonrural districts (71 percent) from 2014/15 through 2018/19 (figure 2; see table B2 in appendix B). The difference was similar for individual years, ranging from 10 percentage points to 11 percentage points (see table B3 in appendix B).

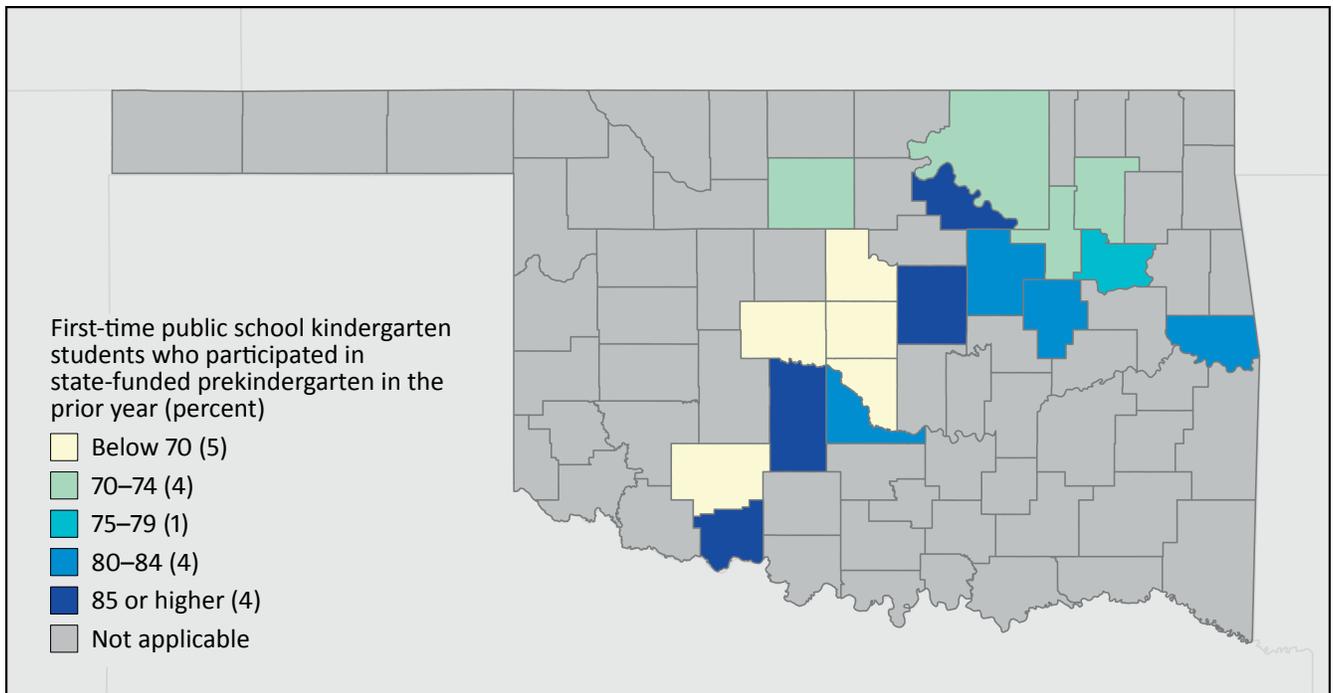
At the county level the median participation rate was greater in rural counties (84 percent) than in nonrural counties (75 percent). Participation rates were high (85 percent or greater) in 27 of 59 rural counties but in only 4 of 18 of nonrural counties (see map 1). Similarly, a greater proportion of rural school districts than of nonrural school districts had high participation rates (see map B2 in appendix B).

Map 1. A greater proportion of rural counties than of nonrural counties had high participation in state-funded prekindergarten among 2014/15–2018/19 Oklahoma public school kindergarten students, five years combined

Rural counties



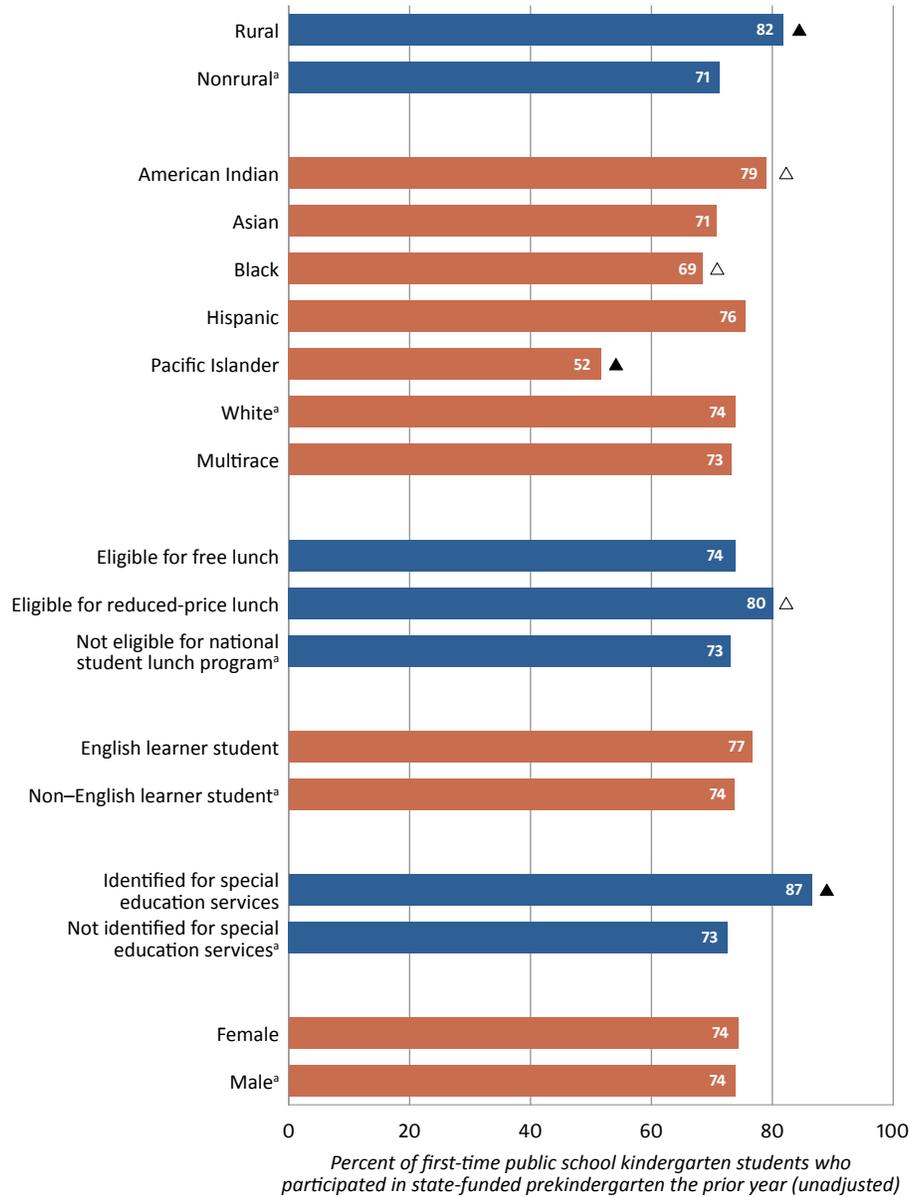
Nonrural counties



Note: Numbers in parentheses are number of counties. Counties were designated as rural or nonrural based on whether they were identified as metropolitan areas (nonrural) in the September 2018 U.S. Office of Management and Budget Metropolitan-Micropolitan Statistical Areas delineation files. Participation rates of 85 percent or higher were designated as high.

Source: Authors' analysis of data from the Oklahoma State Department of Education and the U.S. Office of Management and Budget September 2018 Metropolitan-Micropolitan Statistical Areas delineation files (U.S. Census Bureau, 2018).

Figure 2. Participation in state-funded prekindergarten in the prior year among 2014/15–2018/19 Oklahoma public school kindergarten students differed by student subgroup, five years combined



Note: A shaded triangle indicates a substantial difference (a standardized difference of 0.25 or greater standard deviation units) in mean participation in state-funded prekindergarten between the indicated group and the reference group. An unshaded triangle indicates a moderate difference (a standardized difference of between 0.12 and less than 0.25 standard deviation units).

a. Reference group.

Source: Authors' analysis of data from the Oklahoma State Department of Education.

Participation in state-funded prekindergarten differed by student subgroup

Compared with White students, smaller percentages of Pacific Islander students and Black students and greater percentages of American Indian students participated in state-funded preK. Participation among Pacific Islander students³ (52 percent) was substantially lower than participation among White students⁴ (74 percent), with a 22 percentage point gap (see figure 2; see table B2 in appendix B). Two other racial/ethnic groups showed moderate differences in participation in state-funded preK. Compared with White students, moderately greater percentages of American Indian students (79 percent) and moderately smaller percentages of Black students (69 percent) participated in state-funded preK.⁵ Group differences were generally consistent across individual years (see table B3).

Greater percentages of students eligible for reduced-price lunch participated in state-funded preK than of students eligible for free lunch and students not eligible for the national school lunch program. Kindergarten students eligible for reduced-price lunch participated in state-funded preK at moderately higher rates (80 percent) than their peers who were not eligible for the national school lunch program (73 percent)⁶ and at moderately higher rates than their peers who were eligible for free lunch (74 percent) across the five years examined (see figure 2 and table B2 in appendix B). Differences in participation rates between students eligible for reduced-price lunch and students not eligible for the national school lunch program ranged from 5 percentage points to 9 percentage points across individual years (see table B3).

Participation rates were similar for kindergarten students eligible for free lunch (74 percent), the most economically disadvantaged group of students, and students not eligible for the national school lunch program (73 percent; see figure 2 and table B3 in appendix B). Students eligible for free lunch were also likely to be eligible for Head Start in the prior year and therefore might have been served by Head Start rather than by state-funded preK.

Greater percentages of English learner students participated in state-funded preK than of non-English learner students. English learner students in public school kindergarten participated in state-funded preK at higher rates (77 percent) than non-English learner students (74 percent; see figure 2 and table B2 in appendix B).⁷ The difference between the two groups increased during the five years, from 1 percentage point for the 2014/15 kindergarten cohort to 4 percentage points for the 2018/19 cohort (see table B3).

Greater percentages of students identified to receive special education services participated in state-funded preK than of students not identified to receive such services. Kindergarten students identified to receive special education services participated in state-funded preK at a substantially greater rate (87 percent) than students not identified to receive such services (73 percent; see figure 2 and table B2 in appendix B). The differences in participation between these two groups were similar across individual years, ranging from 14 percentage points to 15 percentage points (see table B3).

3. Pacific Islander students represented a small proportion of the population examined, comprising approximately 200 individual students per year (0.4 percent).

4. White students comprised the largest demographic group in the population and served as the reference group for the summary findings.

5. After other student and district characteristics were accounted for, differences fell below the threshold for moderate differences in participation for two racial/ethnic subgroups: Black students relative to White students and American Indian students relative to White students (see tables B4 and B5 in appendix B). This suggests that the overall differences in participation for these subgroups were due in part to differences in characteristics other than race/ethnicity.

6. After other student and district characteristics were accounted for, differences between students eligible for reduced-price lunch and students not eligible for the national school lunch program fell below the threshold for moderate difference in participation (see table B5 in appendix B). This suggests that the overall differences in participation for these subgroups were due in part to differences in characteristics other than socioeconomic status.

7. After other student and district characteristics were accounted for, the difference between English learner students and non-English learner students exceeded the threshold for moderate differences in participation (7 percentage points difference between the two groups of students; standardized difference = 0.25; see table B5 in appendix B).

Similar percentages of boys and girls participated in state-funded preK. Over 2014/15–2018/19, 74 percent of girls and 74 percent of boys who attended public school kindergarten for the first time had participated in state-funded preK in the prior year (see figure 2 and table B2 in appendix B). When individual years were examined, participation in state-funded preK differed between boys and girls by less than 2 percentage points (see table B3).

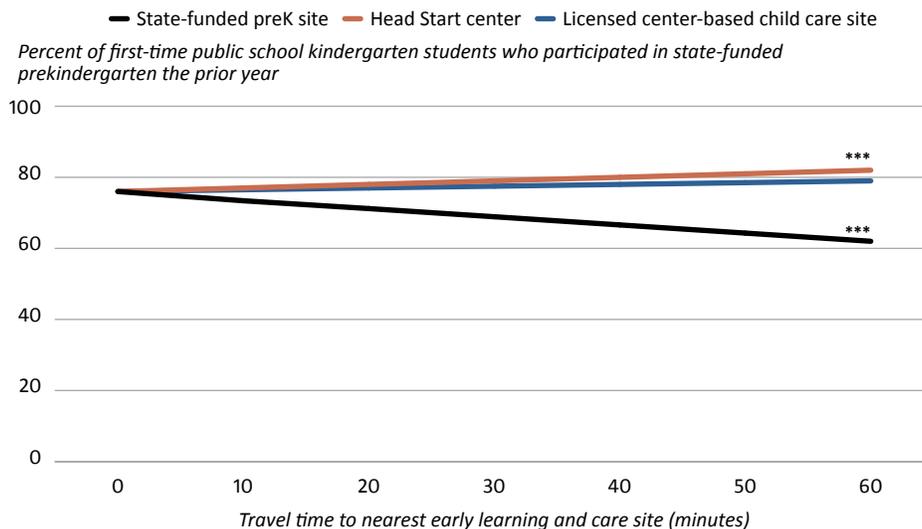
Public school kindergarten students who lived farther from a state-funded prekindergarten (preK) site were less likely to participate in state-funded preK, and students who lived farther from a Head Start center were more likely to participate

Estimated student travel time to state-funded preK sites and to alternative early learning and care sites, an indicator of local access to early childhood options, was associated with student participation in state-funded preK. This finding suggests that proximity to early learning and care sites is associated with parents’ enrollment decisions.

Travel time to the nearest state-funded preK site was negatively associated with student participation in state-funded preK. The average travel time to the nearest school or center that offered state-funded preK was 5 minutes, with travel times ranging from 0 minute⁸ to 59 minutes (see table A3 in appendix A for additional information on travel time dispersion). Travel time to the nearest site was negatively associated with student participation in state-funded preK. For every 10 minutes farther away from the nearest site, students had a 2 percentage point lower probability of having participated in state-funded preK, with student and district characteristics and travel times to the nearest Head Start center and nearest licensed center-based child care site held constant (figure 3; see table B4 in appendix B, model 4).

Travel time to nearest Head Start center was positively associated with student participation in state-funded preK. The average estimated travel time to the nearest Head Start center was 9 minutes, with travel times ranging from

Figure 3. Among 2014/15–2018/19 Oklahoma public school kindergarten students, participation in state-funded prekindergarten (preK) the prior year was less likely among students who lived farther from a state-funded preK site and more likely among students who lived farther from a Head Start center



*** Significant at $p < .001$.

Source: Authors’ analysis of data from the Oklahoma State Department of Education, the Oklahoma Head Start Collaboration Office Head Start directories, and the Oklahoma Department of Human Services child care facility records.

8. For cases in which both the student address and site address were geocoded with zip codes and the zip codes were the same, the resulting distance was calculated as zero.

0 minute to 60 minutes (see table A3 in appendix A for additional information on travel time dispersion). Travel time to the nearest Head Start center was positively associated with student participation in state-funded preK. For every 10 minutes farther away from the nearest Head Start center, students had a 1 percentage point greater probability of having participated in state-funded preK, with student and district characteristics and travel times to the nearest state-funded preK site and nearest licensed center-based child care site held constant (see figure 4 and table B4 in appendix B, model 4).

Travel time to nearest licensed center-based child care site was not associated with student participation in state-funded preK. The average estimated travel time to the nearest licensed center-based child care site was 5 minutes, with travel times ranging from 0 minute to 60 minutes (median time was 3 minutes; see table A3 in appendix A for additional information on travel time dispersion). Travel time to the nearest licensed center-based child care site was not associated with participation in state-funded preK (see figure 3 and table B4 in appendix B, model 4).

Implications

Members of the REL Southwest Early Childhood Education partnership and other education leaders in Oklahoma want to maximize access to and participation in early learning and care for all students. This study found that Oklahoma's state-funded preK program broadly served first-time kindergarten students from 2014/15 through 2018/19, including students in subgroups that might benefit most from participation in preK. The students who did not participate in state-funded preK, approximately 25 percent of first-time kindergarten students, included students who did not participate in any preK program as well as students who attended other preK options such as Head Start or a licensed center-based child care site. Up to 13 percent of four-year-old children were enrolled in Head Start, but this is an upper-bound estimate because the study could not adjust for possible duplicate counting of enrollment in Head Start and state-funded preK (see box 2 and appendix C). Data on enrollment in private programs are not routinely collected. Students not participating in any form of preK could be a priority for Oklahoma state and local education agencies to increase awareness and encourage families to participate in the state-funded preK program or other preK options that meet Oklahoma's quality standards.

The study findings suggest that some subgroups of students could be prioritized in gathering information about parent decisions and enrollment in early learning and care. Understanding parent decisions might be particularly important in nonrural communities, to explore whether lower participation in state-funded preK in these areas reflects children's access to other early learning and care options, parent awareness about early learning and care options, or other factors. Nationally, nonrural areas have greater availability of all types of center-based programs than rural areas do (Nores & Barnett, 2014), which might reduce demand for state programs.

In addition, the findings indicate three other student subgroups to prioritize in gathering additional information about parents' decisions and children's enrollment in early learning in order to determine whether students are being equitably served by preK: students eligible for free lunch, Black students, and Pacific Islander students. The moderately lower participation in state-funded preK for students eligible for free lunch (compared with students eligible for reduced-price lunch) and Black students (compared with White students) might be due in part to some students' participation in Head Start, which could not be confirmed in this study. Black students nationally are more likely to participate in Head Start than their White counterparts (Child Trends Databank, 2015), and some of the Oklahoma students eligible for free lunch would have been eligible for Head Start. The low participation in state-funded preK among Pacific Islander students (who made up about 200 students or about 0.4 percent of first-time kindergarten students a year) suggests the presence of barriers that may be particularly prevalent among this small subgroup of children and families.

Limitations in data maintained by Oklahoma agencies made it infeasible to accurately account for individual student participation in preK across publicly subsidized programs, including state-funded preK, Head Start, and licensed

center-based child care site receiving subsidies from the Oklahoma’s Child Care Subsidy program. This challenge could be eased by developing an early childhood integrated data system or by gathering, at the time of kindergarten entry, parents’ reports of their child’s participation in preK and other early learning and care programs in the year before kindergarten entry. Parent reports of other factors that might affect their choice of early learning and care options (for example, parents’ employment status and work schedules) would provide other relevant information that is not typically available in administrative data systems. States across the country are working to link disparate data systems to form unified systems that provide a clearer picture of how they are serving children and families (First Five Years Fund, 2019; Regenstein, 2017). Currently, 22 states link data between all or some early child education programs, and 12 others have plans to do so (Child Trends, 2018). Improved data can support a more complete understanding of early learning experiences, equity of participation, factors affecting parent choice, and the implications of preK participation patterns for school readiness and subsequent school success.

References

- Child Trends. (2018). *2018 state of early childhood data systems interactive map*. Retrieved April 24, 2020, from <https://www.childtrends.org/publications/2018-state-of-early-childhood-data-systems-interactive-map>.
- Child Trends Databank. (2015). *Head Start*. Retrieved April 24, 2020, from <https://www.childtrends.org/?indicators=head-start>.
- First Five Years Fund. (2019). *Preschool Development Grant Birth through Five (PDG B-5)*. Retrieved April 24, 2020, from <https://www.ffyf.org/issues/pdg/>.
- Friedman-Kraus, A. H., Barnett, W. S., Weisenfeld, G. G., Kasmin, R., DiCrecchio, N., & Horowitz, M. (2019). *The state of preschool 2018: State preschool yearbook*. Rutgers University, Graduate School of Education, National Institute for Early Education Research. <https://eric.ed.gov/?id=ED595313>.
- Gormley, W. T., & Phillips, D. (2005). The effects of universal pre-k in Oklahoma: Research highlights and policy implications. *Policy Studies Journal*, 33(1), 65–82. <https://eric.ed.gov/?id=ED482858>.
- Gormley, W. T., Phillips, D., & Anderson, S. (2018). The effects of Tulsa’s Pre-K program on middle school student performance. *Journal of Policy Analysis and Management*, 37(1), 63–87. <https://eric.ed.gov/?id=EJ1163976>.
- Gormley, W. T., Phillips, D., & Gayer, T. (2008). Preschool programs can boost school readiness. *Science*, 320(5884), 1723–1724.
- Nores, M., & Barnett, W. S. (2014). *Access to high quality early care and education: Readiness and opportunity gaps in America*. National Institute for Early Education and Center on Enhancing Early Learning Policy Report. Center on Enhancing Early Learning Outcomes. <https://eric.ed.gov/?id=ED555707>.
- Oklahoma State Department of Education. (n.d.). *Standards for accreditation of Oklahoma schools 2014–15*. <http://sde.ok.gov/sde/sites/ok.gov.sde/files/documents/files/Accreditation%20standards-Early%20Childhood%202014.pdf>.
- Oklahoma State Department of Education. (2017a). *Four-year-old program*. Retrieved April 24, 2020, from <http://sde.ok.gov/sde/four-year-old-program>.
- Oklahoma State Department of Education. (2017b). *February 2017 legislative briefing: Pre-kindergarten program*. <https://sde.ok.gov/sites/ok.gov.sde/files/Legislative%20Briefing%20PreK%20Program.pdf>.
- Regenstein, E. (2017). An unofficial guide to the why and how of state early childhood data systems. *The Ounce Policy Conversations*, 7(1), 1–47. https://www.theounce.org/wp-content/uploads/2017/08/PolicyPaper_UnofficialGuide.pdf.

U.S. Census Bureau. (2018). Delineation files. Retrieved July 8, 2019, from <https://www.census.gov/geographies/reference-files/time-series/demo/metro-micro/delineation-files.html>.

U.S. Department of Education. Institute of Education Sciences, National Center for Education Statistics. (n.d.). Elementary/Secondary Information System. Retrieved July 8, 2019, from <https://nces.ed.gov/ccd/elsi/>.

Wong, V. C., Cook, T. D., Barnett, W. S., & Jung, K. (2008). An effectiveness-based evaluation of five state pre-kindergarten programs. *Journal of Policy Analysis and Management*, 27(1), 122–154. <https://eric.ed.gov/?id=EJ780612>.

REL 2021–044

December 2020

This report was prepared for the Institute of Education Sciences (IES) under Contract ED-IES-91990018C0002 by the Regional Educational Laboratory Southwest administered by American Institutes for Research. The content of the publication does not necessarily reflect the views or policies of IES or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

This REL report is in the public domain. While permission to reprint this publication is not necessary, it should be cited as:

Dahlke, K., Karoly, L. A., Perera, R., Little, M., Henry, C., Lasserre-Cortez, S., & Gerdeman, D. (2020). *Participation in state-funded prekindergarten in Oklahoma* (REL 2021–044). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest. <http://ies.ed.gov/ncee/edlabs>.

This report is available on the Regional Educational Laboratory website at <http://ies.ed.gov/ncee/edlabs>.