Preschool Program Review And Full-Day Kindergarten

Research Report No. 450

Office Of Education Accountability

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Foreword

For more than 25 years, the Office of Education Accountability (OEA) has played an important role in reporting on education reform in the Commonwealth of Kentucky. Today, the employees of OEA strive to provide fair and equitable accountability, documenting the challenges and opportunities confronting Kentucky's education system.

In November 2016, the Education Assessment and Accountability Review Subcommittee approved the OEA 2017 study agenda, which included the report you're reading now. This study analyzes revenues, expenditures, enrollment, characteristics, and outcomes of preschool and include an analysis of full-day kindergarten at the state and district levels.

The Office of Education Accountability would like to thank staff at the Governor's Office of Early Childhood and the Kentucky Department of Education for their assistance with this report.

The Legislative Research Commission comprises more than 400 professionals who work to make the legislative process accessible, informative, and relevant to the citizens of the commonwealth. OEA is an important part of that mission. Thank you for your interest in this report and for your interest in preschool and kindergarten in Kentucky.

David A. Byerman
Director

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Summary

Kentucky established its state-funded preschool program through the Kentucky Education Reform Act of 1990 (KERA). Initially, children qualified to attend preschool if they were 4 years old and qualified for the federal free lunch program or were 3 or 4 years old with a disability, regardless of income. By 2016, the General Assembly increased the number of at-risk children eligible for state-funded preschool by increasing the eligibility requirements to 160 percent of the federal poverty level.

Head Start was created in 1965 to help communities meet the needs of disadvantaged children. In Kentucky, state-funded preschool and Head Start served an average of 60.45 percent of eligible 4-year-olds in school years 2014 through 2016. During that same period, 21,634 preschool-eligible children remained at home with a parent or guardian instead of attending Head Start, state-funded preschool, or child care.

In establishing Kentucky's state-funded preschool program, the General Assembly intended for state-funded preschool to not supplant Head Start funding and for Head Start to continue serving the number of eligible 4-year-olds that it served in 1989. KRS 157.3175 requires that each school district's preschool proposal include a certification from the local Head Start director that the Head Start program is "fully utilized." To meet this requirement, each year local school districts and Head Start providers sign full utilization agreements. Data collected from the 2017 school year full utilization agreements indicate that 32 percent of districts are not meeting the pre-KERA Head Start enrollment targets for 4-year-olds, so approximately 1,500 fewer 4-year-olds are served by Head Start in 2017 than in 1989.

Local districts are required to annually submit preschool proposals to the commissioner of education for review and approval of each program. The preschool proposals are lacking in several areas.

Districts are only required to offer a half-day preschool program 4 days per week; however, 40 percent of districts are providing full-day preschool 4 or 5 days a week. The most common type of preschool schedule is a half-day double session 4 days per week, with the fifth day for services to children and their families, such as home visits, special experiences for children, parent training, or coordination of medical or social services. In addition, districts tend to believe that they are serving a greater percentage of preschool-eligible children than they actually are. The 4-year-old participation rates by county vary from 38 percent to 100 percent of eligible students enrolling in preschool or Head Start.

The number of at-risk and special education preschool students has fluctuated over the years. While the income requirement threshold for state-funded preschool has increased in order to serve more students, overall Kentucky is currently serving 110 fewer preschool students than in the 2006 school year. The at-risk 4-year-old population participating in preschool increased 13.8 percent, and the special education population decreased by 18.2 percent relative to the 2006 population. In addition, less than half of all limited English proficiency (LEP) students participated in the state-funded preschool program even though more than 80 percent of them

qualify for free or reduced-price lunch (FRPL), also qualifying them for state-funded preschool services. Moreover, less than 8 percent of LEP students were identified as qualifying for special education services in school years 2015 to 2017, compared to 14 percent of non-LEP students.

After the Education Professional Standards Board adopted 704 KAR 3:410 in 2005, preschool teachers were required to have an Interdisciplinary Early Childhood Education (IECE) certificate. 704 KAR 3:410 allowed preschool teachers who had been teaching without a certificate, prior to the promulgation of the regulation, to continue teaching preschool as long as they remained in the same district. These preschool teachers were assigned the title "associate teacher." As of 2017, 79 percent of preschool teachers have an IECE certificate. Currently, there are only 89 preschool associate teachers remaining in the state; preschool associate teachers comprise 9 percent of all preschool teachers. Only 1 percent of preschool teachers have a probationary IECE certification, and another 1 percent hold an emergency IECE certification.

Districts reported spending, on average, $4,395 more per child than they received from the preschool funds allocated by the General Assembly. Of the $9,302 districts reported spending per child, $2,056 was spent on special education services for preschool students and $1,035 was spent on transportation. Districts are not required to transport preschool students; however, all but 13 districts do so. In addition, districts are required to provide a driver's assistant for every bus that transports preschool students. Districts providing preschool transportation receive no additional funds to provide this service. Districts that reported the largest expenditures in preschool were districts that operated a full-day preschool program.

The educational achievement of state-funded preschool students is measured and assessed in two ways. First, prior to enrolling in kindergarten, preschool teachers observe and assess students on academic and social learning outcomes. Since districts have the option to use one of five different assessments, comparing student progress and achievement across Kentucky's 173 school districts is difficult. Second, since the fall of 2013, all students entering kindergarten, statewide, have taken a common kindergarten entry screener to measure kindergarten readiness. The screener that is used is the Brigance Kindergarten Screen III. The preschool assessments and kindergarten readiness data for students attending state-funded preschool, however, send conflicting messages about social and behavioral outcomes. While kindergarten readiness data suggest that social emotional outcomes are a strength (73 percent average or above), preschool data suggest the opposite, with only 37 percent considered age-appropriate.

In 2017, the kindergarten readiness rate for all students entering kindergarten was 50.1 percent. State-funded FRPL preschool students outperformed their nonpreschool counterparts by approximately 15 percentage points, and state-funded preschool students with individualized education programs (IEPs) outperformed nonpreschool IEP students by roughly 6 percentage points. Additionally, kindergarten readiness rates for state-funded preschool students receiving free or reduced-price lunch or having IEPs are almost twice as high as the readiness rates of FRPL and IEP students who listed only "home" as their prior setting.

Over the last 3 years, an equal percentage of white students and black students who had a prior setting of preschool were ready for kindergarten. Among FRPL students who had only a prior setting of preschool, a greater percentage of black students were ready for kindergarten than

white students. Preschool students who participated in a preschool program for more than 16 hours per week were more likely to test ready for kindergarten than students who attended for less than 16 hours per week. Among preschool students, the average rate of readiness in districts with more than 16 hours of scheduled preschool time per week is 13 percentage points higher than in districts with less than 12 hours of preschool per week. In districts with more than 16 hours of scheduled preschool time per week, the average rate of kindergarten readiness is 54.9 percent, compared to 41.9 percent in districts with less than 12 hours per week.

The Governor's Office of Early Childhood Race to the Top Grant included $4.9 million for the Kentucky Department of Education (KDE) to provide training and incentives and for KDE to reevaluate each district's preschool program for using the Kentucky All STARS rating system. All preschools started with a rating of 3 STARS, and preschool programs could ask KDE to come and perform a reevaluation. Of the 370 preschool programs that KDE has reevaluated, 98 percent, or 364, received a 5-STAR rating.

Kindergarten

As of the 2017 school year, only six districts offered half-day kindergarten, with another four districts offering both full- and half-day kindergarten. Nine districts had moved to full-day kindergarten over the prior 7 years. The per-pupil cost to move to full-day kindergarten varied among these districts, ranging from $844 to almost $3,000. Districts' largest expense associated with providing full-day kindergarten was the increase in salaries and benefits. KDE has included in its 2018–2020 biennial budget a request for the General Assembly to fund full-day kindergarten at an estimated increase of $171 million.

Compared to students who attended half-day kindergarten, students who had attended full-day kindergarten were 1.08 times as likely to score proficient or better on the 3rd-grade K-PREP reading test and 1.12 times as likely to score proficient or better on the 3rd-grade K-PREP math test when controlling for demographic variables. This result was statistically significant and consistent with other research on full-day kindergarten results.

This report mentions several issues concerning data used in this study. Areas of concern include

- expenditures reported on annual financial reports for preschool and kindergarten,
- enrollment of preschool and Head Start children,
- lack of preschool attendance records in the student information system,
- prior setting data,
- cut scores used for the kindergarten readiness outcomes, and
- blended and partially blended preschool and Head Start programs.

In addition, there are compliance issues concerning districts' preschool program proposals and local annual evaluations.

The report makes 15 recommendations:

Recommendation 2.1
The Kentucky Board of Education should update 704 KAR 3:410 to set at-risk 4-year-old preschool student eligibility to at least 160 percent of the poverty level and review eligibility regularly to take into account changes made by the General Assembly in the biennial budget process.

Recommendation 2.2
The Kentucky Department of Education should change the chart of accounts' instructional level 11 heading to "preschool" to match the description of the program and should add an additional instructional level code to track other district Pre-K expenditures. The Kentucky Department of Education should also work with district finance officers to correctly record preschool expenditures on annual financial reports.

Recommendation 2.3
The Kentucky Department of Education should consider recommending that the Kentucky Board of Education allocate a portion of preschool funds to districts that transport preschool students.

Recommendation 3.1
The Kentucky Department of Education should enforce KRS 157.3175 and require districts to submit complete preschool proposals that include all data elements. If some of the documentation can be obtained electronically or is no longer needed, KDE should work with the General Assembly to modify the requirements of the preschool proposal documentation.

Recommendation 3.2
The Kentucky Department of Education should provide to the General Assembly, before the 2018–2019 school year, a district-level analysis of the potential cost of increasing preschool enrollment of 4-year-old students. This analysis should include an inventory of available space in district school buildings, supplies, and playground equipment, and the funding that the General Assembly may have to include in its preschool appropriations.

Recommendation 3.3
School districts, with support and guidance from the Kentucky Department of Education, should complete a needs assessment analysis in order to determine whether the educational needs of preschool-age limited English proficiency students are being met and to explore possible resources that may assist in better meeting the needs of these students.

Recommendation 3.4
Kentucky Department of Education should enforce 704 KAR 3:410, sec. 5(4) and require districts to use Infinite Campus to record the daily attendance of preschool students.

Recommendation 4.1
The Kentucky Department of Education should ensure that all districts complete an annual preschool evaluation that meets and fulfills the requirements outlined in 704 KAR 3:410, sec. 9.

Recommendation 4.2
The Kentucky Department of Education and the Early Childhood Advisory Council should ensure that all future reporting of preschool and Head Start enrollments is accurate and consistent.

Recommendation 4.3
School districts, with support and guidance from the Kentucky Department of Education, regional training centers, and the Governor's Office of Early Childhood, should review, and where necessary revise, their recruitment strategies to increase the enrollment of children eligible for state-funded preschool in order to more fully comply with 704 KAR 3:410, sec. 5. One possible strategy may include districts adding a question on the kindergarten enrollment form asking why parents did not enroll their child in an early childhood education program.

Recommendation 4.4
If the Kentucky Department of Education continues to use the Brigance Kindergarten Screen III to determine kindergarten readiness, it should recalibrate the criterion/standard for readiness based on data gathered in the initial years of its use as a common screener in Kentucky.

Recommendation 4.5
The Kentucky Department of Education should verify prior setting data for students enrolled in state-funded preschool or Head Start. Students enrolled in blended or partially blended state-funded preschool/Head Start programs should be accurately identified in the Kentucky Student Information System.

Recommendation 4.6
The Kentucky Department of Education should engage in a longitudinal assessment of the relationships between kindergarten readiness and K-PREP and other indicators of future academic success.

Recommendation 4.7
The Kentucky Department of Education should conduct a full and complete evaluation of the state-funded preschool program at least every 5 years beginning in 2020. The evaluation should be provided to the Kentucky Board of Education and to the General Assembly.

Recommendation 5.1
The Kentucky Department of Education should work with district finance officers to correctly record kindergarten expenditures on annual financial reports using instructional level 12.

Chapter 1

Preschool And Kindergarten Program Overview

Background

Preschool

State-funded preschool was created with the Kentucky Education Reform Act of 1990 (KERA). The program originally enrolled 4-year-old students who qualified for free lunch and 3- and 4-year-old children with a disability.

Individual states began funding their own early childhood education programs in the 1980s. Kentucky established its state-funded preschool program through the Kentucky Education Reform Act of 1990 (KERA). The preschool program was optional in 1990–1991 but mandatory in the 1991–1992 school year. Kentucky's state-funded preschool program enrolls 4-year-old students who qualify for the federal free lunch program and 3- and 4-year-old children with a disability, regardless of income, as required by KRS 157.3175. Depending on available space and district policies, other preschool-age children can be served; the expense can be covered by the local district or by a fee set by the local board of education.

Head Start was created by the federal government in 1965 to help communities meet the needs of disadvantaged children. Head Start began as a half-day summer pilot program and included not only an educational component but also several other services for families, such as parent outreach, health, nutritional, and psychological supports.

Districts cannot enroll a 4-year-old student in preschool if that student also qualifies for the Head Start program, until Head Start is fully utilized. This means that the Head Start program is serving the same number of 4-year-old students as it did in 1989.

In creating the preschool program, it appears that the General Assembly sought to ensure that districts avoided duplication of services. To serve as many 4-year-old children as possible, the General Assembly did not want to supplant federal funds that were spent on Head Start. To achieve these goals, local school districts are required to work collaboratively with the local Head Start director to ensure that the Head Start program is at full utilization. This means that, before a district can enroll a Head Start-eligible student in its preschool program, the local Head Start center must be fully utilized (that is, it must enroll the number of students attending Head Start in 1989).

In 1999, Governor Paul Patton created the Governor's Early Childhood Task Force. This task force was charged with developing a 20-year plan that supported high-quality early childhood experiences.

During the 2000 regular session, both chambers of the General Assembly unanimously passed the Early Childhood Development Act (House Bill 706). The bill established the Early Childhood Development Authority in the Governor's Office. That office was tasked with managing the expenditures of the early childhood development fund. This fund received a quarter of the revenues generated from the Kentucky Phase I Tobacco Settlement.

Preschool teachers were not required to hold a certificate in interdisciplinary early childhood education prior to the 2002-2003 school year.

Prior to the 2002-2003 school year, preschool teachers were not required to hold a certificate in interdisciplinary early childhood education (IECE). 704 KAR 3:410 requires preschool teachers to be certified in interdisciplinary early childhood education. Preschool teachers who did not hold this certification were grandfathered in, allowing them to continue to teach preschool as long as they continued to teach in the district where they were employed. Their job classifications were changed to "preschool associate teachers." There are currently 89 preschool associate teachers, in 27 school districts, still working as preschool teachers.

In 2009, by executive order, Governor Steve Beshear created the Task Force on Early Childhood Development. This task force was created to promote a greater collaboration among service providers, develop a unified vision for early childhood development policies, and ensure a successful transition to kindergarten.

In July 2011, by executive order, Governor Beshear created the Early Childhood Advisory Council (ECAC). ECAC replaced the Early Childhood Development Authority established by the Early Childhood Development Act in the 2000 session. ECAC includes 26 members who provide guidance and promote program accountability that affects children and families in Kentucky. In the 2013 legislative session, the General Assembly passed HB 184, which incorporated the changes made by the executive order. HB 184 is commonly referred to as the KIDS NOW legislation.

The Governor's Office of Early Childhood was awarded a $44.3 million Race To The Top – Early Learning Challenge grant in December 2013.

In December 2013, the Governor's Office of Early Childhood (GOEC) was awarded a $44.3 million Race to the Top – Early Learning Challenge (RTT-ELC) grant. The grant plan is now referred to as the Kentucky All STARS Plan. Some of the deliverables in this plan are as follows:

- Expanding the number of United Way Born Learning Academies
- Creating early childhood standards training modules to continue developing the skills of early childhood educators

- Redesigning the voluntary tiered quality rating improvement system, called STARS for KIDS NOW. This system expanded into Kentucky All STARS, a mandatory quality rating and improvement system serving all early care and education programs that receive public funds, including state-funded preschool, Head Start, and child care.
- Developing online models to provide an overview of the early childhood standards
- Integrating the Strengthening Families Leadership framework
- Developing responsive professional development for teachers
- Integrating data in the Kentucky State Longitudinal Data System

Kindergarten

There is no statutory requirement for students to attend kindergarten, but students must attend public school at age 6 or qualify for an exemption.

There is no statutory requirement that students attend kindergarten, but several statutes mention kindergarten and age of compulsory attendance. KRS 158.030 defines *common school* as an elementary or secondary school of the state supported in whole or in part by public taxation. It furthers states that any child who is 6 years of age, or who may become 6 years of age by October 1, shall attend public school or qualify for an exemption. Any child who is 5 years of age, or who may become 5 years of age by October 1, may enter primary school program. In 2012, Senate Bill 24 moved the statutory cut-off date for kindergarten from October 1 to August and created an early enrollment option for those students not meeting the birthday deadline but wishing to attend kindergarten. In 2015, SB 201 amended the statute to allow school districts to charge tuition to those early admission students enrolled according to the district's policy and evaluation criteria.

KRS 157.320(7) discusses the full-time equivalent pupil average daily attendance definition for kindergarten. KRS 157.360(5)(a)1 states the maximum class size for kindergarten as 24 pupils. In addition, KRS 158.031(6) discusses how a school district may advance a student through the primary program when it is determined that it is best for the student. KRS 158.031 also states that a student who is 5 years old (but not yet 6) and is advanced in the primary program may be classified as other than a kindergarten student for purposes of funding under KRS 157.310 to 157.440.

Districts are required to offer at least a half-day kindergarten program.

Kentucky, as set out in KRS 158.031(6), requires all children to enroll and attend school before the age of 6 years. Kindergarten enrollment is further clarified in board policies stating that children enter primary school and must advance through the primary program without regard to age. Because districts are mandated to

offer at least a half-day kindergarten program, students begin elementary school in kindergarten. The 2016 *50-State Review* of kindergarten by the Education Commission of the States (ECS) found that only 13 states, mostly in the south, and the District of Columbia require full-day kindergarten. ECS works with all 50 states, American Samoa, Guam, Northern Mariana Islands, and the District of Columbia to provide research and advice, and to track policies for state policy makers.

Description Of The Study

This study reviews Kentucky's preschool program including funding, expenditures, enrollment, program characteristics, and outcomes. Outcomes are measured via the Brigance Kindergarten Readiness Screener. In addition the report examines the cost districts incur above the half-day Support Education Excellence in Kentucky (SEEK) funding for students who attend full-day kindergarten.

In December 2016, the Education Assessment and Accountability Review Subcommittee (EAARS) requested that the Office of Education Accountability (OEA) study Kentucky's preschool program, including a review of funding, expenditures, enrollment, and preschool program characteristics at the state and district levels. The committee also requested that OEA examine preschool attendance rates, along with outcomes measured by the Brigance Kindergarten Readiness Screener. In addition, this review includes a comparison of Kentucky's preschool program characteristics to those of the nation and of surrounding states. Finally, OEA was asked to examine the costs districts incur, above the half-day Support Education Excellence in Kentucky (SEEK) funding that districts receive for each student who attends kindergarten. This examination was also to include a comparison to surrounding states in regard to funding and instructional time. If data were available, this report would also explore the relationship between enrollment in full-day kindergarten and academic achievement.

Data Used For The Study

Data used for this study include data from the Kentucky Department of Education (KDE), Kentucky Early Childhood Data System, Governor's Office of Early Childhood, interviews, and a survey that was sent to all superintendents.

In conducting the study, staff relied on data from the Kentucky Department of Education (KDE) and the Governor's Office of Early Childhood. Data provided by GOEC were submitted both directly to OEA and through the Kentucky Center for Education Workforce Statistics (KCEWS). According to KCEWS, the Head Start data provided by KCEWS were submitted to them by GOEC in aggregate form. The data provided by KDE were submitted to them by local school districts or collected internally from KDE support staff. Data include student demographic characteristics, attendance, and preschool and kindergarten enrollment. KDE also porvided OEA with preschool program reviews (P2R), Brigance kindergarten screener data, and preschool assessment data from the Kentucky Early Childhood Data System, along with financial and staffing data from the MUNIS financial software system.

In addition, OEA used information collected during interviews with KDE staff within the Division of Program Standards and with staff from GOEC. OEA staff also used data from a survey that was sent to all 173 district superintendents. This survey included several open-ended and Likert-style items. While the survey received a 100 percent response rate, individual questions did not. Appendix A includes a copy of the document request and Appendix B includes the survey. Unless otherwise noted, this report refers to school years by the year in which the school year ends. For example, the 2015–2016 school year is called the 2016 school year

Organization Of The Report

Chapter 1 includes major conclusions, statutes and regulations, and program supports to schools and districts for the preschool program. Chapter 2 discusses preschool appropriations by the General Assembly, and district revenues and expenditures.

The remainder of Chapter 1 includes the major conclusions, followed by statutes and regulations, and concludes with program supports to schools and districts for the preschool program.

Chapter 2 describes the General Assembly's appropriations to the preschool program since its inception, how these appropriations are allocated across the state, flexible focus fund revenue movements into the preschool program, preschool tuition rates, and other types of revenue districts are allowed to spend on preschool students. The chapter concludes with how much districts spend on the preschool program by funding source and expenses by object level, which includes salaries, benefits, special education services, and transportation.

Chapter 3 discusses the requirement for preschool program proposals, teacher qualifications, day care services, and a demographic analysis of preschool students.

Chapter 3 discusses the preschool program proposal requirements, types of preschool operational schedules, and nontraditional preschool programs. Preschool teacher qualifications, along with a comparison from surrounding states, follows. The remainder of the chapter provides a demographic analysis on the state-funded 4-year-old students compared to the demographics of kindergarten students. Finally, the number of districts offering day care services to preschool students is provided.

Chapter 4 describes preschool evaluations, recruitment strategies, enrollment, and educational outcomes.

Chapter 4 describes the preschool program evaluations performed externally and internally, recruitment strategies, and enrollment barriers districts face in enrolling preschool students. The chapter also includes an analysis of the percentage of eligible 4-year-olds attending preschool or Head Start. The chapter concludes by describing educational outcomes on the Brigance Kindergarten Screen III by prior setting.

Chapter 5 discusses kindergarten funding, full-day kindergarten and 3rd-grade outcomes associated with full- and half-day kindergarten programs.

Chapter 5 compares Kentucky to surrounding states with regard to the minimum amount of instructional time kindergarten students receive and how much funding each state provides. This chapter also addresses the cost when a district switches from a half-day to a full-day kindergarten program and the savings when it switches from a full-day kindergarten program to a half-day program. Also included is what additional funds the General Assembly would need to appropriate through the SEEK funding program if full-day kindergarten were mandated. This chapter concludes with 3rd-grade outcomes associated with full- and half-day kindergarten programs.

Major Conclusions

Preschool

- Kentucky is serving 1,110 fewer preschool students than in school year 2006. The at-risk population eligibility has increased from 130 percent of the federal poverty level to 160 percent, and the population of at-risk students has increased 13.8 percent while the special education population has decreased 18.2 percent for the same period.
- Preschool is the largest prior setting for students entering kindergarten, but individual districts tend to believe that they are serving a far greater percent of preschool-eligible children than they actually are.
- Full-utilization certification forms indicate that Head Start programs in 32 percent of districts are agreeing on a smaller number than the pre-KERA 1989 number served. This resulted in 1,512 fewer 4-year-old preschool students being served by Head Start in the 2017 school year.
- Districts spent $9,302 per pupil for preschool students in FY 2016: $2,056 for special education, $1,035 per pupil for transportation, and $6,211 for all other per-pupil expenditures.
- All but 13 districts provide transportation for preschool students, which costs districts an additional $1,035 per pupil though they receive no additional funds to provide this service.
- Forty percent of districts are providing full-day preschool 4 or 5 days a week.
- Among preschool students, the average rate of readiness in districts with more than 16 hours of scheduled preschool time per week is 13 percentage points higher than in districts with less than 12 hours of preschool per week.
- Less than half of all students with limited English proficiency (LEP) participate in state-funded preschool even though more

than 80 percent qualify for free or reduced-price lunch (FRPL). Additionally, less than 8 percent of the LEP students were identified for special education services in school years 2015 through 2017, compared to 14 percent of non-LEP students.

- Kindergarten parents' perceptions of students considered average or above average on self-help and social-emotional skills are twice as high as the percentage reported as age-appropriate in preschool data by teachers.
- In 2017, the kindergarten readiness rate for all students entering kindergarten was 50.1 percent.
- Kindergarten readiness among preschool and nonpreschool students is roughly the same; however, less than a third of kindergarten students who had a prior setting of home were deemed ready.
- Free or reduced-price lunch students and students with an individualized education program (IEP) who enroll in preschool are more likely to test ready for kindergarten than their FRPL and IEP peers who do not enroll in preschool.
- Over the last 3 years, an equal percentage of white and black students with a prior setting of preschool only were ready for kindergarten. Among FRPL preschool-only students, a greater percentage of black students were ready for kindergarten than white students.
- KDE is not requiring districts to submit complete preschool program proposal documentation, perform annual preschool program evaluations, and record preschool attendance in Infinite Campus.
- When reporting preschool and kindergarten expenditures on annual financial reports, districts are not using the correct instructional level codes required by the KDE chart of accounts.
- There is no consistent enrollment count data for the state-funded preschool program or federally funded Head Start in Kentucky. Additionally, reliance on parent reporting of prior settings at kindergarten enrollment makes the data unreliable.
- If Kentucky were to continue using the Brigance screener, it should recalibrate the criterion/standard for readiness.

Kindergarten

- As of the 2017 school year, six districts offer half-day kindergarten, four districts offer both full-day and half-day, and the rest of the districts provide a full-day kindergarten program.
- The per-pupil cost of moving to full-day kindergarten varies by district. However, districts reported an average per-pupil cost

of $3,957 in FY 2016 for salaries, benefits and special education services related to kindergarten students.

- Students who had attended full-day kindergarten were 1.08 times as likely to score proficient on the 3rd-grade K-PREP reading test and 1.12 times as likely to score proficient on the 3rd-grade K-PREP math test.

Statutes And Regulations

Table 1.1 contains a list of preschool statutes and regulations with a brief description of each, though the list is not exhaustive.

Table 1.1
Statutes And Regulations Pertaining To Preschool

Statute/Regulation	Summary
KRS 156.496	Defines family resource youth services centers' roles, location of centers, and grant programs. Requires that a family resource/youth service center shall not provide or make referrals for an abortion. Section 2 requires family resource center to promote and coordinate existing resources for full-time preschool child care for children 2 and 3 years of age, to provide after-school child care for children ages 4 through 12, and to provide full-time service during the summer and on days when school is not in session.
KRS 157.3175	Establishes eligibility criteria for preschool education, establishes how preschool funding appropriations are allotted to districts, and outlines the preschool proposal process that districts should include for approval by commissioner. Requires that programs reflect equitable geographic distribution representative of all areas in Kentucky.
KRS 157.318	Establishes network of regional training centers for preschool and early childhood education.
KRS 161.028	Sets authority of Education Professional Standards Board (EPSB) to establish teaching certification standards and requirements for obtaining and maintaining teaching certificates.
KRS 161.030	Addresses EPSB teacher certification authority, which includes traditional and nontraditional certificates, beginning teacher assessments and training, internship, beginning teacher committee, and resource teachers.
16 KAR 2:040	Establishes interdisciplinary early childhood education (IECE) certificate and teacher performance standards.
16 KAR 2:140	Establishes 1-year probationary certificate for IECE teachers.
16 KAR 4:020	Establishes requirements for exceptional children teachers, including certification requirement for assignments of IECE teachers. Allows IECE teacher to serve as teacher of record for preschool education.
702 KAR 3:250	Establishes funding eligibility for preschool program and requires KDE to annually recommend a preschool allocation formula to Kentucky Board of Education for review and approval. Regulation also allows unallotted preschool funds to be prorated and sent to districts that transport eligible children who are enrolled in

	Head Start, up to amount per child allowed for transportation in section 5 of this regulation.
702 KAR 5:150	Requires each school bus transporting 3- and 4-year-old chldren to be staffed with a minimum of one qualified, trained driver assistant. Requires driver assistant to deliver and receive child safely to and from parent.
704 KAR 3:410	Establishes criteria for preschool education program, procedures for grant allocation, program operation guidelines, and facilities and transportation guidelines, Section 7 details requirement that preschool teachers must hold IECE certificate or letter of exemption. Preschool associate teachers were grandfathered into current positions with no additional certification requirements.
704 KAR 3:420	Establishes criteria for paraprofessional instructional personnel, including differentiated job description, qualifications for position, and responsibilities for certified personnel to supervise preschool associate teachers.

District And School Preschool Program Supports

Preschool teachers, administrators, principals, and superintendents have access to several supports when providing preschool education in Kentucky. Below is a description of the major sources of support.

Kentucky Department Of Education

The Division of Program Standards provides leadership, services, and support to school districts for preschool programs. A school readiness consultant is assigned to each Kentucky school district.

The School Readiness Branch, housed in the Division of Program Standards within the Office of Teaching and Learning, provides leadership, service, and support to school districts focusing on students ages 3 to 8, including those districts implementing state-funded preschool programs. KDE supports local districts by increasing capacity for high-quality teaching and learning experiences, and by implementing Kentucky's K-12 Academic Standards as well as Kentucky's Early Childhood Standards.

There are seven KDE staff providing school districts with early childhood leadership, service, and support. A school readiness consultant is assigned to each Kentucky school district, with districts grouped into five service regions. The goal is to ensure that KDE cultivates optimal conditions in school districts to achieve equitable and comprehensive success for all students in preschool through 3rd grade. KDE's supports and oversight pertaining to preschool include administrative support, compliance and quality improvement support, professional learning support, assessment support, and collaborative support.

KDE staff guidance includes technical assistance with fall and spring enrollment counts, program approval reports, preschool contract sites, special education, and interventions. In addition, KDE conducts desk reviews of the preschool program to determine compliance and quality programs.

Administrative Support. KDE staff members help districts with understanding and fulfilling reporting requirements. Examples include guidance and technical assistance with the fall and spring enrollment counts, preschool performance reports, program approval reports, preschool contract sites, special education (Part C to Part B data, Kentucky Systems of Intervention guidance, and IDEA section 619 activities), Preschool Partnership Grant applications and reports, and preschool teacher certification. KDE staff members take responsibility for implementing state and national preschool data reporting requirements and expectations, including special education and the National Institute for Early Education Research (NIEER) annual report.

Compliance And Quality Improvement Support. Each year, KDE conducts a desk review of preschool program compliance and quality in multiple school districts. Also, preschool staff participate in KDE's statewide consolidated monitoring process. Consolidated monitoring involves the coordination of state and federal program site visits within a selected set of school districts in an effort to reduce the impact on district time and services. Also, through the Race to the Top Early Learning Challenge grant initiative, KDE staff contribute to the development and implementation of Kentucky's expanded five-star quality rating and improvement system for early child care and education programs.

Professional Learning Support. Between 2011 and 2016, KDE staff administered five Early Learning Leadership Networks (ELLNs) statewide. ELLNs are designed to ensure that every district's preschool program has knowledgeable and cohesive leadership teams to guide the professional learning and practice of all administrators, teachers, and staff. ELLNs involved two network strands, one for teacher leaders and one for administrative leaders. Each network strand included representatives from state-funded preschools, Head Start, kindergarten, and child care organizations. In 2016–2017, ELLN work was integrated into Kentucky's Next Generation Leadership Network.

Assessment Support. Each year KDE supports school districts in administering the Brigance Kindergarten Readiness Screener. This support includes guidance and help with screening kit orders and fulfillment, student assessment procedures and tips, and online data entry. Also, KDE staff are involved in preschool assessment, working with school districts and the University of Kentucky to collect data using the Kentucky Early Childhood Data System.

Collaborative Support. KDE staff members support statewide efforts to improve the quality of early childhood service delivery through participation in multiple interagency teams and committees. These interagency teams and committees include the Early Childhood Advisory Council, Kentucky All STARS workgroup, the Interagency Coordinating Council, the Prichard Committee for Academic Excellence's Strong Start workgroup, and the Strengthening Families workgroup.

Early Childhood Regional Training Centers

The 15 regional training centers provide peer-to-peer training, consultation, and technical assistance to preschool staff.

As an extension of KDE, regional training centers (RTCs) provide peer-to-peer training, consultation, technical assistance, and instructional materials to local school districts and other agencies operating programs for students with disabilities and for at-risk students. The support and resources provided by RTCs are research-based and aligned to Kentucky's early childhood standards, standards for professional learning, and criteria for educator effectiveness.

There are 15 RTC staff, located in five regions, dedicated to working in conjunction with KDE to promote high-quality learning environments and continuous quality improvement in state-funded preschool settings. In addition, there are five RTT-ELC preschool consultants assigned to the regional training centers, one to each RTC area. These consultants assist with the evaluation and rating of preschool sites participating in the Kentucky All STARS system.

A memorandum of agreement is signed between KDE and each RTC. Each RTC gets a base operating budget of $312,478, except for Anderson RTC, whose budget includes an additional $23,000 because it serves Jefferson County's preschool program. In addition to the base funding, some RTCs receive additional federal funds to provide professional learning initiatives, to support the Classrooms of Excellence initiative, and to support the Kentucky Initiative for Social Skills and Emotional Development (KISSED) statewide work. RTCs provide the following supports to districts: professional learning, compliance and quality improvement, lending library, and consultation and technical assistance.

Professional Learning Support. RTCs help design, model, implement, and participate in ongoing high-quality professional learning. Learning opportunities are based on individual district needs in each region. Examples include ELLNs, Early Childhood Environmental Rating Scale, 3rd Edition (ECERS-3) training,

KISSED professional learning, teacher and administrator workshops, and annual regional and statewide institutes addressing effective programming and administrative issues.

Compliance And Quality Improvement Support. RTCs provide multiple supports to school districts during the P2R process. RTC staff share materials, resources, skills, expertise, knowledge, and competency to ensure that preschool services improve and that children learn at the highest levels. RTCs provide ECERS-3 training to local school districts, ensuring that local evaluators achieve inter-rater reliability. In addition, RTCs conduct ECERS-3 evaluations in 30 percent of all preschool classrooms during each cohort year.

Lending Library Support. RTCs provide school district staff and families access to high-quality early childhood materials and program resources through lending libraries.

Consultation And Technical Assistance Support. RTCs assist school districts with effective program planning, management, organization, and evaluation. This may include support in identifying research-based teaching and learning strategies for classrooms, intervention strategies for individual students, effective staffing patterns, and high-quality classroom environments.

Governor's Office Of Early Childhood

The Governor's Office of Early Childhood provides funding, professional development staff support, and monitoring for community early childhood programs.

Created by executive order in July 2011, GOEC and ECAC replaced the Early Childhood Develoment Authority. These offices were charged with facilitating systemic changes across early childhood systems. The offices provide funding, professional development, staff support, and monitoring for community early childhood programs. The main goal of the offices is to ensure that at-risk Kentucky children have the supports needed to be ready for kindergarten. GOEC developed a school readiness definition in 2010, which formed the foundation for a common screener in kindergarten. The Head Start Collaboration Office is also housed with GOEC.

GOEC worked with other government entities, stakeholders, and early childhood advocates in the creation of the Kentucky All STARS rating system. This rating system was originally created to rate the quality of private day cares, but it now includes ratings for preschools and Head Start centers. The expansion of the All STARS rating system was largely due to the $44 million RTT-ELC

grant from the US Department of Education. GOEC helped the United Way of Kentucky to secure funding from Toyota to expand academies to schools statewide. This new partnership is called the Toyota Bornlearning Academies and is a $1 million investment. These academies include school-based workshops designed to introduce parents and caregivers to the school system early in a child's life and to help parents guide their children with educational learning experiences.

Chapter 2

Preschool Funding

Introduction

In 1991 the General Assembly appropriated $18 million to the preschool program. The first year was a pilot year. All districts were required to offer preschool by 1992.

This chapter discusses General Assembly appropriations for preschool programs and how KDE distributes these appropriations to school districts. A discussion on the movement of flexible focus funds (FFF) into the preschool grant follows, and the remainder of the chapter breaks down what districts spend on preschool programs. Preschool was voluntary during the first year it was offered in Kentucky; it wasn't until 1992 that every district was required to offer a preschool program.

General Assembly Appropriations

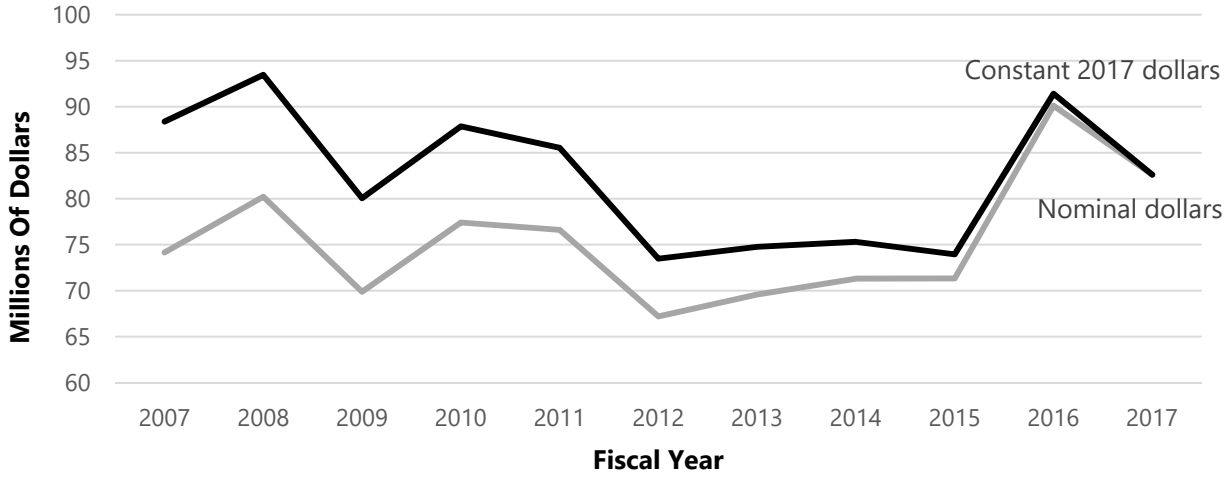
The General Assembly increased the eligibility for at-risk 4-year-olds from 130 percent of the federal poverty level to 150 percent. In addition, they appropriated $77 million or nearly $88 million in 2017 dollars.

In 1991, the General Assembly appropriated $18 million to the preschool program, and the following year it doubled the appropriation to $36 million. Figure 2.A shows the General Assembly appropriations to the preschool program in nominal dollars, and in inflation-adjusted 2017 dollars for fiscal years 2007 through 2017. In 2007, the General Assembly appropriated approximately $74 million, or nearly $88 million in 2017 dollars. In 2007, the General Assembly also increased the eligibility for at-risk 4-year-olds from 130 percent of the federal poverty level to 150 percent of the federal poverty level.

Eligibility requirements to serve at-risk 4-year-old students increased again in 2016 to 160 percent of the federal poverty level, and appropriations were increased to $90.1 million.

In the 2016 legislative session, the budget bill, HB 303, included an additional increase in the eligibility requirements to serve at-risk students, to 200 percent of the federal poverty level; however, because of a line-item veto, the eligibility requirement for state-funded preschool was set at 160 percent of the federal poverty level. In 2016, the General Assembly also increased preschool appropriations to $90.1 million, or approximately $91.4 million in 2017 dollars. In 2016, the General Assembly also reduced the $91.4 million biennial budget to provide preschool partnership grants described below for 2017 by $7.5 million. HB 235, passed in the 2014 Regular Session, changed the enrollment eligibility date-of-birth requirement for preschool students from October 1 each year to August 1. This change took effect for the 2016 school year.

Figure 2.A
General Assembly Appropriations
FY 2007 To FY 2017



Source: LRC Budget Review.

Allocations To School Districts

Preschool funds are distributed to districts based on the average prior-year enrollment taken on December 1 and March 1. Two districts, which contract with their local Head Start provider, have never enrolled preschool students since the inception of KERA preschool.

The General Assembly appropriations to the preschool grant are distributed by KDE to the school districts that provide education services to preschool students. There are two districts, Lee County and Wolfe County, that do not provide preschool services. Preschool students in these two districts are served through contracts with local Head Start providers. These districts have not received any state-funded preschool grants since the inception of KERA preschool.

Per KRS 157.3175, the preschool funds appropriated by the General Assembly must be approved by the Kentucky Board of Education and allotted to school districts. Districts receive funds based on the average of the number of identified preschool students served on December 1 and March 1 of the prior academic year. These enrollment counts are referred to as the semiannual enrollment counts in this report. Prior to 2014, the funding formula was more complex, which made it difficult for districts to plan for the amount of funds from year to year. KDE, accordingly, sought a change in the statute.

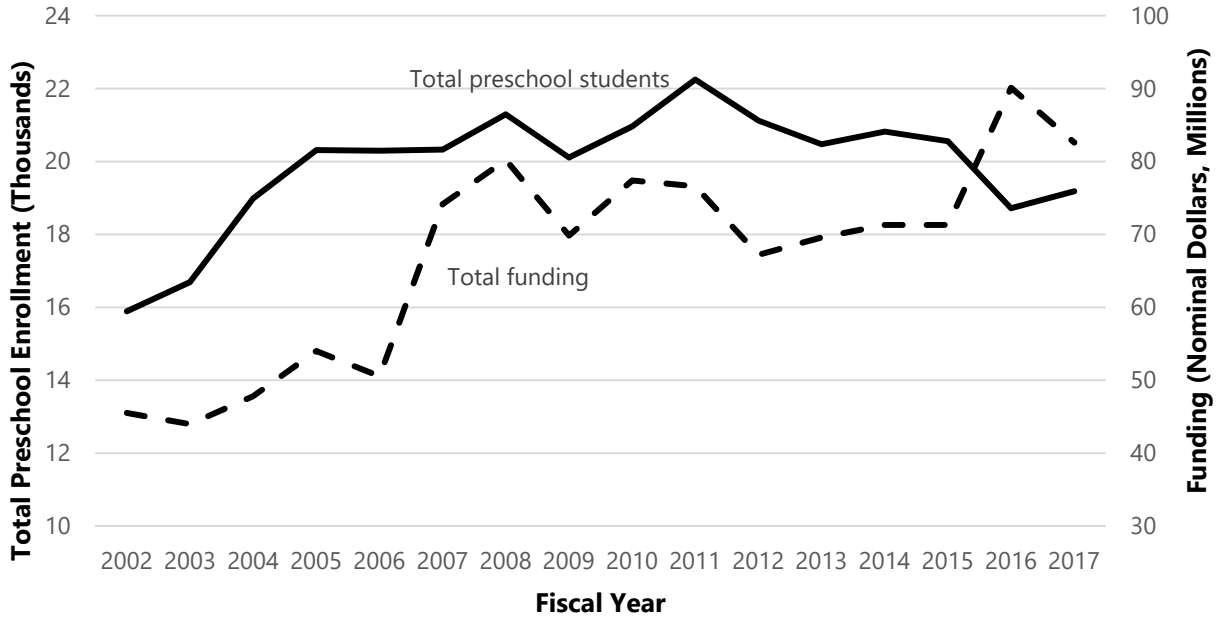
KRS 157.3175 states that local school districts must send preschool program proposals to KDE for approval by the commissioner of education. The preschool program proposals will be discussed further in Chapter 3 of this report.

The preschool eligibility increased from 130 percent of the poverty level in 2007 to 150 percent and increased again in 2016 to 160 percent of federal poverty. However, the total number of preschool students served prior to the increase in eligibility was lower by 1,110 students in 2017.

Figure 2.B includes the number of total preschool students served from fiscal years 2002 through 2017 along with the amount of funds allocated from the preschool grant. The preschool grant revenues doubled in fiscal year 2016 from the 2002 revenues. However, the preschool student population increased by only 2,823 students during the same period.

The General Assembly's first preschool eligibility increase, in 2007, raised the 130 percent poverty level to 150 percent. Prior to this increase the 2006 number of preschool students served was 20,292, which is still 1,110 more than the 2017 number. In addition, the General Assembly had increased the 150 percent poverty level to 160 percent in 2016.

Figure 2.B
Count Of Preschool Students And Funding
FY 2002 To FY 2017

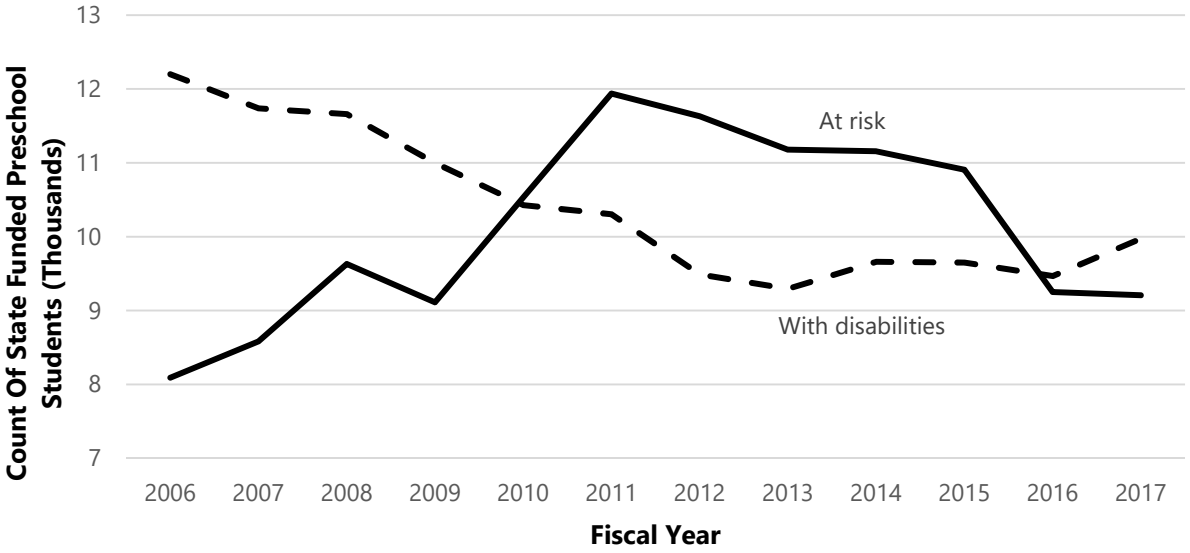


Source: Staff compilation of data from the Kentucky Department of Education.

Between 2006 and 2017, the number of at risk 4-year-old preschool students served increased 13.8 percent, while the special education population served decreased by 18.2 percent.

At-Risk Students And Students With Disabilities. The number of at-risk and special education preschool students has fluctuated over the years, as seen in Figure 2.C. The at-risk 4-year-old population served increased 13.8 percent, while the special education population served decreased by 18.2 percent relative to the 2006 population.

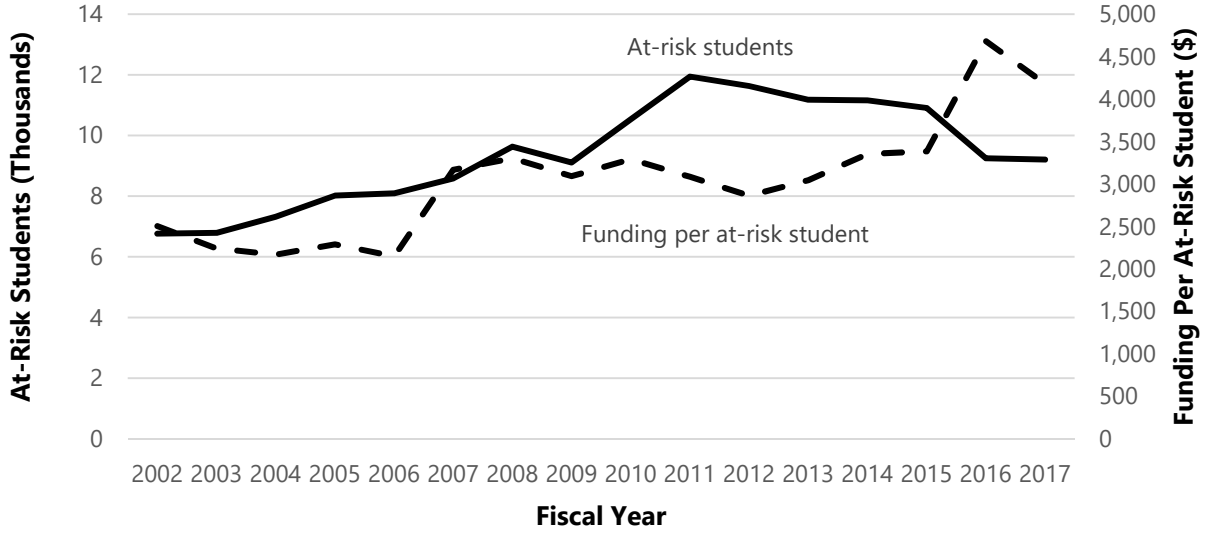
Figure 2.C
Kentucky Preschool Population At-Risk Students And Students With Disabilities
School Years 2006 To 2017



Source: Staff compilation of data from the Kentucky Department of Education.

At-Risk Preschool Students. The per-child preschool rates approved by the Kentucky Board of Education for at-risk students and students with disabilities appear in Figures 2.D through 2.G along with the total number of students in each funded category.

Figure 2.D
Count Of At-Risk Preschool Students And Per-Pupil Funding
FY 2002 To FY 2017



Source: Staff compilation of data from the Kentucky Department of Education.

The count of at-risk preschool students was 6,763 in FY 2002. Enrollment was highest in FY 2011 with approximately 12,000 4-year-old preschool students enrolled. By 2017 the at-risk enrollment was 9,206.

Figure 2.D shows that, in FY 2002, 6,763 preschool students were enrolled in the at-risk category. The number of funded at-risk students continued to increase through FY 2008, when 9,631 at-risk 4-year-olds were enrolled in state-funded preschool. In FY 2009, this population of students dropped to 9,110. By FY 2010, an additional 1,421 at-risk preschool students enrolled, and in FY 2011 the at-risk population increased again by another 1,408; 2011 had the highest enrollment of at-risk students with a little under 12,000 students. By 2017, the number of at-risk preschool students dropped to 9,206, similar to the number enrolled in FY 2009.

The funding per student for at-risk preschool students was $2,505 in FY 2002. Funding for at-risk students in FY 2016 was higher than ever at $4,682. This amount was decreased by almost $500 the following year for the Preschool Partnership Grant funding.

The funding for at-risk students was $2,505 per student in FY 2002. The per-child amount declined until FY 2007, when it was increased to $3,168 per at-risk student. The largest at-risk per-child allocation came in FY 2016, when districts received $4,682 per at-risk student. This amount decreased approximately $500 per student in FY 2017, when the General Assembly created the Preschool Partnership Grant, which is discussed at the end of this chapter.

The federal poverty level to serve at-risk 4-year-old preschool students has been included in each biennial budget. The 2016–2018 budget included language that raised the eligibility requirements for preschool students to include a higher percentage of the federal poverty level than is required by 704 KAR 3:410, sec. 2(c); however, KRS 157.3175 gives the Kentucky Board of Education the authority to set the eligibility requirements in regulation. When the governor line-item vetoed the provision that raised eligibility to 200 percent of the federal poverty level in the 2016–2018 budget, the eligibility requirements should have reverted to those set in 704 KAR 3:410, sec. 2(c); that level was to serve only students eligible for free lunch—children at 130 percent of the federal poverty level, instead of the 160 percent set in prior budgets. KDE lacked the explicit statutory or regulatory authority to modify the eligibility level in response to the veto. However, KDE determined that districts would suffer undue harm from a reversion to the 130 percent federal poverty level. KDE, accordingly, decided to continue to keep preschool eligibility at the 160 percent poverty level. To prevent this issue from recurring, OEA offers the following recommendation.

Recommendation 2.1

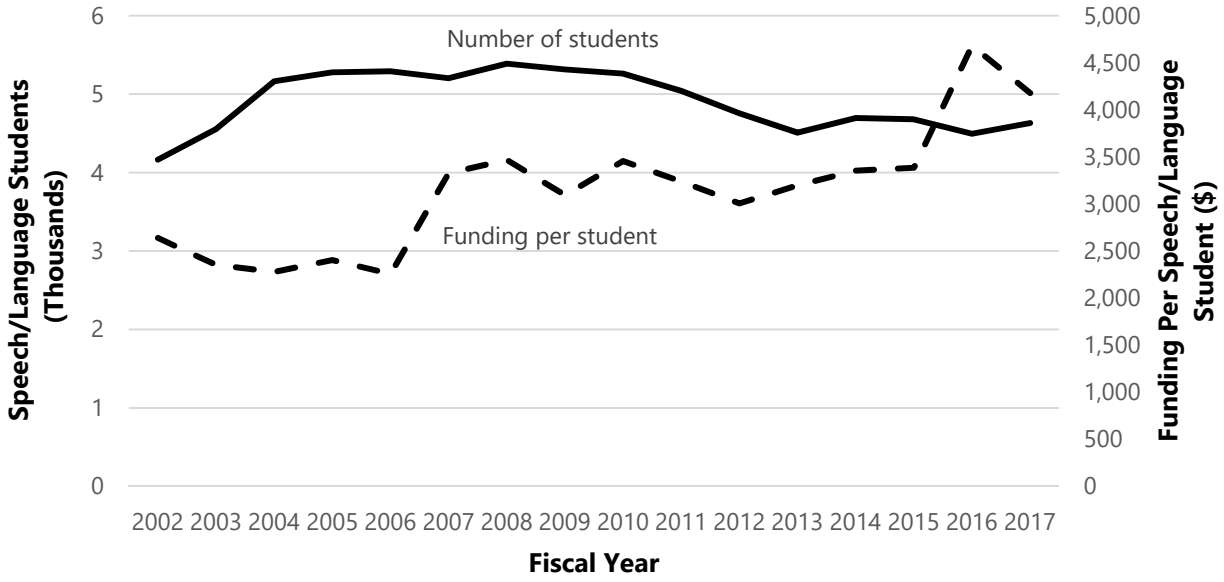
Recommendation 2.1

The Kentucky Board of Education should update 704 KAR 3:410 to set at-risk 4-year-old preschool student eligibility to at least 160 percent of the poverty level and review eligibility regularly to take into account changes made by the General Assembly in the biennial budget process.

Preschool enrollment for students who require speech/language services increased slightly over the past 15 years. Enrollment was 4,164 in FY 2002 and increased to 4,631 by FY 2017.

Students With Speech/Language Disorders. Figure 2.E shows the number of preschool students requiring speech/language services served, along with the per-child funding amount by year. In FY 2002, 4,164 preschool students required speech/language services and by FY 2008 that number increased by 1,225, resulting in a total student count of 5,389. Speech/language preschool students declined for the following 5 years and, in FY 2013, Kentucky served approximately 4,500 speech/language students, or roughly the same number as in FY 2003.

Figure 2.E
Count Of Speech/Language Preschool Students And Per-Pupil Funding
FY 2002 To FY 2017



Source: Staff compilation of data from the Kentucky Department of Education.

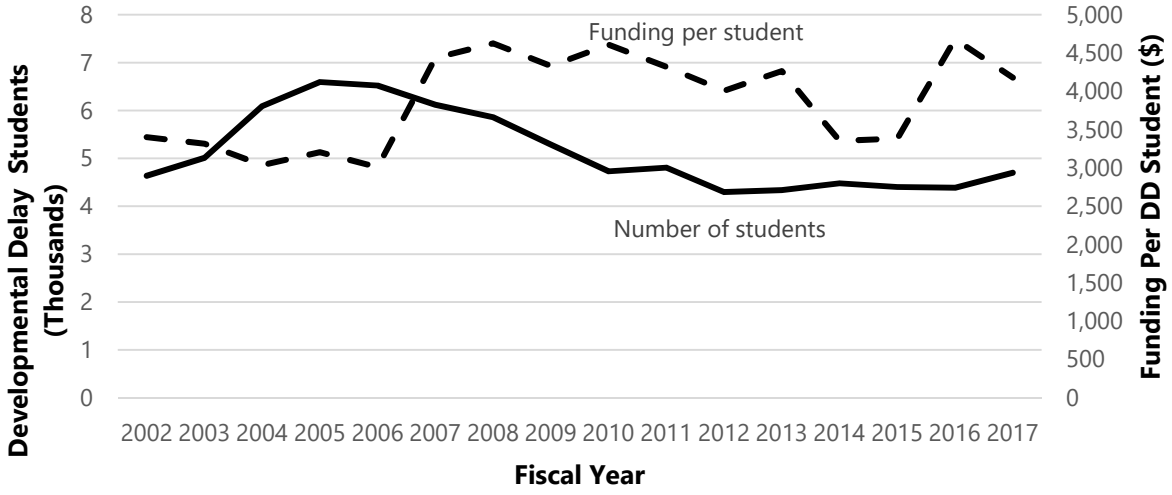
The per-pupil funding for students who require speech/language services was $2,639 in FY 2002 and increased almost $2,050 per student by FY 2016.

The per-pupil funding for students requiring speech/language services in FY 2002 was $2,639 and fluctuated over the next 6 years until it increased to $3,469 per child in FY 2008. The funding per speech/language student was highest in FY 2016, at $4,682, which was an increase of almost $2,050 per student from FY 2002.

There were 4,363 preschool students diagnosed with developmental delays in FY 2002, increasing to 4,700 by 2017. Districts received $3,403 per student with developmental delays in FY 2002 and $4,180 in 2017.

Students With Developmental Delays. Figure 2.F shows the count and funding for preschool students with developmental delays (DD) for fiscal years 2002 to 2017. In FY 2002, there were 4,363 DD students, funded at $3,403 per student. The student count for DD preschool students was highest in FY 2005, at 6,595 students. The largest amount of per-child funding for DD students was in FY 2016, at $4,682 an increase of almost $1,700 per student from the lowest point, in 2006; however, approximately 250 fewer students were funded in FY 2016 than in FY 2002.

Figure 2.F
Count Of Developmental Delay Preschool Students And Per-Pupil Funding
FY 2002 To FY 2017

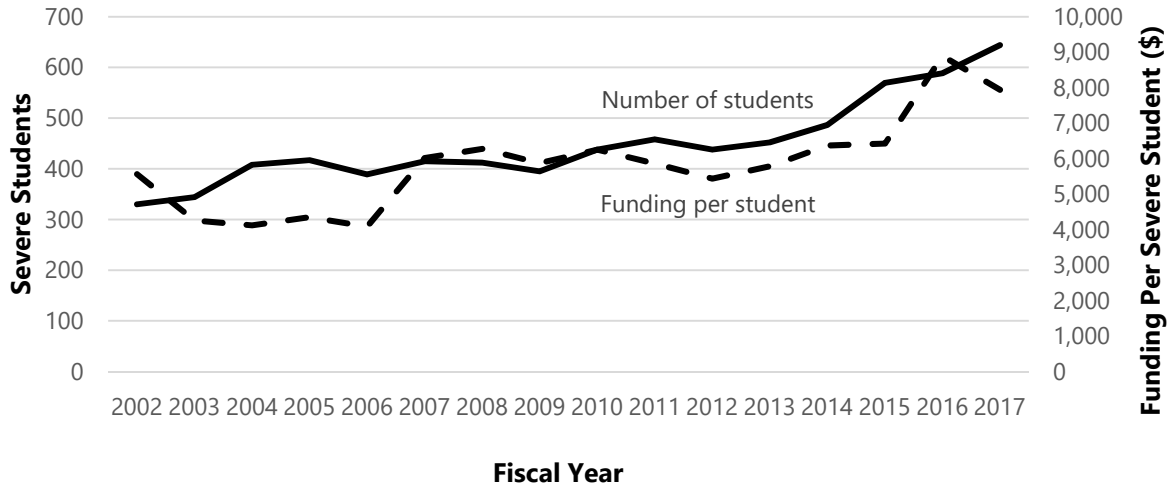


Source: Staff compilation of data from the Kentucky Department of Education.

Since 2002, preschool students with severe or multiple disabilities grew from 330 students to 644 students in FY 2017. In addition, the funding increased $3,331 per student during the same period.

Severe And Multiple Disabilities. Figure 2.G shows the count and funding of preschool students who had severe/multiple disabilities. This classification of preschool students received $5,565 per student in FY 2002, when there were only 330 preschool students with severe/multiple disabilities. The number of such students increased to 644 by FY 2017. The funding per student fluctuated over the 11-year period and was the highest in FY 2016, at almost $8,900 per student, an increase of $3,331 from FY 2002.

Figure 2.G
Count Of Severe/Multiple Disabled Preschool Students And Funding
FY 2002 To FY 2017



Source: Staff compilation of data from the Kentucky Department of Education.

Flexible Focus Fund

The Flexible Focus Fund program allows districts to move allocations among five state grants. They include preschool, extended school services, textbooks, safe schools, and professional development. However, no funds are allowed to move out of the preschool allocations.

The General Assembly authorized the Flexible Focus Fund program in the 2003 budget. The FFF program allows districts to reallocate funds in the preschool grant and four other state grants to better address local needs. However, districts are not allowed to move funds out of the preschool grant; they can only transfer funds into this account. The remaining four grants include extended school services, textbooks, safe schools, and professional development. Districts can transfer revenue from and to these four grants as long as the legal requirements of each grant are met and districts continue to serve the needs of the intended student populations.

There were 67 districts that participated in FY 2013 and moved more than $3.8 million into the preschool grant. Only 13 districts moved funds into preschool in 2016.

Table 2.1 includes the number of districts that took advantage of moving FFF into the preschool allocation from KDE between FY 2012 and FY 2016. In FY 2012, only 17 districts moved FFF revenues into the preschool account. In 2016, only 13 districts participated in the FFF program. From FY 2012 to FY 2016, the largest amount transferred into the preschool account was $315,035, in FY 2014. During FY 2013, 67 districts participated, with a total amount of $3,832,214 being transferred into FFF.

Table 2.1
Districts Participating In Preschool Grant Flexible Focus Fund Movement And Amounts
FY 2012 To FY 2016

Fiscal Year	Number Of Districts Participating	Smallest Amount Transferred	Largest Amount Transferred	Total Amount Transferred
2012	17	$261	$101,364	$567,398
2013	67	428	299,516	3,832,214
2014	13	3,513	315,035	734,255
2015	23	140	147,691	1,076,702
2016	13	4,606	84,752	612,984

Source: Staff compilation of data from the Kentucky Department of Education.

Other Preschool Revenues

There are additional federal and state funds that districts can use to support the preschool program.

Districts can also use funds from the federal government and other state grants to maximize their investment in preschool education. The grants mentioned below are not all inclusive, and OEA staff cautions the reader on the Title I, IDEA-B and Family Resource Center total revenues amounts listed. During the analysis of districts' annual financial reports (AFR) and discussions with district finance officers, some districts may overstate their preschool expenses, possibly because districts record expenditures from the kindergarten and elementary school instructional level to the preschool instructional level. Other district data may be understated for the

same reason. In addition, some districts coded preschool expenses from funds moved in the FFF program to the preschool instruction level, instead of moving the revenues as discussed in the FFF section.

Federal Grants

Districts are allowed to use federal grant revenue to enhance their preschool programs. Federal law forbids the use of federal funds to supplant state and local funds, but it encourages grant recipients to use the grants to supplement state and local funds. One way districts use federal grant money to supplement existing programs is by providing professional development for preschool staff.

Head Start serves students whose family income is at 100 percent of the federal poverty level or below and can alter entrance criteria to meet community needs. Kentucky spent $108 million on Head Start in FY 2016.

Head Start. The Head Start program was created in 1965. Federal tax dollars are used to help counties offer services to 3- and 4-year-old children living in poverty. The primary goal of Head Start is to increase the school readiness of at-risk children. Head Start services are offered to families whose income is 100 percent of the federal poverty level or below, but Head Start programs may alter the eligibility criteria to meet community needs. For example, one community may experience a high rate of child homelessness or children in the foster care system who would benefit from the Head Start program despite being over-income. Head Start may also provide dental, medical, and social emotional services. Head Start programs are designed to take into consideration the individual needs of students.

According to the National Institute for Early Education Research *State Of Preschool Yearbook*, in FY 2016 Kentucky's share of federal spending was $108 million. This provided services for 6,058 3-year-old and 7,567 4-year-old Head Start students, which translates to a per-pupil amount of $7,924 for FY 2016.

There are currently 31 Head Start grantees in Kentucky. Most school districts do not oversee the local Head Start program.

Unlike most federal funds, Head Start revenues do not flow through KDE to districts. These funds are sent directly to the agencies that are awarded Head Start grants. Currently in Kentucky, there are 31 Head Start grantees, of which fewer than half are local school districts. In addition, some Head Start grantees service more than one school district. The Ohio Valley Educational Cooperative (OVEC) Head Start not only provides Head Start for Shelby County, where OVEC is located, but, as of FY 2017, also manages the Head Start programs for Owen, Henry, Spencer, Bullitt, and Trimble Counties. So while almost half of the 31 Head Start grantees are districts, a much greater number of districts do not oversee the Head Start program in their district.

When the General Assembly created the preschool program, it did not intend state-funded preschool funds to supplant federal Head Start funds. In order to ensure that federal dollars were not supplanted, the General Assembly added provisions in subsequent budgets that districts must first "fully utilize" Head Start funds before enrolling students in state-funded preschool. The full utilization number for each county was set as the number of 4-year-old preschool students served by Head Start in 1989. Chapter 3 discusses full utilization in detail.

If the preschool center and Head Start center cannot agree on the full utilization number, then, according to budget language, the commissioner of education must resolve any disputes. If a district begins enrolling eligible Head Start students into its preschool program before full utilization is met, then the commissioner of education is allowed to withhold preschool funding in an amount equal to the funding for the number of Head Start-eligible children serviced in the preschool program.

Districts and Head Start agencies are encouraged to blend preschool and Head Start students to maximize funds.

Blending Of Programs. Districts are also encouraged to "blend" their preschool program with their local Head Start agencies. This means that some services may be financially supported through several funding sources and agencies. There are both fully blended and partially blended preschool programs in Kentucky school districts. For a district to be fully blended, every preschool class in the district must also include Head Start students. A partially blended preschool program could mean that at least one preschool classroom includes students from both Head Start and state-funded preschool. Chapter 3 discusses blended services in Kentucky.

IDEA-B and IDEA-B Preschool funds can be used for preschool expenditures. Districts reported spending $3.6 million from IDEA-B and $9.8 million from IDEA-B Preschool funds in 2016.

IDEA-B And IDEA-B Preschool Funds. IDEA-B and IDEA-B Preschool funds are federal funds that are passed through KDE to districts. IDEA-B funds can be used to assist in preschool and school-age screening of students once they have been identified as having a disability. The funds can also be used to produce brochures explaining what services and programs the districts provide. Other allowable expenses include supplies and materials needed to implement students' IEPs. In FY 2017, 19 districts reported using a total of approximately $3.6 million in IDEA-B funds to support preschool programs.

IDEA-B Preschool funds are formula grants awarded to states to provide special education and related services for 3- to 5-year-old children with disabilities. Allowable expenditures include direct services for eligible children, administration expenditures, supplementary aids, and services. These services may be in a variety

of settings, in the regular classroom, and in pull-out services for occupational, speech, and physical therapy. All but three districts reported on their AFRs that they used IDEA-B Preschool funds to support the preschool program. The total amount recorded on AFRs was almost $9.8 million.

The Ohio Valley Educational Cooperative and the Green River Regional Educational Cooperative received $41 million in Race to the Top funds for preschool programs.

Race To The Top Grants. Twenty-two districts from the Ohio Valley Educational Cooperative and the Green River Regional Educational Cooperative received $41 million to pay for additional staff, teacher coaches, professional development, and career counselors in 2013. Of that amount, $1.2 million was allocated to family resource youth service centers to reduce barriers to kindergarten readiness and college and career readiness. Another $2 million was awarded specifically for the Preschool Pals program and materials for parents and child care providers to get children ready to attend school. The Preschool Pals supplemental grant was also to be used to enhance kindergarten readiness through a network of supports for private preschools and child care providers. Some of the services offered through the Preschool Pals grant included dialogic reading, professional development, and supports in taking next steps to responding to the Brigance Kindergarten Readiness data.

Districts can use Title I funds for preschool students who are at risk of not meeting academic achievement standards. Funds can be used for tuition for a full-day preschool program or enrichment services. Districts recorded spending $9.7 million in Title I funds for preschool in FY 2016.

Title I Funds. Districts are allowed to spend Title I funds for the preschool program to improve cognitive, health, and social-emotional outcomes. If Title I funds are used for the preschool program, districts and schools must ensure they are used to serve children who are at risk of not meeting the academic achievement standards. In addition, if a school is deemed to have a schoolwide Title I program and does not have enough funds to serve all eligible preschool students who live within school boundaries, it can also use Title I funds to pay for tuition, increasing the amount of time and days the student is attending preschool, or enriching services through additional staff. Nineteen districts used $9.7 million in Title I revenues for preschool services in FY 2016.

Additional State Grants

This section focuses on two additional state grants that are directly benefiting preschool students: family resource centers and preschool partnership grants.

Family resource centers were created with the KERA reform. They can provide before- and after-school services, school supplies, food, clothing, and medical attention.

Family Resource Center. KERA created the family resource youth service centers (FRYSC). FRYSCs provide supports for middle and high schools, while the family resource centers provide supports to elementary school-age and younger students. FRYSCs are

school-based support centers that focus on removing nonacademic barriers to learning. Schools are encouraged to work with FRYSCs to assist in coordinating before- and after-school day care for preschool students. They also assist with the recruitment of preschool students, educating parents on early child development, and providing assistance with home visits. Other services may include providing school supplies, food, clothing, and medical attention to children. According to 2016 district AFRs, eight districts used a total of $267,000 out of their FRYSC allocation to support the preschool program

Preschool partnership grants were provided in the executive budget for districts to partner with child care providers to offer full-day, high-quality programs for at-risk children.

Preschool Partnership Grants. HB 303 of the 2016 Regular Session included $7.5 million in FY 2016 and FY 2017 to develop partnerships between school districts and child care providers to offer full-day, high-quality programs for at-risk children. The grant was developed in collaboration between the Kentucky Board of Education, KDE, the Early Childhood Advisory Council, the Child Care Advisory Council, and the Cabinet for Health and Family Services. *Full-day program* was defined as a program that provides a minimum of 6 hours of operation for at least 4 days a week.

Tier I Preschool Partnership grants were planning grants for districts to build a partnership with a child care provider that served children in the Child Care Assistance Program. Tier II grants were used to implement the plan. Schools could receive up to $25,000 for the Tier I grant and up to $150,000 for Tier II grants.

- **Tier I And Tier II Funds.** There were two types of grants for which districts might apply: Tier I and Tier II grants. Districts had the option of applying for one of the two types of funding in the first year. The deadline to apply for each grant was August 29, 2016. The Tier I Preschool Partnership grant was a planning grant for districts to build partnerships with child care providers that served children eligible for assistance from the Child Care Assistance Program (CCAP). The partnering child care providers were required to have a Kentucky All STARS rating of 3 or higher. School districts that received this grant were to focus on building partnership and planning outcomes for children. Expectations included developing a formal plan to increase the availability of full-day, high-quality preschool services in their communities. Districts that received the Tier I grant could receive up to $25,000. Tier I funds were to be used for conducting early childhood surveys, focus groups, and meetings to prepare for applying for the Tier II grants. Twenty districts were awarded the Tier I grant, with the smallest amount, $7,050, going to Lee County. Tier II Preschool Partnership grants focused on implementation of full-day, high-quality early childhood programs. Districts were the primary applicants; partnering child care providers, or Head Start providers, were coapplicants. Funds were distributed to districts and could be spent on salaries to extend program hours or open a new classroom; travel; training; supplies; and marketing/recruitment

activities. The smallest of the 46 Tier II grants, $27,000, was awarded to Elliott County; 23 districts received $150,000 each, the maximum Tier II grant possible. Appendix C includes a complete breakdown of the Tier I and Tier II grant awards.

Tier III funds were distributed to schools to continue the Tier II partnership for 1 more year, but the funding was limited to $75,000 per school.

- **Tier III Funds.** Districts had until May 12, 2017, to apply for Tier III funds. Because this money was to be used to continue the Tier II partnership, only districts that received Tier II funds were allowed to apply for the Tier III grants. Awards were announced in August 2017, and districts will use funds in FY 2018.

Survey Results. The OEA survey asked districts whether they applied for the Tier II Preschool Partnership Grant. Fifty-four districts reported that they applied for or were in the process of applying for a Tier II grant. An independent district with over 70 percent of students on FRPL that applied and received the Tier II grant provided this survey comment:

> We applied [for the preschool partnership grant] because we knew that we needed to continue to partner with others to do what is best for all of the children in our community. As you may know, we applied for a Tier 2 grant and received it—which we very much appreciated. As a part of that grant we added two public preschool teachers to one of our childcare provider locations—one with high numbers of CCAP children. Due to the timing of grant awards which was well into the school year, we were not able to post and hire these two teachers and have them start until January. This means that those teachers will only really have been in those classrooms for about 3 to 4 months before the end of the school year. This would be fine if we could continue with the Tier 3 and keep them in place. However, the Tier 3 grant reduces the funding from $150,000 to $75,000. There is no way we could have had the impact needed in those few months and no way we can just pick up the cost. In most grant application processes, the same amount of funding is typically in place for at least a year and then is not reduced by half when recipients are looking to sustain the programs. I am not sure if anything can be done, but most districts are not going to have had enough time to get started and now will not have enough time or resources to continue what was started with the Tier 3 being reduced by this amount. Even if we were receiving the same amount of funding, we are going to have to non-renew the teachers because the deadline to let people know if we are having them back for a second year is by May 15th. I respectfully wanted to bring this to your attention and was hoping something might be able to be

done—or perhaps some or the RTT funding which seems to need to be spent could be used to help with this.

On an Office of Education Accountability (OEA) survey, of 106 districts that indicated they had not applied for Tier II funds, approximately half cited lack of local day cares, lack of time to apply, or lack of understanding of the grant.

The survey also had an open-ended question for districts that did not apply for Tier II funds. A total of 106 districts responded to this question. Thirty-six districts indicated they did not apply because there were no eligible day cares in their district. Twenty-one districts either did not fully understand the grant or did not have enough time to write the grant. Table 2.2 summarizes these responses.

Table 2.2
District Survey Responses Regarding Why Districts Did Not Apply For Tier II Preschool Partnership Grant
FY 2017

Reason For Not Applying For Tier II Preschool Partnership Grant	Count Of Districts*
Lack of staff or space	11
Lack of partner or day care rated at least 3 STARS	36
District did not fully understand grant, or time line to apply was too short	21
Applied for Tier I grant or ineligible for Tier II grant	29
District preschool is full day or has wrap-around day care already	9
Tier II grant not properly funded or district cannot sustain program after funds are gone	10
Other	8
Total	124

*A total of 106 districts responded. Multiple reasons were allowed, so count does not equal 106.
Source: OEA survey results.

A western Kentucky district with over half of its students receiving FRPL gave the following examples of why it didn't apply:

> Our district did not apply for a [Tier II] preschool partnership grant for a variety of factors. One reason being is that the grant is short term[;] therefore, since those funds are no longer available, districts became faced with discontinuing services that families have become dependent upon or finding the financial resources to sustain the program. If the partnership services are provided at a local child care facility, rather than in school owned. We would very much be in support of all day preschool, however accomplishing this through the means of partnering and daycares shifts the responsibility and leads to the school district perhaps looking at reevaluating the eligibility guidelines for state funded preschool would allow access to these families.

The total amount awarded to districts was $6,439,659 for the Tier I grants and $1,060,341 for the Tier II grants, leaving an undistributed amount of $1,060,341.

Preschool Tuition

Districts are permitted to charge tuition to students who do not qualify for state-funded preschool when space is available. Sixty-one districts enrolled tuition-paying students in FY 2017, resulting in approximately 1,200 additional students in the preschool program.

Kentucky's state-funded preschool program is primarily designed to serve at-risk 4-year-olds and also 3- and 4-year-olds with a disability; however, 704 KAR 3:410, sec. 2 permits school districts to enroll 3- and 4-year-old students who do not meet the eligibility requirements as space permits, and districts may charge tuition or a fee for enrollment. When space permits and districts opt to enroll tuition-paying students, tuition rates are set by the individual districts.

During FY 2017, 61 districts enrolled tuition-paying students; however, 3 such districts opted to limit the enrollment of tuition-paying students to the children of faculty and staff. Tuition-paying students were enrolled in both half-day and full-day preschool programs: 32 districts enrolled students in half-day programs, 21 districts enrolled students in full-day programs, and 8 districts enrolled students in both half- and full-day programs.

In total, approximately 1,200 tuition-paying students were enrolled in state-funded preschool programs during the 2017 school year. Districts that elected to accept tuition-paying students enrolled, on average, 20.66 total preschool students. The number of tuition-paying students enrolled in these 61 districts ranged from 1 to 124. Of the approximately 1,200 tuition-paying students enrolled in 2016, 729 were enrolled in half-day programs and 468 were enrolled in full-day programs.

Tuition rates ranged from $900 to $5,550 per year for non-state-funded preschool students. Four districts charge tuition on a sliding scale based on parental income.

Annualized tuition rates set by districts ranged from $900 to $5,550. The average annualized rate of tuition in school year 2017 was $2,035.96; however, tuition rates for full-day programs were, on average, 47 percent higher than those for half-day programs. The average tuition rate in school year 2017 for half-day programs was $1,702.28, and the average rate for a full-day program was $2,496.21. Tuition rates ranged from $900 to $3,800 for half-day programs and from $1,000 to $5,550 for full-day programs. At the discretion of the individual school districts, tuition rates may be charged on a sliding scale based on the parental level of income. In 2017, 4 of the 61 districts that enrolled tuition-paying students opted to base tuition rates on parental income. A list of these districts appears in Appendix D.

Expenditures

Preschool Expenditure Comparison With Bordering States

Kentucky ranked 21st in the US for state spending in *The State Of Preschool* annual report published by the National Institute for Early Education Research (NIEER) for 2016. However, when looking at total spending per child enrolled, Kentucky ranked 9th.

NIEER publishes an annual report titled *The State Of Preschool*, which provides comprehensive data and analysis regarding state-funded preschool programs across the United States. Information in the 2016 NIEER report was used to compare preschool expenditures in Kentucky with those in bordering states.

Table 2.3 shows state-level preschool expenditures and preschool expenditures from all reported sources for Kentucky and its bordering states. During school year 2016, Kentucky spent $4,832 per student from state sources, which ranked 3rd highest among border states and 21st nationally. However, Kentucky's state spending per child enrolled was slightly below the national average. When accounting for preschool funding from all reported sources, Kentucky ranked 9th nationally, and 2nd among bordering states per child enrolled.[a]

Table 2.3
Preschool Expenditures For Kentucky And Bordering States
School Year 2016

State/Program	Total State Pre-K Spending	State Spending Per Child Enrolled	State Spending Rank Per Child Enrolled	All Reported Spending Per Child Enrolled	All Reported Spending Rank
West Virginia	$97,807,662	$6,472	13	$9,898	5
Indiana	9,542,255	6,020	17	6,594	22
Kentucky	92,677,908	4,832	21	8,110	9
Tennessee	86,097,664	4,753	22	7,037	19
Missouri	11,753,285	4,722	23	4,722	30
Ohio	59,060,000	4,000	27	4,000	36
Virginia	68,651,478	3,740	29	5,964	26
Illinois	246,729,910	3,374	34	3,854	38
United States	$7,390,801,796	$4,976	N/A	$5,696	N/A

Note: All expenditures have been rounded to the nearest dollar.
Source: National Institute for Early Education Research. *The State Of Preschool 2016.* Brunswick: Rutgers Graduate School of Education, 2016.

[a] Funding from all reported sources includes local, state, and federal funding. All reported funding is variable by district, so some districts in Kentucky may spend more per student than the state average, and some may spend less.

District Preschool Expenditures

Chart Of Accounts

While regulation requires districts to code expenditures using the KDE Uniform Chart of Accounts, district annual financial reports analyzed for this study had coding errors making it impossible to determine the true cost of preschool expenditures.

Districts are required to record expenditures using the KDE Uniform Chart of Accounts per 702 KAR 3:120. KDE posts the chart on its website, along with a description for each of the segments.[1] According to the Uniform Chart of Accounts, districts are to record preschool expenditures to instructional level 11. The title of instructional level 11 is Pre-School/Pre-Kindergarten; the description of instructional level 11 states that these are expenses for programs that are available for all 4-year-old children whose family income is no more than 160 percent of poverty level; all 3- and 4-year-old children with developmental delays and disabilities, regardless of income; and other 4-year-old children as placements are available based on district decision. Head Start expenditures cannot be coded to instructional level 11.

OEA staff had planned to use district AFRs to provide trend data on the cost of preschool at the district level. However, after analyzing the data from AFRs, it became apparent that too many districts were not coding preschool expenditures properly. For example, some districts have a preschool/kindergarten school in one building, and several of them recorded all of the expenditures to the preschool instructional level and none to kindergarten. Other districts had their preschool students in the elementary school and, instead of breaking out the expenses for preschool, they coded all expenses to the elementary school instruction level. These coding errors were sufficiently common and widespread to make AFR data too unreliable to serve as the basis of trend data.

OEA relied on data captured from a survey that was sent to all superintendents to reflect preschool expenditures for FY 2016.

Preschool Expenditures Survey Results. OEA staff followed up with a group of finance officers to discuss how data could be pulled consistently across the state to capture correct expenditures of the preschool program. During these discussions, it became apparent that districts were recording preschool expenditures in a variety of ways and that the most accurate way to capture preschool expenditures was to obtain information through a survey. As mentioned in Chapter 1, the survey was sent to all superintendents and received a 100 percent response rate. The survey asked districts to report their 2016 preschool expenditures and not include any on-behalf payments paid by KDE. The survey included a breakdown of expenditures to be reported by general fund expenses (Fund 1), and state and federal special grants in the special revenue fund (Fund 2). In addition, districts were asked to separate the expenditures in Fund 1 and Fund 2 by certified and classified salaries, substitute

salaries, benefits, special education, supplies and equipment, and transportation. These were the categories that district finance officers reported as having the most expenditures that were easily obtainable. Appendix E includes a breakdown of total preschool expenditures. Six districts did not include preschool expenditure breakdowns, as noted in Appendix E.

States are required to include per-pupil expenditures disaggregated by source on the 2018 school report cards per the requirements of the Every Student Succeeds Act.

Fiscal Reporting In The Every Student Succeeds Act. The Every Student Succeeds Act (ESSA) requires states to include per-pupil expenditures disaggregated by source on the 2017 report cards. The report cards must report federal, state, and local funds by school. In June 2017, the US Department of Education sent letters to local education agencies giving states an additional year to implement the new requirement.

OEA recommends the following in order for districts to be able to comply with the new ESSA requirements and in order for future research to be conducted using accurate data.

Recommendation 2.2

Recommendation 2.2

The Kentucky Department of Education should change the chart of accounts' instructional level 11 heading to "preschool" to match the description of the program and should add an additional instructional level code to track other district Pre-K expenditures. The Kentucky Department of Education should also work with district finance officers to correctly record preschool expenditures on annual financial reports.

Expenditures By Fund And Expense Codes

There were 110 districts that supplemented the preschool program with general fund expenditures. These districts spent a total of $8.7 million or $661 per pupil in 2016.

Table 2.4 describes average per-pupil expenditures by source of funds, excluding special education and transportation expenditures. For this analysis, OEA staff deleted districts that did not answer the OEA survey question and deleted the number of preschool students these districts served in FY 2016 from the state total. A total of 110 districts were included in the general fund analysis, representing a total of 13,199 students. Districts spent $6.3 million on salaries in the general fund for preschool expenditures. Also, districts reported spending an additional $1.7 million on benefits, not including state on-behalf payments for Kentucky Teachers' Retirement System payments and employee insurance. Supplies and equipment for the preschool program cost districts an additional $734,000. These amounts total $8.7 million in preschool expenses for the 13,199 preschool students served, a per-pupil average expenditure of $661. The state grant funds had total expenditures of over

$64 million, with a per-pupil average of $3,456. Total federal expenditures were approximately $29 million, with a per-pupil average expenditure of $2,094.

Districts reported spending a total of $101 million, or $6,211 per pupil, on preschool expenditures in 2016. This amount includes only expenses for the regular preschool program and does not include special education or transportation costs.

Table 2.4 also includes the total funds that districts spent by type of expenditure. The districts spent a total of $81.6 million in employees' salaries with another $15.3 million going toward employees' benefits. Districts spent a little less than $4.9 million on supplies and equipment, bringing the total expenditures for these categories to almost $102 million. The total number of preschool students served with these funds was 18,568, bringing the average per-pupil expenditure to $6,211. For the most part, the districts that offered full-day preschool had the largest per-pupil expenditures. After special education and transportation expenses are shown, there will be a section on the total per-pupil average expenditures for preschool students.

Table 2.4
District Preschool Expenditures By Source And Expense Object Code
Compared To Total Preschool Students And Average Per-Pupil Expenditures
FY 2016

Source	Salaries	Benefits	Supplies And Equipment	Total Expenditures	Total Preschool Students Covered	Average Per-Pupil Expenditure
General fund	$6,336,552	$1,657,518	$734,495	$8,728,565	13,199	$661
State funds	55,372,027	6,042,227	2,745,539	64,159,793	18,563	3,456
Federal funds	19,910,279	7,631,901	1,391,310	28,933,490	13,818	2,094
Total funds	$81,618,858	$5,331,646	$4,871,344	$101,821,848		$6,211

Source: OEA survey results; data provided by the Kentucky Department of Education.

Special Education Preschool Expenditures

In addition, 124 districts responded to the OEA survey reporting that they spent an additional $15.4 million to provide special education services to preschool students in FY 2016. This amounted to an additional $2,056 per pupil above the regular preschool program cost.

Districts are required to provide special education services for preschool students who have an IEP. The OEA survey asked districts to provide their 2016 preschool program expenditures. A total of 124 districts responded on the cost of their preschool special education programs, which amounted to more than $15.4 million. To determine a per-pupil average amount, OEA staff divided the districts' reported special education expenses by the total number of special education students per district. For FY 2016, the average per-pupil amount was $2,056.

Preschool Transportation Expenditures

Districts are not required to transport preschool students. If they do, each bus must have a driver assistant. Districts that do transport students do not get funding for this service.

Districts that provide transportation for preschool students currently receive no additional funds for providing this service. The SEEK transportation calculation provides districts funding only for transporting kindergarten through 12th-grade students.

According to 702 KAR 3:250, sec. 3(2), if there are available funds after districts have been allotted funds to serve all eligible enrolled children through the state fund appropriation, then the remaining funds may be prorated to those districts that transport eligible children who are enrolled in Head Start, up to the amount per child allowed for transportation in 701 KAR 3:250, sec. 5; however, section 5 requires that KDE annually recommend a preschool allocation formula to the Kentucky Board of Education for review and approval. The allocation formula must specify the amount of funds to be allocated for each child. Since the inception of the preschool program, KDE has never proposed funding transportation. Furthermore, when extra funds remained in the preschool allocation, KDE increased one or more of the funded weights for preschool students, meaning that there were no additional funds to distribute for transportation of preschool students.

According to 702 KAR 5:150, each local board of education that provides bus transportation for preschool students must have a minimum of one driver assistant who is trained and qualified to responsibly deliver and receive students to and from school. The driver assistant shall escort any student who crosses a roadway Driver assistants who receive pay shall be at least 16 years old; if the driver assistant is a volunteer, there is no age requirement.

The OEA survey to superintendents asked whether their district provides transportation for preschool students and the number of driver assistants, including district-employed driver assistants, student workers, and volunteer driver assistants.

Thirteen districts do not provide preschool transportation.

According to survey responses, 13 districts do not transport preschool students. Of these districts, seven were countywide districts and six were independent districts. One independent district that does not provide transportation indicated that it provides midday transportation to preschool students who attend child care; however, transportation is available only to the children of working parents.

Of the 156 districts that provide transportation for preschool students, 143 employed driver assistants, 43 used student workers, and 10 used volunteers. Districts reported using one, two, or all three

types of driver assistant. Two independent districts responded that they transport preschool students on separate buses, while some county districts provide transportation at designated stops and did not pick students up at home. Some districts use their preschool classroom classified aides as driver assistants. Appendix F lists the number and type of driver assistants and the number of bus drivers by district.

The estimated cost to provide preschool transportation was $1,035 per pupil in 2016.

The OEA survey asked districts to provide an estimate of how much it cost the district to transport preschool students. OEA staff analyzed the per-pupil cost reported by districts and computed a per-pupil cost. In FY 2016, the total amount of transportation expenditures reported by 129 districts was $16,947,941. The per-pupil cost for transporting state-funded preschool students was $1,035. Districts must currently cover these transportation expenses with no funding, which could result either in cuts to other services provided to preschool students or in the use of general fund dollars that could have otherwise been spent on supports to other K-12 program initiatives.

Recommendation 2.3

Recommendation 2.3

The Kentucky Department of Education should consider recommending that the Kentucky Board of Education allocate a portion of preschool funds to districts that transport preschool students.

Total Preschool Expenditures

In 2016, districts reported spending a total of $9,302 per pupil for regular education, special education, and transportation of preschool students.

The total amount of preschool expenditures districts reported on the OEA survey includes the total shown in Table 2.4 of $101,821,848, the $15,407,223 spent on special education, and the $16,947,941 spent on transportation. This brings the total preschool cost per preschool student enrolled to $9,302 in FY 2016. It should be noted that districts that offer full-day preschool programs tended to have higher per-pupil preschool expenditures. The types of preschool programs offered are discussed further in Chapter 3.

Preschool Survey Responses

An open-ended question on the OEA survey asked districts whether they had any additional comments on preschool. Funding was mentioned most frequently, with 30 comments on this topic.

The OEA survey included an open-ended question asking whether the district had any additional comments that related to preschool. Forty-four districts commented on preschool. Funding was mentioned the most frequently, with 30 comments on this topic. In these comments, four funding issues were raised. Sixteen districts

discussed providing universal preschool for all students, as well as extending preschool to 5 full days a week. One superintendent stated:

> Permanent funding should be provided by the state to provide full day preschool and kindergarten. Kentucky was a leader in the country in providing preschool services through school districts, and we need to continue the commitment to quality early childhood programs.

Nine districts mentioned funding cuts or the need for additional funding. Three districts mentioned providing preschool transportation funding. Another three districts reported issues with state-funded preschools competing with other pre-K programs, such as CCAP. A respondent in western Kentucky reported:

> Preschool Partnership Grant funding should NOT have reduced the allocation to public preschool—they should have been stand alone and not solely tied to a childcare that serves CCAP children/families. Would love to use these funds to expand current preschool program to full day as an option. Love our grant and partner. Universal preschool in Kentucky should be our state's number one novice reduction and achievement gap closure strategy.

Chapter 3

Types Of Preschool Programs

Introduction

This chapter discusses preschool program proposals, operational hours, teacher qualifications, demographics of preschool students, and a comparison of Kentucky preschools to those in surrounding states and the nation.

This chapter describes the requirements of district preschool program proposals and the different types of preschool operational schedules. Next, there is a discussion of how many districts provide a nontraditional preschool program and of the blending of preschool and Head Start classrooms, followed by an 11-year trend analysis of preschool teacher qualifications. This chapter also includes a comparison of the demographic makeup of 4-year-old preschool students to the kindergarten students of the following year.

Kentucky preschool program attributes will be compared to those of bordering states and the nation as a whole. A discussion of preschool attendance follows, and the chapter concludes with a discussion of the number of districts that provide day care services to schools that enroll preschool students.

Preschool Program Proposals

A database of preschool program proposals is currently lacking in several areas. Only 1 of the 17 requirements was fully met, and another 2 requirements were partially met.

KRS 157.3175(5) requires local school districts to submit preschool proposals to the commissioner of education for review. Each program proposal must include, at a minimum, the requirements set out in Table 3.1. KDE provided an electronic copy of each district's preschool program approval plan for the 2017 school year. The current preschool program database provides some of the data required for the preschool program proposals, but the proposals are lacking in several areas.

Table 3.1 describes whether preschool program proposals met, partially met, or did not meet the requirements established in KRS 157.3175. The only requirement that was fully met was the estimated ratio of staff to preschool students. The qualifications of program staff were included in the proposals, but no documentation of training was provided. In addition, the proposals provided the days of the week for the operation of each program, but not the hours of operation. Some of the required program proposal information, while not submitted, may be acquired by KDE through alternative means. For example, each district submits a list of preschool teachers on the proposal, and KDE can pull teacher credentials from the Educational Professional Standards Board. While districts are required to submit their state-funded preschool budgets to KDE on

the district's consolidated budget report, this report only includes a budget for the allocation the district received from KDE on the preschool grant. It does not include expenses that districts spend from other grants on the preschool program or federal and local expenditures, which may result in districts submitting inaccurate per-child expenditure estimates.

Table 3.1
Districts' Compliance With Preschool Program Proposal Reporting Requirements Mandated By KRS 157.3175(5)
School Year 2017

Summary Of Requirement	Met Requirement
Process conducted by district to assure that parents or guardians of all eligible participants have been made aware of program and of their right to participate	No
Description of planned educational program and related services	No
Estimated number of participating children	No
Strategies for involving children with disabilities	No
Estimated ratio of staff to preschool students	Yes
Estimated percentage of children participating in program who are at risk of educational failure	No
Training and qualifications of program staff and documentation that staff meet required standards	Partial
Budget and per-child expenditure estimate	No
Plan to facilitate active parental involvement, including provisions of complementary parent education when appropriate	No
Facilities and equipment that are appropriate for young children	No
Days of week and hours of day when program shall operate	Partial
Plan for coordinating program with existing medical and social services, including child development and health screening component	No
Assurance that students will receive breakfast and lunch	No
Program sites that meet state and local licensure requirements	No
Plan for coordinating program philosophy and activities with local primary program	No
Evaluation component	No
Certification from Head Start director that Head Start program is fully utilized	No

Source: Staff analysis of data from the Kentucky Department of Education.

Recommendation 3.1

Recommendation 3.1

The Kentucky Department of Education should enforce KRS 157.3175 and require districts to submit complete preschool proposals that include all data elements. If some of the documentation can be obtained electronically or is no longer needed, KDE should work with the General Assembly to modify the requirements of the preschool proposal documentation.

Operation Of Preschool Programs

Preschool programs must provide at least 2.5 hours of classroom time, 4 days a week. Breakfast or lunch must be provided and shall not count toward the 2.5 hours of instruction. The staff to student ratio in preschool is 1 to 10 and can increase up to 20 students if there is an instructional assistant.

The operation of preschool programs is detailed in 704 KAR 3:410, sec. 6. This regulation outlines three preschool programs and requires districts to select one of these options for their preschool program:

- A standard half-day, 5-day-a-week program with a single session.
- A half-day, 4-day-a-week program in single or double session, with the 5th day reserved for services to children and their families, such as home visits, special experiences for children, parent training, or coordination of medical or social services.
- A locally designed program approved by the commissioner of education.

For districts that choose the double session program, time must be allotted to allow staff to prepare for the session, as well as to give individual attention to children entering and leaving the program and for adequate break time. The hours of operation for the half-day program can vary, but it must provide a minimum of 2.5 hours of classroom time per day for instruction and, in addition, students must receive breakfast or lunch. The class size shall be 10 students to each preschool teacher, and a class can have up to 20 students if there is also an instructional assistant.

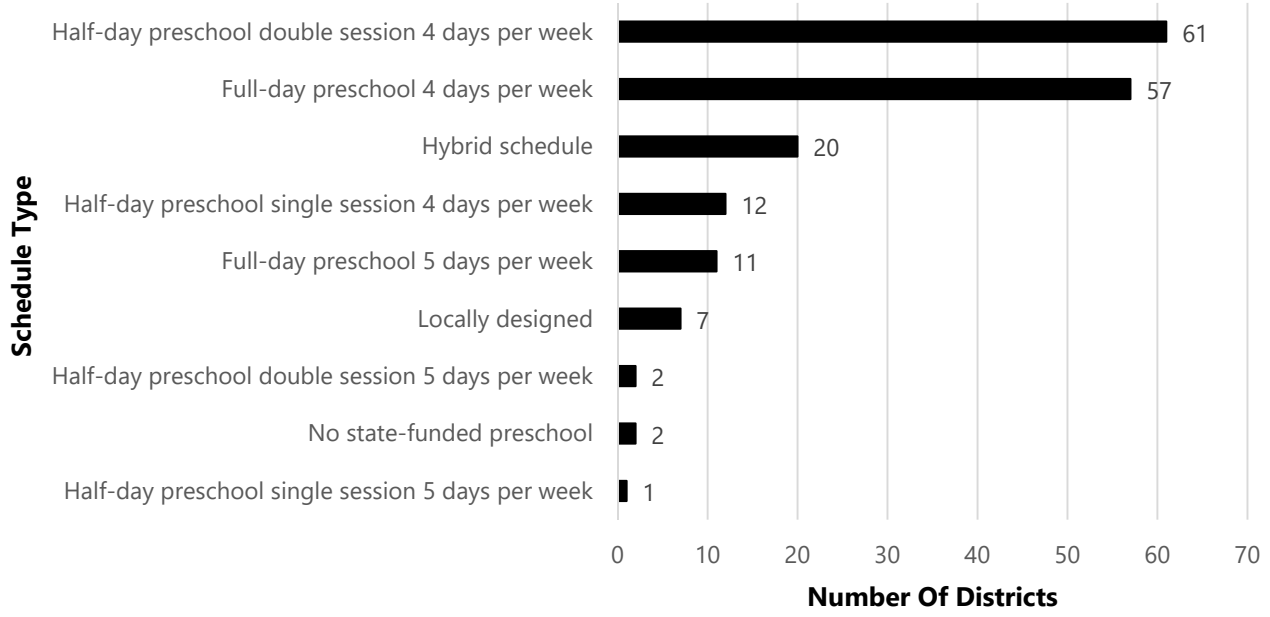
Some districts offer a hybrid preschool schedule, where one school may offer a full-day program and a half-day preschool program. Twenty districts offered a hybrid schedule in 2017.

The OEA survey asked districts to indicate the type of preschool program they offered in the 2017 school year. A hybrid schedule was created to categorize districts that offered different schedules to their students. For example, if a district stated on the survey that it had one class that operated a full-day program 4 days a week and 3 classrooms with a half-day program 4 days a week, the district was grouped in the hybrid category. In addition, OEA staff received copies of documentation submitted to the commissioner of education by districts that requested approval for a locally designed preschool program.

Sixty-eight districts (40 percent) are providing a full-day preschool schedule 4 or 5 days a week. Two districts, which contract with Head Start to provide preschool services, have never enrolled any preschool students.

Figure 3.A describes the 2017 program schedule provided to preschool students by districts. Of Kentucky's 173 school districts, 44 percent (76 districts) provided a half-day preschool program 4 or 5 days per week. Of these, 63 districts offered preschool in a double session. Forty percent (68 districts) provided a full-day preschool schedule 4 or 5 days per week. Twelve percent (20 districts) operated a hybrid schedule, offering both full- and half-day schedule options. Two districts do not offer preschool services; these districts contract with Head Start to provide preschool services to their students.

Figure 3.A
Types Of Preschool Schedules, School Year 2017



Source: OEA staff analysis of data from the Kentucky Department of Education; OEA survey.

The commissioner of education has approved seven districts to operate locally designed preschool programs. These districts offer full-day preschool 2 days a week.

In 2017, seven districts (4 percent of the total) used a locally designed option approved by the commissioner of education. All of the locally designed programs provided a preschool program in which students attended school all day (6 hours), 2 days a week. Each of these districts cited a need to reduce costs as a reason for seeking approval of a locally designed option. Most of these districts indicated that a locally designed option would reduce transportation cost and salaries. Two districts submitted an estimated cost savings: One district reported saving $198,000 per year, and the other, which served fewer students, stated that it would save $52,000 per year.

While the commissioner approved all locally designed preschool programs, in his responses to the district applications he cautioned applicants that current research does not support alternate day schedules for kindergarten and could likely have the same implications for preschool.

Montessori preschool programs are offered in Jefferson County and Corbin Independent.

Nontraditional Preschool Programs. The OEA survey asked whether districts provided a nontraditional preschool program. Corbin Independent and Jefferson County Public Schools (JCPS) both reported that they offered a Montessori program. Corbin Independent reported enrolling 69 preschool students in its Montessori program in the 2017 school year. JCPS stated that it had two schools that offered a Montessori program in 2017: the John F.

Kennedy Montessori Elementary School (10 preschool students) and Coleridge-Taylor Elementary School (33 preschool students).

Preschool classrooms can be fully blended or partially blended with Head Start students. There were 55 districts that were fully blended and 18 districts that were partially blended in 2017.

Preschool Blended Programs. Preschool and Head Start programs are encouraged to blend or share classrooms that will service both preschool and Head Start children and are financially supported through preschool funding and Head Start funding, as well as other sources of funding such as Title I. Districts may have fully blended or partially blended programs. In fully blended programs, every preschool classroom in the district includes Head Start students. Partially blended programs have at least one preschool classroom in which Head Start students are also enrolled, but the remainder of the preschool classrooms service only preschool students.

The form used for preschool program proposals included a place for districts to record whether or not they were blending services. For the 2017 school year, 55 districts stated that they were fully blended, 18 districts stated that they were partially blended, 93 districts said they had a stand-alone program, and two districts did not have a preschool program. Five districts reported that they were unsure of the type of preschool program they had, or that they had an "other" type of program. OEA could not verify the data on blended programs; thus, no analysis of blended programs was completed for this report.

Full Utilization Of Head Start. After the passage of KERA in 1990, to ensure that federal dollars were not supplanted, the General Assembly added provisions in subsequent budgets that districts must first "fully utilize" Head Start funds before enrolling students in the state-funded preschool program. KRS 157.3175(5) states that each district must work with existing preschool programs to avoid duplication of programs and services, to avoid supplanting federal funds, and to maximize Head Start funds in order to serve as many 4-year-old children as possible.

Currently no state statute or regulation defines *full utilization*. Head Start centers and preschool centers must agree that they are fully utilized each year. The full utilization number is the number of 4-year-old students Head Start was serving in 1989.

There is no statutory or regulatory definition of *full utilization*; however, the legislature appears to have intended the use of the pre-KERA (1989) number of 4-year-old students being served with Head Start funds. Furthermore, local districts are required to sign a full utilization certification agreement with Head Start each school year. The certification, made through a form letter, includes the 1989 pre-KERA number of 4-year-old Head Start students; however, this form letter also includes a field for districts and Head Start centers to mutually agree on a full utilization number. The language allowing districts and Head Start centers to agree on a different number is not

mentioned anywhere in budget language or in statute. According to budget language,

> Each local district shall work with Head Start and other existing preschool programs to avoid duplication of services and programs, to avoid supplanting federal funds, and to maximize Head Start funds in order to serve as many four-year-old children as possible, and shall maintain certification from the Head Start director that the Head Start Program is fully utilized. If a local district fails to comply with the requirements of this subsection, the Commissioner of Education shall withhold preschool funding for an amount equal to the number of Head Start-eligible children served in the district who would have been eligible to be served by Head Start under the full utilization certification required under this subsection (HB 303 (2016)).

Thirty-two districts agreed on a full utilization number that is below the 1989 number of Head Start children being served. The result is that Head Start funds serve 1,512 fewer 4-year-olds in these districts.

OEA staff analyzed the 2016 GOEC full utilization data, which included a listing of districts that met pre-KERA Head Start full utilization. A total of 32 districts did not meet full utilization and agreed on another number. In these 32 districts, Head Start served 1,512 fewer 4-year-old students in 2016 than in 1989.

In the OEA survey, several districts reported that they were having issues trying to enroll preschool students because of the full utilization requirements. The full utilization numbers have been unchanged since 1989 despite changes in Kentucky's demography.

KDE is working with Head Start directors and state-funded preschool coordinators to revise and modernize the full utilization agreement process, including its procedures and forms. KDE expects the work to be completed in 2017, with changes being implemented in the 2019 school year.

According to the new performance standards set by the US Department of Health and Human Services (45 CFR, sec. 1302.14(a)(3)), if a Head Start program operates in a service area with high-quality publicly funded preschool that is available for a full school day, the program must prioritize serving younger children. This means that Head Start programs must shift Head Start funding slots from 4-year-old and 3-year-old children toward Early Head Start children. In addition, 45 CFR, sec. 1302.21 states that, by August 1, 2019, center-based Head Start programs must provide 1,020 annual hours of planned class operations over the course of at least 8 months per year. Because Head Start will not be allowed to offer double sessions, Head Start will likely serve fewer students.

According to NIEER, Head Start enrollment of children under 3 more than doubled between 2007 and 2015. This would suggest that Kentucky should be prepared to serve more 4-year-old preschool students in the future.

Recommendation 3.2

Recommendation 3.2

The Kentucky Department of Education should provide to the General Assembly, before the 2018–2019 school year, a district-level analysis of the potential cost of increasing preschool enrollment of 4-year-old students. This analysis should include an inventory of available space in district school buildings, supplies, and playground equipment, and the funding that the General Assembly may have to include in its preschool appropriations.

Preschool Staff

Preschool teachers who began teaching after 2005 must have a certificate in interdisciplinary early childhood education (IECE). Preschool teachers who were teaching prior to 2005 were grandfathered in. There are 27 districts that still have at least one preschool teacher who has been grandfathered in.

Prior to school year 2005, districts were allowed to hire staff without a teaching certificate to instruct preschool students. After 704 KAR 3:410 was adopted, the Education Professional Standards Board required preschool teachers to have a certificate in interdisciplinary early childhood education. Preschool teachers who were teaching without a certificate prior to the passage of 704 KAR 3:410 were allowed to continue teaching preschool as long as they remained in the same district. They were assigned the title “associate teacher.” Table 3.2 shows that there were eighty-nine preschool associate teachers in school year 2017. Twenty-seven districts still have at least one preschool associate teacher instructing preschool students. Jefferson County has the largest number of preschool associate teachers, at 38, followed by Wayne County and Whitley County, which both employ 4 associate teachers. There are 6 districts that employ three associate teachers, another 6 districts that employ two, and 13 districts that have only one preschool associate teacher employed as of the 2017 school year.

Table 3.2
Preschool Teacher Certifications By Type
School Years 2007 To 2017

Certification Type	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
IECE	450	483	505	541	598	644	679	747	759	754	817
Probationary IECE	56	47	41	36	51	37	37	19	23	22	34
Emergency IECE	17	8	7	13	17	8	9	11	10	6	13
Letter certified	184	168	153	149	128	119	111	102	95	84	78
Letter classified (ec)	35	31	28	28	25	27	25	21	19	16	19
Special education certified	2	1	1	0	0	0	4	4	4	6	7
Preschool associate teacher	303	274	254	233	203	183	158	140	125	105	89
Total preschool teachers	1,047	1,012	990	1,000	1,022	1,018	1,023	1,044	1,035	993	1,057

Note: IECE = interdisciplinary early childhood educations; (ec) = early childhood.
Source: Kentucky Department of Education.

Since 2007, the number of teachers with an IECE certificate has doubled.

From 2007 to 2017, the number of IECE-certified teachers almost doubled. 16-KAR 2:140 allows districts to hire preschool teachers who hold a probationary IECE certificate. The number of preschool teachers with a probationary IECE certification has decreased 65 percent since 2007.

Districts also have the option of hiring preschool teachers who have a bachelor's degree and/or certification in another content area. This teacher certification is called an emergency IECE certificate. Teachers holding this certificate decreased from 23 in 2007 to 10 in 2017. Districts are also allowed to hire special education teachers as preschool instructors. In school year 2007, there were seven preschool teachers holding a special education certification; all were employed by the Jefferson County Public Schools.

704 KAR 3:420, sec. 3(3)(b) allows EPSB to provide kindergarten and special education teachers with a letter certifying eligibility to teach preschool students without having one of the other certifications. Table 3.2 refers to this status as "letter certified," and there were 78 preschool teachers holding this letter. A similar letter is available for those holding a child development degree to be a state-funded preschool teacher, though there were only 17 teachers holding this letter in 2017. These two letters do not expire, and they serve as a lifetime waiver. The use of both types of letters of certification has decreased over the last 11 years.

Comparison To Neighboring States And The Nation And Preschool Comparison With Bordering States

The *State Of Preschool* annual report by NIEER includes 10 measures of quality for state-funded preschool programs. Kentucky met 9 of the 10 quality standards in 2016, missing only the standard that requires assistant teachers to have a child development associate degree.

NIEER publishes an annual report, *The State Of Preschool*, that provides comprehensive data and analysis of state-funded preschool programs across the United States. The report's profiles for each state address access to state-funded preschool, NIEER quality standards for state-funded preschool programs, and state spending on preschool programs. These profiles were used to compare the state-funded preschool program in Kentucky to those of bordering states.[a]

NIEER Quality Standards. NIEER has developed 10 measures of quality for state-funded preschool programs, with specific benchmarks for each targeted policy. Policies included in the quality standards checklist include early learning and development standards, preschool teacher degree requirements, standards for maximum class size, and standards for continuous quality improvement.

Table 3.3 illustrates how Kentucky and the bordering states fared on these measures of quality in the 2016 school year. Kentucky met the benchmarks for 9 of the 10 quality standards, missing only the standard that requires assistant teachers to have a child development associate (CDA) credential.[b] West Virginia was the only bordering state that met all 10 of the current quality standards for the 2016 school year.[c]

[a] Bordering states are Illinois, Indiana, Missouri, Ohio, Tennessee, Virginia, and West Virginia.

[b] In order to be eligible for the CDA credential, an individual must have a high school diploma or be a junior or senior enrolled in a vocational early education program. According to NIEER, only 19 state-funded preschool programs met the requirements for this standard during the 2016 school year.

[c] NIEER has developed a new set of quality standards to be used for future reports. The new standards and benchmarks were presented in the 2016 report as supplementary metrics.

Table 3.3
NIEER Current Quality Standards Met By Kentucky And Bordering States
School Year 2016

State/Program	Comprehensive Early Learning Standards	Teacher Has BA	Specialized Training In Pre-K	Assistant Teacher With CDA Or Equivalent	At least 15 hrs/yr In Service (For Teachers)	Class Size 20 Or Lower	Staff-Child Ratio 1:10 Or Better	Vision, Hearing, Health And One Support Service	At Least One Meal Provided	Site Visits	Current Quality Standards Sum
West Virginia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
Kentucky	✓	✓	✓		✓	✓	✓	✓	✓	✓	9
Tennessee	✓	✓	✓		✓	✓	✓	✓	✓	✓	9
Illinois	✓	✓	✓		✓	✓	✓	✓		✓	8
Missouri	✓	✓	✓		✓	✓	✓	✓		✓	8
Virginia	✓				✓	✓	✓	✓			5
Ohio	✓		✓					✓		✓	4
Indiana	✓				✓					✓	3
United States	59	35	51	19	49	47	49	41	28	42	N/A

Note: The numbers for the United States represent the total number of state preschool programs meeting the criteria; there are 59 state preschool programs in 43 states and the District Of Columbia.
Source: National Institute for Early Education Research. *The State Of Preschool 2016.* Brunswick: Rutgers Graduate School of Education, 2016.

Kentucky lags slightly behind the national average in total enrollment of 3- and 4-year-old preschool students. The nation was at 18.4 percent while Kentucky enrolled 17.4 percent. However, the percentage of 3-year-olds in state preschool is higher in Kentucky than in the nation as a whole.

Overall Enrollment Comparison. The NIEER report provides information on the percentage of 3- and 4-year-olds enrolled in state-funded preschool relative to the total population of 3- and 4-year-old children in each state. Table 3.4 shows that, at more than 17 percent, Kentucky ranked third among bordering states in the total percentage of 3- and 4-year-olds enrolled in state-funded preschool during the 2016 school year. Kentucky was behind the national average considering the percentage of 4-year-olds enrolled, but higher than the national average for 3-year-olds enrolled relative to the state population.

Table 3.4
Percentage Of 3- And 4-Year-Olds Enrolled In State-Funded Preschool
For Kentucky And Bordering States
School Year 2016

State/Program	% 4-Year-Olds In State Pre-K	Access Ranking For 4-Year-Olds	% 3-Year-Olds In State Pre-K	Access Ranking 3-Year-Olds	Total % Of 3- And 4-Year-Olds
West Virginia	66.4%	6	11.0%	7	38.5%
Illinois	26.1	21	19.9	3	23.0
Kentucky	25.8	22	9.0	9	17.4
Tennessee	21.8	26	0.7	26	11.2
Virginia	17.8	29	—	—	8.9
Ohio	7.8	33	2.8	20	5.3
Missouri	2.1	41	1.2	23	1.7
Indiana	1.9	43	—	—	0.9
United States	31.8		4.9		18.4

Note: This table is sorted by total percentage of 3- and 4-year-olds enrolled in state-funded preschool.
Source: National Institute for Early Education Research. *The State Of Preschool 2016*. Brunswick: Rutgers Graduate School of Education, 2016.

Kentucky enrolls a larger percentage of special education students than all bordering states and the nation.

Special Education Preschool Enrollment Comparison. The NIEER report also provides a breakdown of 3- and 4-year-olds receiving special education services. According to NIEER, Kentucky had a higher percentage of 3- and 4-year-olds receiving special education services than any bordering state.[a] Table 3.5 provides a comparison of the special education preschool population in Kentucky and its bordering states.

[a]The percentages of 3-year-olds, 4-year-olds, and 3- and 4-year-olds receiving special education services in state-funded preschool in Kentucky were all higher than the national average for those populations.

Table 3.5
Special Education Preschool Enrollment For Kentucky And Bordering States
School Year 2016

State	3-Year-Olds Enrolled	% Of Age 3 Population	4-Year-Olds Enrolled	% Of Age 4 Population	Age 3 And 4 Enrolled	% Of Age 3 And 4 Population
Kentucky	3,697	7%	5,948	11%	9,645	9%
Illinois	9,574	6	13,076	8	22,650	7
Missouri	3,673	5	6,139	8	9,812	7
Indiana	4,510	5	5,959	7	10,469	6
West Virginia	1,000	5	1,611	8	2,611	6
Ohio	5,233	4	8,323	6	13,556	5
Virginia	3,892	4	5,681	6	9,573	5
Tennessee	2,503	3	4,176	5	6,679	4
United States	178,073	4	262,858	7	441,931	6

Note: This table is sorted by percentage of 3- and 4-year-old special education preschool students served.
Source: The National Institute for Early Education Research. *The State Of Preschool 2016. Brunswick:* Rutgers Graduate School of Education, 2016.

The minimum number of instructional hours for preschool in Kentucky is 2.5 hours per day. The data for surrounding states show that Tennessee provides the most at 5.5 hours of preschool.

Operation Schedule Comparison. Table 3.6 displays the minimum hours of operation per day and the operating schedules for preschools in Kentucky and its bordering states. Kentucky, Illinois, and Ohio have the lowest required hours of operation per day at 2.5 hours. Tennessee had the highest number of required hours of instruction per day at 5.5 hours. Kentucky and the majority of bordering states have preschool operation schedules that adhere to a traditional academic calendar, with Missouri operating on a full calendar year schedule and Indiana determining preschool operation schedules locally.

Table 3.6
Preschool Operating Schedules And Minimum Hours Of Operation Per Day
For Kentucky And Bordering States, School Year 2016

State/Program	Minimum Hours Of Operation Per Day	Operating Schedule
Tennessee	5.5	School or academic year
Indiana	4.0	Determined locally
West Virginia	3.5*	School or academic year
Missouri	3.0	Full calendar year
Virginia	3.0	School or academic year
Illinois	2.5	School or academic year
Kentucky	2.5	School or academic year
Ohio	2.5	School or academic year

* According to NIEER, West Virginia requires a minimum of 14 hours per week regardless of whether a district uses a 4- or 5-day school week for preschool. The number provided in this chart assumes a 4-day week.
Source: The National Institute for Early Education Research. *The State Of Preschool 2016*. Brunswick: Rutgers Graduate School of Education, 2016.

Demographics

On average, 29 percent of kindergarten students in school years 2015 to 2017 had previously participated in the state-funded preschool program as 4-year-olds.

From school year 2015 to school year 2017, 153,841 students enrolled in Kentucky kindergartens; of these, 44,064 (29 percent) had previously participated in the preschool program as state-funded students. Over this 3-year period, the state-funded preschool program was the most common prior setting for students enrolling in kindergarten. An average of 14,688 state-funded preschool-eligible students participated in the program each year. Table 3.7 shows enrollment numbers for state-funded 4-year-old students in school years 2014 to 2016.

Table 3.7
Number Of State-Funded 4-Year-Old Students
And Percent Of Kindergarten Enrollment
School Years 2014 To 2016

School Year	Preschool Enrollment	% Of Next Year's Kindergarten Enrollment
2014	15,164	29.84%
2015	13,969	27.65
2016	14,232	28.37

Source: Staff analysis of data from the Kentucky Department of Education.

This section provides a brief discussion of the demographic makeup of 4-year-old state-funded students who enrolled in the preschool program in school years 2014 to 2016 and compares these students to their kindergarten cohorts the following year. A more detailed analysis of preschool student demographics, at the district level, appears in Appendix G.

The analysis included in this section relied on a combination of demographic markers included in the kindergarten readiness data and the semiannual student enrollment data provided by KDE. Student-level demographic information contained in the kindergarten readiness data set was paired with student-level preschool enrollment data to accurately identify state-funded 4-year-olds who had enrolled in preschool prior to beginning kindergarten. The analysis in this section does not report demographic information on non-state-funded 4-year-olds who enrolled in the preschool program, as demographic information on these students was not available. A demographic description of special education 3- and 4-year-olds appears in the next section of this chapter.

The percentage of 4-year-olds who were male was slightly higher for preschool than for kindergarten the following year.

Gender. During the 3 years reviewed for this section of the report, the percentage of state-funded 4-year-olds who were male was slightly higher for preschool populations than for kindergarten

populations the following year. Male students accounted for 54.53 percent, 55.27 percent, and 54.78 percent of state-funded 4-year-old preschool students in school years 2014, 2015, and 2016, respectively. While the majority of students who entered kindergarten in school years 2015 to 2017 were also male, male students accounted for just 51.79 percent, 52.15 percent, and 51.77 percent of kindergarten students in school years 2015, 2016, and 2017, respectively.

Nonwhite students constituted a larger share of state-funded 4-year-old students in preschool than in kindergarten.

Race/Ethnicity. Table 3.8 shows the racial and ethnic makeup of state-funded 4-year-old preschool students compared to the racial and ethnic makeup of the kindergarten cohorts in school years 2015 through 2017. In all 3 years analyzed, nonwhite students constituted a larger share of state-funded 4-year-old preschool students than of the kindergarten cohort as a whole. The overrepresentation of minority students in the preschool population can be attributed to the higher percentage of students receiving FRPL among nonwhite students.

Table 3.8
Race/Ethnicity Of All Kindergarten Students
And State-Funded 4-Year-Old Preschool Students
School Years 2014 To 2017

	All Kindergarten Students			State-Funded Preschool Students		
Race	**2015**	**2016**	**2017**	**2014**	**2015**	**2016**
White	76.38%	76.25%	75.65%	68.71%	71.95%	69.73%
Black	10.25	10.06	10.22	14.13	11.04	13.17
Hispanic	7.15	7.21	7.40	10.13	9.68	9.78
Other	6.21	6.48	6.74	6.85	7.34	7.32

Source: Staff analysis of data from the Kentucky Department of Education.

Free Or Reduced-Price Lunch Status. For 4-year-olds, eligibility for the state-funded preschool program is determined by eligibility for the federal free or reduced-price lunch program. Table 3.9 compares rates of students receiving FRPL for all kindergarten students and kindergarten students who enrolled in the state-funded preschool program the previous year.

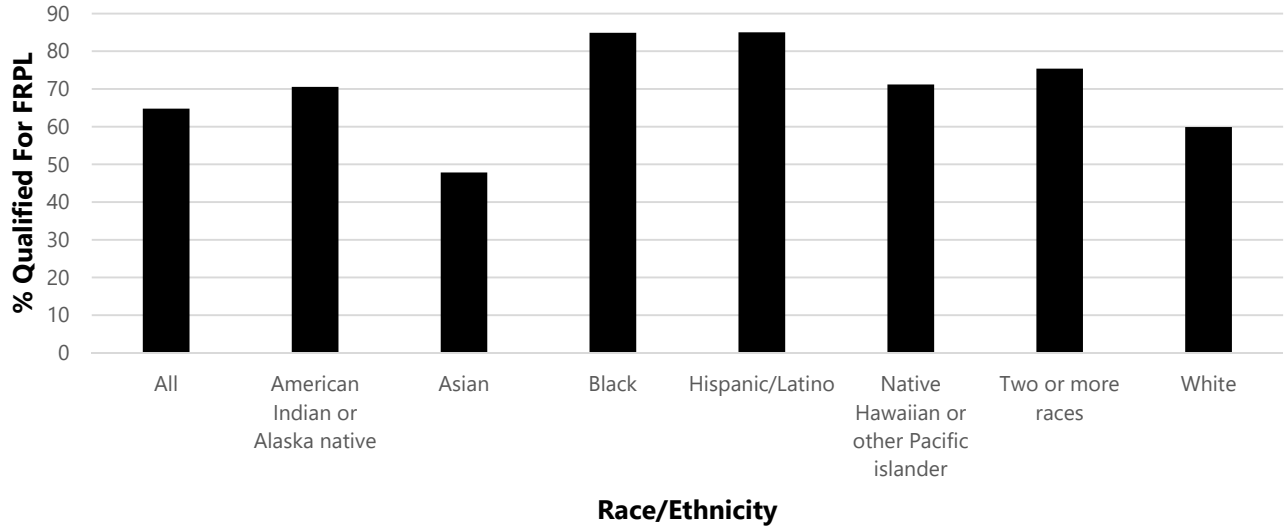
Table 3.9
Percent FRPL For All Kindergarten Students
And State-Funded 4-Year-Old Preschool Students
School Years 2014 To 2017

	All Kindergarten Students			State-Funded Preschool Students		
Race	**2015**	**2016**	**2017**	**2014**	**2015**	**2016**
Free	59.73%	59.55%	60.31%	77.27%	76.12%	76.60%
Reduced	5.42	4.79	4.56	6.28	5.34	4.97
Free or reduced	65.15	64.34	64.87	83.55	81.46	81.57

Source: Staff analysis of data from the Kentucky Department of Education.

In order to further explore the overrepresentation of nonwhite students in the state-funded preschool program, Figure 3.B illustrates the percent of kindergarten students, by race, who qualified for FRPL during school years 2015 to 2017.

Figure 3.B
Percentage Of Kindergarten Students Qualifying For FRPL By Race
School Years 2015 To 2017

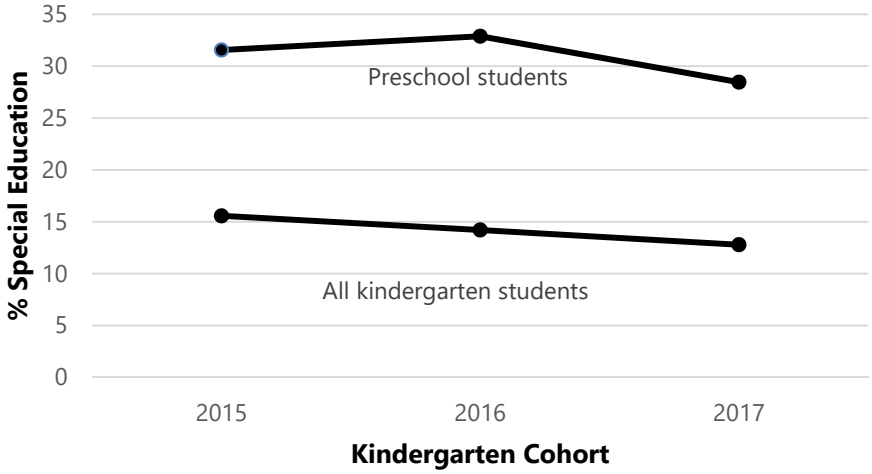


Source: Kentucky Department of Education.

During school years 2015 to 2017, the percentage of 4-year-old preschool students who entered kindergarten with an individualized education program (IEP) was almost double that of all kindergarten IEP students.

Special Education. During the 3-year period reviewed in this section, the percent of 4-year-old state-funded preschool students who entered kindergarten with an IEP was approximately double that of all kindergarten students. Figure 3.C compares the percentage of all kindergarten students who qualified for special education services and those kindergarten students who had participated as state-funded 4-year-olds in the preschool program.

Figure 3.C
Percentage Of All Kindergarten Students And State-Funded 4-Year-Old Preschool Students Who Qualified For Special Education Services School Years 2015 To 2017



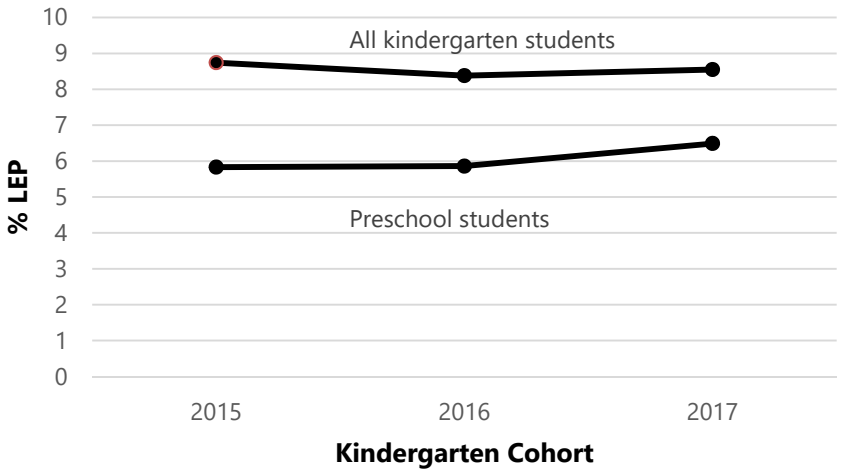
Source: Staff analysis of data from the Kentucky Department of Education.

Limited English Proficiency. Analysis suggests that students who qualified, as 4-year-olds, for the state-funded preschool program are more likely to qualify for FRPL and for special education services than their nonpreschool peers. These students are also more likely to be identified as having limited English proficiency. Figure 3.D shows the percentage of all kindergarten students and the percentage of state-funded 4-year-old preschool students who were identified as LEP during the 3-year period of this analysis.

Although 80 percent of students with limited English proficiency (LEP) qualify for FRPL, less than half of all LEP students participate in state-funded preschool.

Less than 10 percent of all state-funded 4-year-old preschool students who entered kindergarten during school years 2015 to 2017 were identified as LEP. At the district level, the average percentage of state-funded preschool students identified as LEP was just 4.21 percent over the same period. However, this district-level average obscures significantly higher rates of LEP students in some districts. During school years 2015 to 2017, a total of 3,774 LEP students enrolled in preschool as state-funded 4-year-olds. More than 40 percent of LEP preschoolers were enrolled in the eight districts with the highest percentage of LEP students. The percentage of students identified as LEP in these eight districts ranged from 27 percent to 44 percent.

Figure 3.D
Percentage Of All Kindergarten Students And State-Funded 4-Year-Old Preschool Students Identified As LEP
School Years 2015 To 2017



Source: Staff analysis of data from the Kentucky Department of Education.

Currently, services for LEP students are determined at the local level, and districts are not required to screen students for English proficiency or to provide services aimed at improving English proficiency prior to entry into kindergarten. In fact, less than half of all LEP students participate in the state-funded preschool program even though more than 80 percent of these students qualify for FRPL. Additionally, less than 8 percent of LEP students were identified as qualifying for special education services during school years 2015 to 2017. When that number is compared to the percentage of all state-funded preschool students (30.98 percent) and all kindergarten students (14.21 percent) who received special education services, the data suggest that LEP students may not be receiving the special education services necessary to better prepare them for kindergarten.

Recommendation 3.3

Recommendation 3.3

School districts, with support and guidance from the Kentucky Department of Education, should complete a needs assessment analysis in order to determine whether the educational needs of preschool-age limited English proficiency students are being met and to explore possible resources that may assist in better meeting the needs of these students.

State-Funded 3-Year-Old Preschool Students

The characteristics of 3-year-old state-funded preschool students differ from the characteristics of 4-year-olds. A larger percentage of 3-year-old preschool students are male, and a larger percentage are white students.

In school year 2016, 5,159 3-year-olds enrolled as state-funded students in preschool programs. Three-year-olds qualify for state-funded preschool if they have an identified special educational need and do not qualify for preschool based on income. This section compares the gender and race and ethnicity of these students to those of state-funded 4-year-old preschool students.

Overall, 3-year-old state-funded preschool students are more likely to be male and white than their 4-year-old counterparts. In school year 2016, 80 percent of state-funded 3-year-olds were white, while just 70 percent of state-funded 4-year-olds were white. As a result, black, Hispanic, and other races/ethnicities accounted for a smaller portion of state-funded 3-year-old preschool students than state-funded 4-year-old students. This is consistent with data that suggest that white students are identified for special education services at a higher rate than nonwhite students. Male students also constitute a considerably larger percentage of 3-year-old state-funded preschool students when compared to state-funded 4-year-old students. Among 4-year-olds, just over half are male (55 percent in school year 2016), but among 3-year-olds the percentage of male students in school year 2016 was 65 percent.

Preschool Attendance

Current regulations require districts to record preschool attendance using the standard attendance reports or through an approved, verifiable alternative method approved by KDE. Staff at KDE stated that they have not approved an alternative method of reporting. In addition, most districts are not recording attendance through the Kentucky Student Information System.

704 KAR 3:410, sec. 5(4) requires the recording of preschool attendance. This regulation states that daily attendance records must be maintained and submitted through the districts' standard attendance reports or through an approved, verifiable alternative method. It further states that parents or legal guardians must be contacted when an enrolled child has irregular attendance or has been absent for 4 consecutive days.

OEA staff received attendance data from the Kentucky Student Information System, Infinite Campus, for school years 2015 and 2016. Approximately half the districts in the state did not have any excused or unexcused absences for preschool students.

OEA staff met with KDE staff on July 11, 2017, to discuss what alternative methods of reporting KDE had approved in the past. KDE staff indicated that no alternative methods are currently approved and that preschool centers keep track of attendance for preschool students on attendance books commonly referred to as green books. KDE staff also indicated that KDE had identified this procedure as an issue, but adherence to policy has not been strictly enforced

because, unlike funding for K-12 students, preschool funding is not based on daily attendance. KDE staff further stated that during the preschool P2R evaluations, KDE does review attendance records.

Recommendation 3.4

Recommendation 3.4

The Kentucky Department of Education should enforce 704 KAR 3:410, sec. 5(4) and require districts to use Infinite Campus to record the daily attendance of preschool students.

Day Care Services

Districts may provide day care services before and after school as well as on the 5th day when preschool students are not in school. There were 41 districts that offered day care to preschool students.

The amount of time that state-funded preschool students spend in the classroom each week varies by district. 704 KAR 3:410, sec. 6 requires that preschool students receive a minimum of 2.5 hours of classroom time per day, 4 or 5 days per week. Preschool programs are funded by state appropriations at a level sufficient to support a 4-day-a-week, half-day schedule. As a result, nearly half of all school districts in Kentucky use a 4-day-a-week, half-day schedule consisting of 2.5 to 3 hours of classroom instructional time per day. In order to assist parents in meeting additional child care needs, 704 KAR 3:410, sec. 8 permits districts to extend services to provide child care before or after the standard operating hours of the preschool program. In addition to before- and after-school child care, some districts operating on a 4-day preschool schedule also offer child care on days when preschool is not in session (hereafter referred to as 5th-day child care). Below is a brief description of the day care services offered by districts to preschool-age children across the state.

Representatives from 167 of the 173 school districts in Kentucky responded to OEA survey questions concerning preschool day care services. In school year 2017, 41 districts reported that they offer some form of preschool day care services. A total of 24 districts offered before-school child care, 38 districts offered after-school child care, and 30 districts offered 5th-day child care. In addition to the 41 districts that offered day care services, one district did not offer day care services but worked with the Head Start program to allow preschool students to attend day care there. In some cases, access to day care services varied within a given district, as 15 districts reported offering day care services at only some schools (26 districts offer day care services at all schools). Table 3.10 details the number of districts that offered the various forms of day care services during school year 2017.

Table 3.10
Day Care Services By District
School Year 2017

Day Care Service Type	Some Schools	All Schools
Before-school care	8	16
After-school care	14	24
5th-day child care	9	21
Total	15	26

Note: Responses do not sum to totals shown because schools can participate in more than one type of day care. Data come from 41 districts providing responses on preschool day care, out of 167 survey respondents.
Source: OEA survey.

In most cases, districts offer a variety of wraparound services. In school year 2017, 14 districts offered only after-school care and 3 districts offered only 5th-day child care. All other districts offered a combination of services. Table 3.11 illustrates the combinations of services offered in 2017.

Table 3.11
Day Care Services Combinations By District
School Year 2017

Day Care Service Combinations	Some Schools	All Schools	Total
Before- and after-school care	4	2	6
After-school and 5th-day care	4	5	9
Before- and after-school and 5th-day child care	4	14	18

Source: OEA survey.

Day Care Services And Enrollment

Districts that offered day care services enrolled more preschool students than districts that did not offer day care.

Despite the promise of a free preschool education, recruiting and enrolling eligible preschool-age children can be challenging for many districts. Evidence suggests that the inclusion of day care services may assist districts in recruiting and enrolling students. For example, in school year 2017, districts enrolled, on average, 46 percent of preschool students who qualify for the state-funded preschool program. Districts that offered day care services enrolled more preschool students than districts that did not offer day care services. In districts where day care services were offered, the average enrollment rate in 2017 was 50 percent, compared to 44.5 percent in districts where day care services were not offered. When districts that offered day care services in all schools were compared to districts that offered day care services in only some schools, enrollment rates were higher where services were available

in all schools (52 percent compared to 46 percent), further suggesting that the availability of day care services may support higher enrollment rates.

Chapter 4

Preschool Program Evaluation

Introduction

This chapter provides an evaluation of the state-funded preschool program including an examination of KDE's Preschool Program Review (P2R), the Kentucky All STARS rating program, recruitment and enrollment of eligible students, and a review of preschool assessment and kindergarten readiness data.

In requesting that OEA study Kentucky's state-funded preschool program, EAARS specifically requested a review of preschool enrollment, preschool outcomes, and characteristics of the preschool program. To that end, this chapter provides an extensive evaluation of the state-funded preschool program. The preschool program evaluation presented in this chapter begins with an examination of KDE's Preschool Program Review process, including a summary of results for all P2Rs conducted over the past 5 years. Particular attention will be paid to annual evaluations conducted at the district level. This chapter also discusses the Kentucky All STARS preschool rating program and offers an in-depth, district-level analysis of participation by and enrollment of eligible students in the state-funded preschool program. The chapter concludes with a review of preschool outcomes as measured by the Brigance Kindergarten Screen III. Based on the data presented in this chapter, a number of recommendations are also presented.

Preschool Program Review And Annual Evaluations

Preschool programs across the commonwealth are evaluated and assessed on a regular basis by the individual school districts, by representatives from regional training centers, and by KDE. Each district is responsible for conducting an annual self-evaluation. Under 704 KAR 3:410, annual self-evaluations must include input from parents, staff, and other professionals. Data gathered from these sources is to be used to evaluate the program's effectiveness in meeting the needs of participating children, the rate of participation by eligible children, parental satisfaction with services offered, and the success of participating children as they complete the preschool program and progress through a primary school program.

KDE developed and implemented the P2R process in 2009. For the P2R review process, Kentucky's 173 school districts have been divided into five cohorts. Each cohort is reviewed once every 5 years.

KDE developed and implemented the preschool program review process in 2009. This second evaluation was created in order to ensure regulatory compliance and high-quality classrooms. The P2R does not currently include an analysis of preschool outcomes, such as kindergarten readiness. Outcome data appear to be collected only as part of the annual self-evaluations completed at the district level.

Under the P2R review process, each preschool program, or district, is to be reviewed once during a 5-year cycle. Districts are divided into five cohorts. Each year, one cohort (one-fifth of the preschool programs in Kentucky) should complete the P2R process, which comprises four essential components:

- Completion of the web-based P2R document by a district representative, such as the preschool program coordinator.
- Classroom evaluations (using the ECERS-3) in all classrooms, conducted by a district observer, and independent evaluations conducted by a representative from the local RTC in at least 30 percent of classrooms (at least one classroom per site should be evaluated).
- Documentation review and verification conducted by a KDE team, possibly including on-site visits.
- Report prepared by KDE and provided to school districts. The report may include powerful practices, recommendations for areas where the district could make improvements, and findings indicating noncompliance with administrative regulations.[2]

Findings

An in-depth examination of 142 P2Rs conducted during school years 2013 to 2017 suggests a number of areas of possible concern related to annual district evaluations, facilities, and safety policies.

Regulations state that districts must conduct an annual self-evaluation. A review of P2Rs conducted since school year 2013 revealed that 50 percent of districts are in some way noncompliant with the annual evaluation requirements.

Annual Self-Assessments. As part of OEA's analysis of the state-funded preschool program, OEA staff asked that the superintendents of each district submit their most recent annual self-evaluation. In response to this request, many districts supplied OEA with their most recent P2R evaluation. A review of submitted P2Rs suggests that a majority of school districts in the commonwealth may not be meeting their regulatory obligation to complete annual self-assessments. Under 704 KAR 3:410, sec. 9, preschool programs should conduct an annual self-evaluation. The annual self-evaluation should include input from parents, staff, and other professionals and should evaluate the program's effectiveness in meeting the needs of participating children, the rate of participation by eligible children, parental satisfaction with services offered, and the success of participating children as they complete the preschool program and as they progress through the primary school program. Of the 142 P2Rs examined for this study, 71 included findings related to the annual self-evaluation requirement. This means that 50 percent of reviewed programs were in some way noncompliant with the annual evaluation requirements. Table 4.1 shows the breakdown of findings, by assurance area, related to annual self-evaluations. As noted above, OEA asked the superintendents of each district to submit their

most recent annual self-evaluation. Only two school districts provided OEA with a complete evaluation that fulfilled the requirements for an annual self-evaluation under 704 KAR 3:410, sec. 9.

Table 4.1
Number Of Districts Receiving P2R Findings
Related To Annual Self-Evaluation, School Years 2013 To 2017

Component Of 704 KAR 3:410, Sec. 9	Number Of Districts With P2R Findings
Annual evaluation of preschool program	71
"At least annually, parents, staff and other professionals shall be involved in evaluating the local preschool program's effectiveness in meeting the needs of participating children."	32
"The program shall address rate of participation by eligible children"	36
"The program shall address parental satisfaction with services provided"	14
"The program shall address success of participating children as they complete the preschool program and progress through the primary school program"	49

Source: OEA analysis of data provided by Kentucky Department of Education.

KDE is aware that many districts do not fully comply with the annual self-evaluation requirements and has begun to take steps to ensure that districts comply fully with the regulation.

In discussions with KDE, OEA was informed that KDE is aware of noncompliance with the annual evaluation requirement and has recently begun to take steps to ensure that districts comply with the regulation. Specifically, KDE informed OEA that when, in the course of P2R evaluations, it is determined that a district has not complied with the self-evaluation regulation, the district is required to submit to KDE an action plan outlining how it intends to come into compliance; however, there is currently no follow-up process, until the next P2R evaluation 5 years later, to ensure that action plans submitted by the districts are being followed.

P2Rs conducted over the period of time for this study indicated that 64 districts were noncompliant with administrative regulations regarding space and 40 districts were noncompliant with safety regulations.

In addition to concerns regarding a lack of compliance with the annual evaluation process, OEA's review of completed P2Rs indicated that 64 districts were noncompliant with administrative regulations regarding space (704 KAR 3:410, sec. 6)[a] and that 40 districts were noncompliant with safety regulations (704 KAR 3:410, sec. 6). The majority of space noncompliance issues stemmed from improper fencing around playground areas and inappropriately sized cafeteria furnishings. A majority of safety policy violations

[a] Space is a component of the Environment subscale in the P2R. In this context, space refers not just to the physical space of the preschool classroom but also to the characteristics and nature of that space. For example, this section of the P2R includes, but is not limited to, questions concerning fencing around playground areas; proximity to transportation pick-up and drop-off; proximity to bathroom facilities; lighting, heating and ventilation; postings of evacuation routes; and cafeteria seating and utensils.

were related to inadequate or improper fencing. While a review of P2Rs completed over the last 5 years revealed several causes for concern, the review also identified a number of strengths in preschool programs across the state. Fifteen districts (10 percent of districts reviewed) received no findings from KDE, suggesting that they were in total compliance with all administrative regulations related to preschool programs.

Additionally, powerful practices, or strengths, in the area of Developmentally Appropriate Practices (704 KAR 3:410, sec. 6) were identified in 69 districts (49 percent). Strengths in the area of Parent/Family Involvement were also identified in 69 districts (49 percent), and Special Education (707 KAR Chapter 1) was a strength of 34 districts (24 percent).

Recommendation 4.1

Recommendation 4.1

The Kentucky Department of Education should ensure that all districts complete an annual preschool evaluation that meets and fulfills the requirements outlined in 704 KAR 3:410, sec. 9.

Kentucky All STARS Program

In December 2014, the Governor's Office of Early Childhood (GOEC) received a grant through the US Department of Education Race to the Top funds. A portion of that grant was used to expand and implement the Kentucky All STARS program. The All STARS program is a 5-star quality rating and improvement system for all publicly funded early care and education programs.

In December 2014, the Governor's Office for Early Childhood received a grant through the US Department of Education's RTT fund. A portion of the grant revenue was used to implement the Kentucky All STARS program. According to GOEC,

> Kentucky All STARS is Kentucky's expanded five-star quality rating and improvement system for early care and education programs. Studies show that children who attend high quality early learning environments have better math, language and social skills. The unified system serves all early care and education programs that receive public funding including child care centers, Head Start and public preschool. Kentucky All STARS is based on Kentucky's Early Childhood Standards and research-based indicators of quality. It recognizes programs that have made a commitment to continuous quality improvement.[3]

GOEC partnered with KDE and allocated $1.8 million to KDE to evaluate state-funded preschool sites using the All STARS rating system. All preschool sites meet the minimum requirements necessary to receive a 3-star rating under the new system.

GOEC has partnered with KDE and the Cabinet for Health and Family Services to evaluate all public preschool, Head Start, and child care centers receiving public funding. KDE has received $1,808,051 in RTT-ELC funding through GOEC to evaluate preschool locations. In total, KDE received $4,889,000 from the RTT grant.

Based on the standards identified in 704 KAR 3:410, KDE decided that all preschool sites in the state meet the minimum requirements necessary to receive a 3-star rating under the new system. To receive a higher STAR rating, preschool sites had to request an evaluation. As of the writing of this report, an individual evaluation had been requested by 370 preschool sites, of which 364 (98 percent) received a 5-STAR rating and 6 received a 4-STAR rating.

Preschool Participation And Enrollment

704 KAR 3:410, sec. 5 establishes the responsibility of school districts to ensure that children eligible for the preschool program are served. School districts must establish a recruitment strategy that assures identification and enrollment of eligible children.

Enrollment of an eligible child in the state-funded preschool program is entirely at the discretion of the child's parent or legal guardian, but 704 KAR 3:410, sec. 5 establishes the responsibility of school districts to ensure that children eligible for the preschool program are served. According to 704 KAR 3:410, sec. 5, school districts must

- establish a recruitment strategy that assures enrollment of eligible children,
- identify all eligible children, and
- demonstrate an emphasis on recruiting those eligible children not currently served by a preschool program.

This section provides an overview of recruitment strategies employed at the district level, an evaluation of participation and enrollment in the preschool program by eligible children, and a brief discussion of perceived barriers to enrollment.

Recruitment Strategies

Per 704 KAR 3:410, sec. 5, each local district is required to establish and maintain an active recruitment process that systematically assures enrollment of eligible children. The OEA survey asked districts to provide information about how they recruit preschool students. The P2R evaluations performed by KDE also include a section on district recruitment strategies.

In response to the OEA survey, 145 districts provided recruitment strategies. Fliers were most commonly used, followed by advertisements in the local newspaper.

OEA Survey. A total of 145 districts included recruitment strategies in response to the OEA survey. Table 4.2 summarizes the most commonly reported recruitment strategies, and lists the percentage of respondents indicating that they use that strategy. Fliers were the most common recruitment strategy used, with 61 percent of districts using this method, followed by newspaper advertisements or articles, at 50 percent. Nineteen percent of respondents said they either go door to door or provide home visits in their community. Though not reflected in the table, four districts reported that they were able to get addresses for families that are participating in the Temporary Assistance for Needy Families program in their school district, and

two other districts indicated that they advertise at their local movie theater.

Table 4.2
OEA Survey Common Responses
For Recruitment Strategies, 2016

Strategy	Number Of Responses	Percent Of Responses
Fliers	89	61%
Newspaper	72	50
Social media	52	36
School and community events	49	34
Radio	39	27
Doctor or health department	39	27
Unspecified advertisement	38	26
Home visit or door to door	28	19
Day cares	17	12
Cable or local TV	14	10

Source: OEA survey.

P2R evaluations conducted since school year 2013 identified 9 districts that received a total of 23 findings related to recruitment; 23 districts received recommendations, and 18 districts showed strengths related to recruitment.

P2R Evaluation Of Recruitment. A review of P2R evaluations performed during school years 2013 to 2017 found that 9 districts received a total of 13 findings related to their recruitment efforts and strategies, 23 districts received a total of 40 recommendations, and 18 districts were cited as showing strength in recruiting a total of 25 times. Appendix H provides a detailed breakdown of the findings, recommendations, and strengths, as well as examples of each from P2Rs reviewed for this study.

Although a few P2R evaluations directly discussed changes in the enrollment of eligible children, overall, the P2R reports offered little detail and discussion regarding the efficacy of recruitment strategies. Comparing preschool enrollment numbers to the number of eligible children in a given district enables a more complete assessment of how effective Kentucky school districts have been at recruiting and enrolling eligible students.

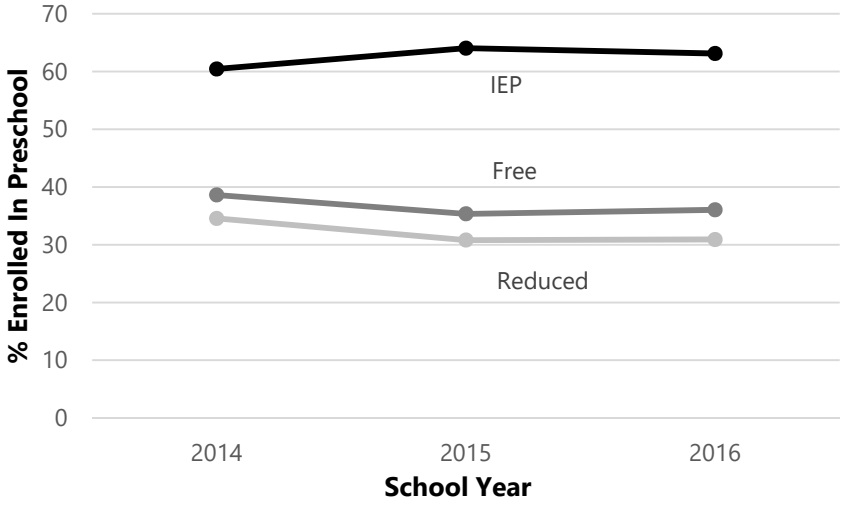
Enrollment

During school years 2014 to 2016, less than half of all preschool-eligible children enrolled in a state-funded preschool program.

As noted above, during school years 2014 to 2016, more than 44,000 eligible 4-year-olds enrolled in the preschool program, making preschool the largest single prior setting for kindergartners who began school between school year 2015 and school year 2017. Between those years, 99,676 students, or approximately 65 percent of all students who entered kindergarten, qualified for the federal free or reduced-priced lunch program, making them eligible for the

state preschool program through the income requirement criteria. Additionally, more than 20,000 kindergarten students in those years had IEPs. Some of these students may have been served by other state- and federally funded programs, a point that will be discussed later, but the fact that less than half of all eligible 4-year-olds enrolled in state-funded preschool suggests that many eligible students may not be enrolling in state-funded preschool. Figure 4.A provides an overview of participation rates by eligible students in the state-funded preschool program in school years 2014 to 2016. During those years, participation was highest among students with IEPs and lowest among reduced-price lunch students.

Figure 4.A
Percentage Of Eligible Students Enrolled In Preschool
School Years 2014 To 2016



Note: IEP = students with individualized education programs; Free = students eligible for free lunch; Reduced = students eligible for reduced-price lunch.
Source: OEA staff analysis of data from the Kentucky Department of Education.

While the data presented in Figure 4.A offer an overview of statewide participation in preschool by eligible students, an in-depth analysis of participation in preschool and Head Start provides a more accurate picture of participation. For this report, enrollment in preschool by eligible students was analyzed at the county level. OEA staff decided to analyze the data at the county level, and not at the school district level, for three reasons:

- The overwhelming majority of children who participate each year in Head Start are also eligible for state-funded preschool.
- KRS 157.3175(6)(q) requires that Head Start programs operating in a given school district achieve full utilization before the preschool programs in that district can begin enrolling eligible 4-year-old students.

- Head Start does not record enrollment data at the school district level.

For these reasons, determining the combined enrollment of both programs at the county level was necessary to accurately assess the number and percentage of eligible children served.

Head Start enrollment data provided by GOEC through the Kentucky Center for Education and Workforce Statistics were combined with preschool enrollment data provided by KDE in the form of the semiannual preschool enrollment count.

The combined enrollment of Head Start and the state-funded preschool program was determined by combining the number of 4-year-olds enrolled in Head Start as reported to OEA by GOEC through the Kentucky Center for Education and Workforce Statistics with the number of eligible 4-year-olds enrolled in preschool as reported by KDE in the semiannual preschool enrollment count data. It should be noted these two data sources do not represent the only enrollment counts for Head Start or the preschool program, and that the various data sets often report different enrollment numbers. OEA received and reviewed Head Start enrollment numbers from KCEWS, GOEC, and NIEER. Data from KCEWS were used because it was the only data set that did not report enrollment at the state level. To determine preschool enrollment by eligible children, OEA staff reviewed kindergarten prior setting data, KDE preschool funding numbers, and the semiannual preschool enrollment counts. KDE funding data were not used in this instance because the data do not include information on students' FRPL or special education status. Prior setting data were excluded because the data were determined to be inaccurate, a point that is discussed in greater detail later in this chapter. Table 4.3 illustrates the various preschool and Head Start enrollment numbers for school years 2014 through 2016 that OEA received from KDE, KCEWS, GOEC, and NIEER. When reading preschool data in Table 4.3, prior setting counts should match the semiannual count for 4-year-olds only, and KDE funding numbers should match the semiannual total count.

Table 4.3
Preschool And Head Start Enrollment Data By Data Source
School Years 2014 To 2016

	Preschool				Head Start			
	Prior Setting	Semiannual Count, 4-year-olds	Semiannual Count, Total	KDE Funding Number	KCEWS	GOEC	NIEER	Prior Setting
2014	15,916	11,617	20,036	20,556	7,929	10,216	8,501	7,040
2015	14,126	12,265	18,205	18,716	7,915	9,071	7,813	6,603
2016	14,525	13,747	18,867	19,182	7,750	8,920	7,576	7,388

Note: Analysis of prior setting data for preschool included only those students who were eligible for state funding based on free or reduced-price lunch status or individualized education program status. Head Start enrollment data includes only 4-year-olds. KDE = Kentucky Department of Education; KCEWS = Kentucky Center for Education and Workforce Statistics; GOEC = Governor's Office of Early Childhood; NIEER = National Institute for Early Education Research.
Source: OEA staff analysis of data provided by the Kentucky Department of Education; Governor's Office of Early Childhood; Governor's Office of Early Childhood through the Kentucky Center for Education and Workforce Statistics; National Institute for Early Education Research.

There were 105,377 preschool-eligible students who began kindergarten during the time reviewed for this study, of whom 60 percent had enrolled in either preschool or Head Start.

Once an estimated combined enrollment for school years 2014 through 2016 was determined for each of the 120 counties in Kentucky, that number was compared to the number of preschool-eligible students who began kindergarten in school years 2015 through 2017. A detailed county-by-county breakdown of this data appears in Appendix I.

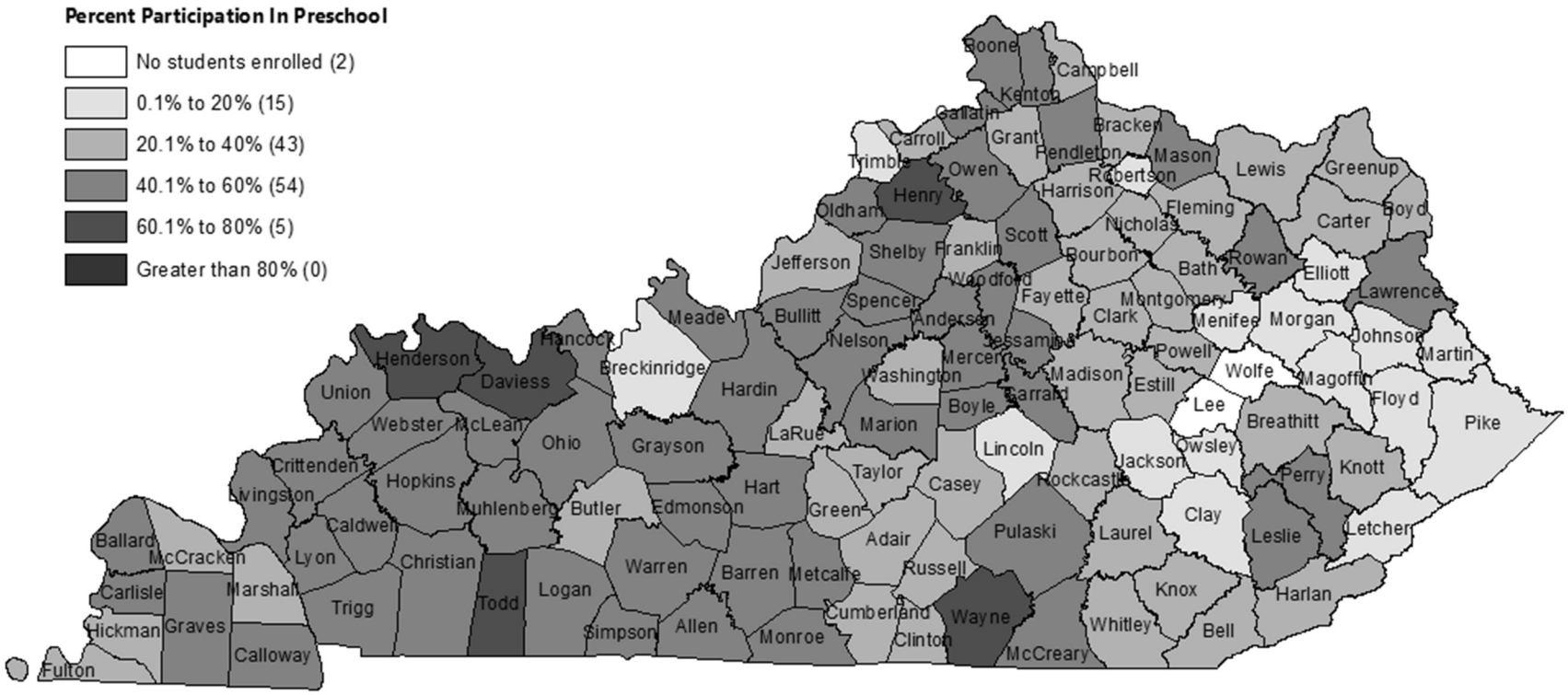
Figures 4.B to 4.D illustrate participation rates among eligible 4-year-olds in preschool, in Head Start, and in the two programs combined. An estimated total of 63,704 4-year-olds enrolled in preschool and Head Start beginning in school years 2014 through 2016, and 105,377 preschool-eligible students began kindergarten in school years 2015 through 2017. Therefore, preschool and Head Start served approximately 60 percent of eligible children over this 3-year period. At the county level, the percentage of eligible students served ranged from 38 percent to 152 percent, with an average of 64 percent. Three districts reported serving more than 100 percent of preschool-eligible children who enrolled in kindergarten the following year. Such a phenomenon may be due to a discrepancy in the enrollment numbers for 4-year-old preschoolers and Head Start students, or it may be due to students enrolling in kindergarten in one district who had lived in a different district the prior year.

According to the OEA survey of district superintendents, many districts believe they have served a greater proportion of preschool eligible students than they actually did.

As part of the OEA survey, respondents were asked what percentage of eligible children they thought enrolled in preschool in their district. Of the 167 districts that responded to this question, 15 districts indicated that they served 100 percent of eligible students, 83 districts indicated that they served 75.1 percent to

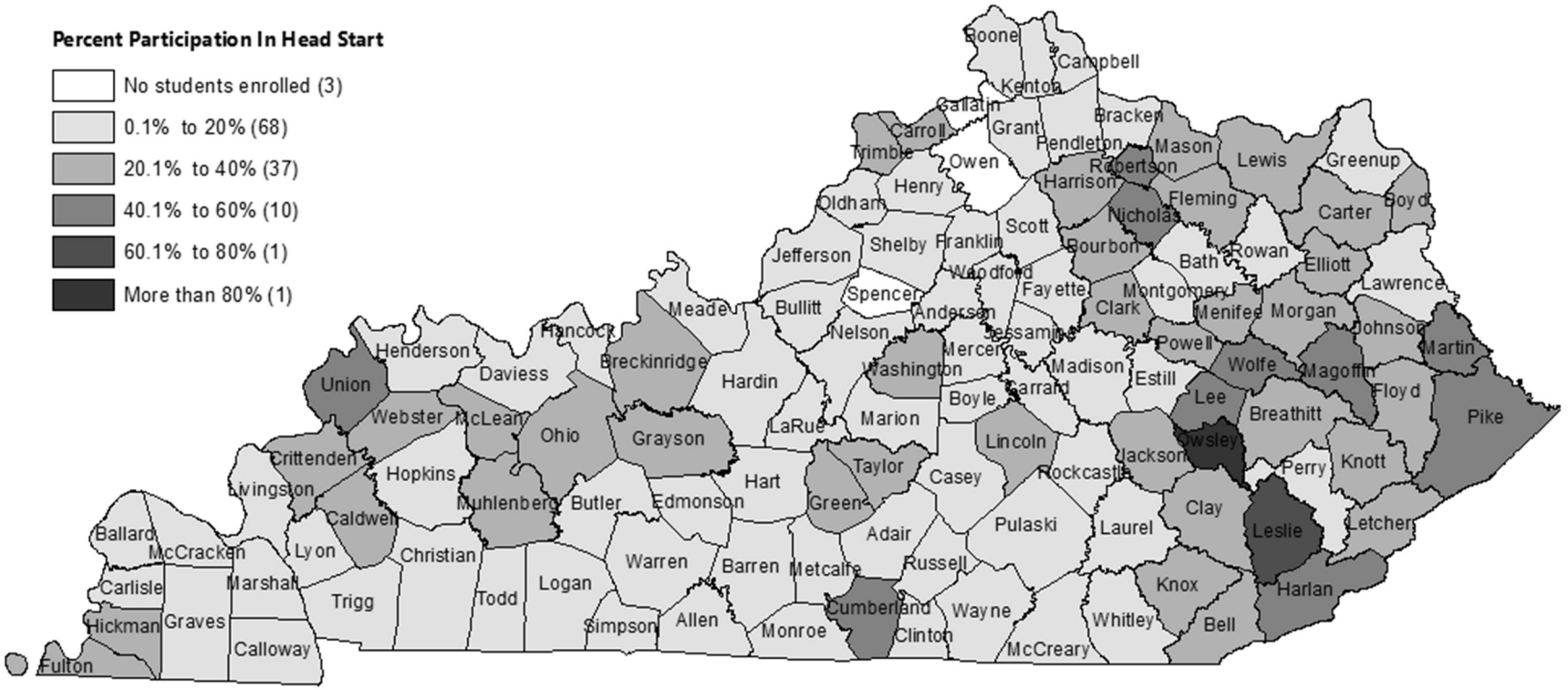
99.99 percent, and 40 districts indicated that they served 50.1 percent to 75 percent. Based on analysis of enrollment data, many of these districts appear to be overestimating the percentage of eligible children served by the preschool program. Even when combined enrollment for preschool and Head Start was compared to the number of eligible children in a county, only 17 counties achieved between 75.1 percent and 99.9 percent participation. A total of 86 counties served 50.1 percent to 75 percent.

Figure 4.B
Percentage Of Preschool-Eligible Students Enrolled In Preschool By County
School Years 2014 To 2016



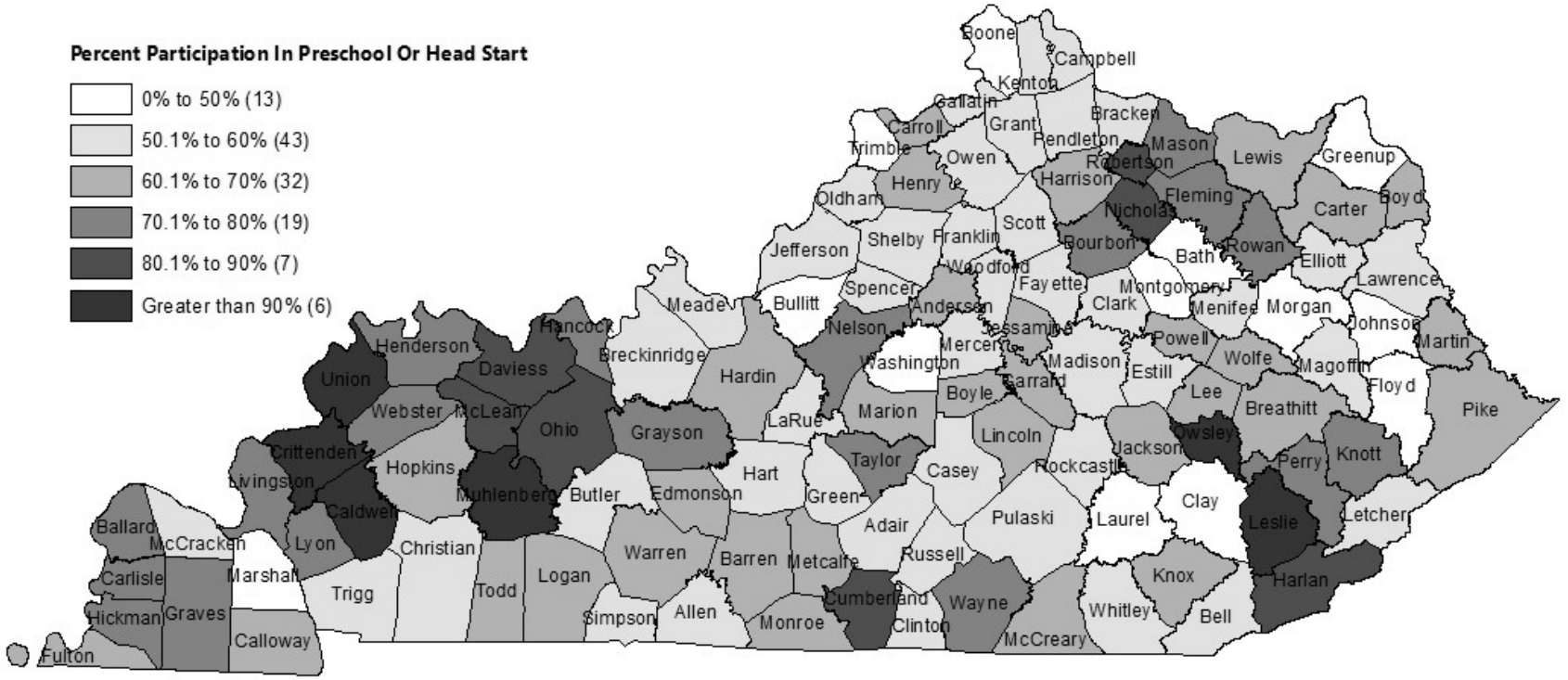
Source: OEA staff analysis of data provided by the Kentucky Department of Education.

Figure 4.C
Percentage Of Preschool-Eligible Students Enrolled In Head Start By County
School Years 2014 To 2016



Source: OEA staff analysis of data provided by the Governor's Office of Early Childhood through the Kentucky Center for Education and Workforce Statistics.

Figure 4.D
Percentage Of Preschool-Eligible Students Enrolled In Preschool Or Head Start By County
School Years 2014 To 2016



Source: OEA staff analysis of data provided by the Kentucky Department of Education; Governor's Office of Early Childhood; Governor's Office of Early Childhood through the Kentucky Center for Education and Workforce Statistics.

According to the OEA survey, the most commonly reported barrier districts face in enrolling eligible preschool students was parents not wanting children to start school before kindergarten.

Enrollment Barriers. In an effort to better understand the barriers and challenges faced by school districts in their attempts to recruit and enroll eligible children in the preschool program, the OEA survey asked respondents to discuss perceived barriers to enrolling eligible students. Table 4.4 provides information on the most commonly reported barriers for school year 2017. The most frequently reported barrier, mentioned by 126 districts, was the belief that parents may not want their children to start school before kindergarten.

Table 4.4
Number Of Districts Reporting Preschool Enrollment Barriers
School Years 2016 To 2017

Number	Preschool Enrollment Barrier
126	Parents do not want children to start school before kindergarten.
118	Some eligible students attend Head Start.
101	Some eligible students attend private preschool, YMCA, and nonpublic schools.
68	Parent receives Child Care Assistance Program.
64	Full-day preschool is not offered 5 days a week.
26	Transportation.

Source: OEA survey.

A slightly smaller number of districts, 118, suggested that some eligible students may enroll in Head Start. As has been previously discussed, Head Start grantees are required to achieve full utilization before preschool programs begin enrolling students. The full utilization requirement likely forced some preschool districts to delay recruitment efforts in the past; however, should Head Start shift its focus to serving 3-year-olds, as was discussed in Chapter 3, preschool programs may find it easier to enroll eligible 4-year-old students in the future.

While some preschool-eligible students may have enrolled in other early childhood education programs, between school years 2015 and 2017, a total of 21,634 preschool-eligible students entered kindergarten with a prior setting of "home," two-thirds of whom were eligible for preschool.

According to respondents from 101 school districts, recruitment efforts may be hampered because eligible students attend private preschool, YMCA, and other nonpublic schools. The Child Care Assistance Program was cited as a possible barrier by 68 districts. An examination of the kindergarten prior setting data, provided to OEA by KDE, indicated that during school years 2015 to 2017 a total of 21,634 preschool-eligible children, more than 20 percent of all eligible children, remained at home with a parent or guardian until they began kindergarten. Prior setting data also showed that more than two-thirds of all children with a prior setting of home were eligible for preschool. A map illustrating the percentage of students with a prior setting of home who were eligible for preschool, by county, appears in Appendix J.

Based on an in-depth analysis of recruitment efforts, enrollment numbers, the percentage of eligible students served, and perceived barriers to enrollment, OEA offers the following recommendations to improve participation by eligible students and to enhance future efforts to monitor the effectiveness of recruitment strategies.

Recommendation 4.2

Recommendation 4.2

The Kentucky Department of Education and the Early Childhood Advisory Council should ensure that all future reporting of preschool and Head Start enrollments is accurate and consistent.

Recommendation 4.3

Recommendation 4.3

School districts, with support and guidance from the Kentucky Department of Education, regional training centers, and the Governor's Office of Early Childhood, should review, and where necessary revise, their recruitment strategies to increase the enrollment of children eligible for state-funded preschool in order to more fully comply with 704 KAR 3:410, sec. 5. One possible strategy may include districts adding a question on the kindergarten enrollment form asking about why parents did not enroll their child in an early childhood education program.

Preschool Outcomes

The Brigance Kindergarten Screen III is used to measure kindergarten readiness statewide. Kindergarten readiness means a child enters school ready to engage in and benefit from early learning experiences that best promote the child's success.

In 2010, the Governor's Task Force on Early Childhood Development and Education issued the state's first definition of *kindergarten readiness* and called for the use of a single kindergarten screener to assess the readiness of all students entering kindergarten. Kindergarten readiness in Kentucky means that a child enters school ready to engage in and benefit from early learning experiences that best promote the child's success; kindergarten readiness is assessed using the Brigance Kindergarten Screen III, which all students take upon entering kindergarten for the first time. Prior to enrolling in kindergarten state-funded preschool, students also complete various educational assessments while enrolled in preschool.

This portion of Chapter 4 is divided into three sections to provide a complete and holistic picture of preschool outcomes. In the first section, the validity and reliability of preschool outcome data currently available to policy makers and educators are discussed. The second section begins with an overview of kindergarten

readiness across Kentucky, with particular attention to readiness among state-funded preschoolers. With a better understanding of overall readiness levels, section two concludes with an exploration of the impact of various factors on kindergarten readiness, including FRPL and IEP status, early childhood education prior settings, schedule type and instructional time in the preschool setting, and, finally, race and ethnicity. In the third section, data from preschool assessments will be compared with kindergarten readiness data.

Preschool Outcome Data

According to 704 KAR 5:070, a central goal of the common kindergarten screener is to provide teachers with key information that can be used to guide instruction and meet individual needs of all students.

Common Kindergarten Entry Screener. A central goal of the common kindergarten screener, as outlined in 704 KAR 5:070, is to provide teachers with key information, early in the school year, that they can use to guide instruction and meet the individual needs of all students.[4] The Brigance Kindergarten Screen III measures children's readiness in five domains: academic skills/cognitive development, language development, physical development, self-help, and social-emotional. The latter two domains are not measured and assessed by school personnel but are reported by parents. For this reason, only academic skills/cognitive development, language development, and physical development are used to determine kindergarten readiness.

In the fall of 2012, the Brigance Kindergarten Screen II was piloted at 458 schools in 109 school districts. Of the more than 31,000 students tested as part of the pilot, 28 percent tested ready for kindergarten. In the findings from the pilot, KDE suggested that the criterion/standard for readiness would be "recalibrated" based on data gathered during the initial years of the initiative. To date, KDE has not recalibrated the standard for readiness.

Brigance Kindergarten Screen II Pilot. In the fall of 2012, prior to full implementation of the common kindergarten screener at the state level, 458 schools in 109 school districts participated in a 1-year pilot test of the Brigance Kindergarten Screen II. Of the more than 31,000 kindergartners tested that year, just over one-quarter (28 percent) tested ready for kindergarten. In the findings from the pilot test, KDE stated that

> Kentucky will have the opportunity in future years to "recalibrate" the criterion/standard for readiness, based on data gathered in the initial years of this initiative, to ensure that the information gathered at the state and district levels will be as useful as possible in guiding instruction and ultimately ensuring student success.[5]

To date, KDE has not recalibrated the standard for readiness. The Brigance Kindergarten Screen II was revised in 2013, and the Brigance Kindergarten Screen III is currently used by all 173 Kentucky school districts. After implementing the Brigance Kindergarten Screen III for the 2014 school year, KDE set an ambitious goal to reach 74.5 percent kindergarten readiness by the 2019 school year. Approximately 50 percent of Kentucky students have tested as kindergarten ready each year in school years 2014 to 2017.

The Brigance Kindergarten Screen III was designed to identify, as early as possible, children who may have developmental delays. There are no cut-scores for kindergarten readiness in the Brigance technical manual. KDE uses the screen's cut-scores for developmental delays to determine kindergarten readiness.

Brigance Kindergarten Screen III. The purpose of the Brigance Kindergarten Screen III is to

- identify as early as possible children who may have developmental delays or disabilities as well as children who may have advanced development or giftedness so that any necessary referrals for further testing or special services can take place as soon as possible,
- determine school readiness by assessing a child's mastery of those age-appropriate skills that prepare the child for the classroom and promote the child's future success, and
- monitor progress over time by administering assessments as pretest and posttest evaluations.[6]

In Kentucky, the Brigance Kindergarten Screen III is administered only once. There is no opportunity to administer a posttest evaluation. While there are no cut-scores in the Brigance Kindergarten Screen III Manual for kindergarten readiness, the manual does include cut-scores to identify students who likely have developmental disabilities or academic delays. KDE uses these cut-scores to determine kindergarten readiness.

The percentage of kindergartners in the Brigance sample who fell below the cut-score was 9 percent. In Kentucky, 49.9 percent of kindergartners fell below the cut-score. OEA asked the National Technical Advisory Panel on Assessment and Accountability (NTAPAA) to comment on the validity and generalizability of the Brigance Kindergarten Screens III to Kentucky's kindergarten population.

The percentage of kindergartners in the Brigance sample who fell below the cut-score was 9 percent, much lower than the 49.9 percent of Kentucky kindergartners who fell below the cut-score in the 2017 school year. This means that 9 percent of kindergartners in the Brigance sample were not kindergarten ready, but nearly 50 percent of Kentucky kindergartners were not kindergarten ready. Noting the difference between Brigance's sample and Kentucky's tested population, OEA requested that Kentucky's National Technical Advisory Panel on Assessment and Accountability (NTAPAA) give general comments on the validity of the Brigance Kindergarten Screen III and the generalizability of that screen to the Kentucky kindergarten population. The full comments from NTAPAA appear in Appendix K.

The Brigance Screener was standardized using a sample "representative of the United States as a whole." It included 167 5-year-olds who achieved a standardized mean score of 100 with a standard deviation of 15. In 2016, 46,697 Kentucky kindergartners achieved a mean score of 86, placing them in the 16th percentile of the sample.

Brigance Kindergarten Screen III National Standardization Sample. The Brigance Kindergarten Screen III Manual reports that the Brigance Screener was standardized based on a "sample [that] included children representative of the United States as a whole."[7] This representative sample included 167 5-year-olds. According to the manual, the performance of that representative sample on the screener was standardized to have a mean of 100 and a standard deviation of 15. In OEA's analysis of the Brigance screener data for all 46,697 Kentucky 5-year-olds tested in 2016, the standardized mean for Kentucky students was 86, with a standard deviation of approximately 15. This means that the mean of Kentucky's

kindergarten population was at the 16th percentile of Brigance's sample.

Approximately 40 percent of the Brigance sample qualified for free or reduced-price lunch or Medicaid. In Kentucky the FRPL rate is roughly 65 percent. This suggests that the Brigance Kindergarten Screen III may overidentify students as potentially having developmental delays.

Generalizability Of Brigance Kindergarten Screen III. According to the data given in the Brigance Kindergarten Screen III technical manual, the population used for determining the cut-scores included "a nationally representative sample ... who were stratified on the basis of race/ethnicity, geographic location, and socioeconomic status across the United States." The FRPL percentage for Brigance's representative sample was approximately 40 percent, including children who qualified for Medicaid. In Kentucky, the FRPL rate, including children who qualified for Medicaid, for kindergartners is approximately 65 percent. According to analyses done by NTAPAA, if it is assumed that the FRPL rate of Kentucky kindergartners matched that of the Brigance sample, the scale scores would still have a mean that is more than 10 points below the reported Brigance standardized mean. This suggests that, as a screener for Kentucky students, the Brigance Kindergarten Screen III may overidentify students as having potential developmental delays.

Recommendation 4.4

Recommendation 4.4

If the Kentucky Department of Education continues to use the Brigance Kindergarten Screen III to determine kindergarten readiness, it should recalibrate the criterion/standard for readiness based on data gathered in the initial years of its use as a common screener in Kentucky.

Prior Setting Information

To compare rates of kindergarten readiness based on early childhood education settings, OEA relied on prior setting data provided by KDE. Possible prior settings include Head Start, state-funded preschool, child care, home, other, and unknown.

To make comparisons between kindergarten readiness levels based on early childhood/prekindergarten settings, OEA relied on prior setting data provided by KDE. Possible prior settings include child care, Head Start, home, state-funded preschool, other, and unknown. KDE defines *child care* as "privately owned, licensed child care facilities and certified homes; usually private pay or subsidized." *Home* is defined as "with a parent or guardian." *Other* refers to "non-licensed facilities, baby-sitter, [or] kin care," and *unknown* implies that "no data [was] gathered from families."[8] Students can be included in multiple prior settings. Indication of prior setting is supplied by parents on kindergarten enrollment forms at the time a child is enrolled in kindergarten, and relies on parents' understanding of the distinctions between various prior setting types.

Comparing prior setting data to other data sets, as discussed above, revealed a number of possible concerns related to the validity of enrollment data.

An extensive examination of the prior setting data provided by KDE, including comparisons to other data sets, as discussed above, led OEA to believe that the prior setting data supplied by KDE are substantially flawed. OEA's concerns with the prior setting data include the following:

- There is no system to verify the correctness of data provided by parents even for state-funded preschool and federally funded Head Start programs. The accuracy of prior setting data depends on parents' correct understanding of the various prior setting types, a district's correct understanding of the various prior settings, and accurate data entry.
- While a number of Head Start and preschool programs are blended, current prior setting data do not include distinctions for students enrolled in either a partially blended or a fully blended program.
- In school year 2017 alone, nearly 1,200 student enrollment forms indicated three or more prior settings, and more than 2,000 enrollment forms indicated an "unknown" prior setting. In one district, 100 percent of students who began kindergarten during school years 2015 to 2017 had an "unknown" prior setting.
- The number of students said to have been enrolled in state-funded preschool and Head Start based on the prior setting data differs drastically from the number of students reportedly enrolled in these two programs according to KDE's funding reports, Head Start's enrollment numbers, and the semiannual preschool counts. For example, during school years 2015 to 2017, prior setting data reported nearly 2,000 more preschool students than are reflected in the semiannual preschool counts for those years. The discrepancies are far greater for Head Start enrollment. For the same 3-year period, prior setting data underreported Head Start students by more than 8,000 when compared to enrollment numbers provided by the Governor's Office of Early Childhood.

Based on these findings, OEA offers the following recommendation.

Recommendation 4.5

Recommendation 4.5

The Kentucky Department of Education should verify prior setting data for students enrolled in state-funded preschool or Head Start. Students enrolled in blended or partially blended state-funded preschool/Head Start programs should be accurately identified in the Kentucky Student Information System.

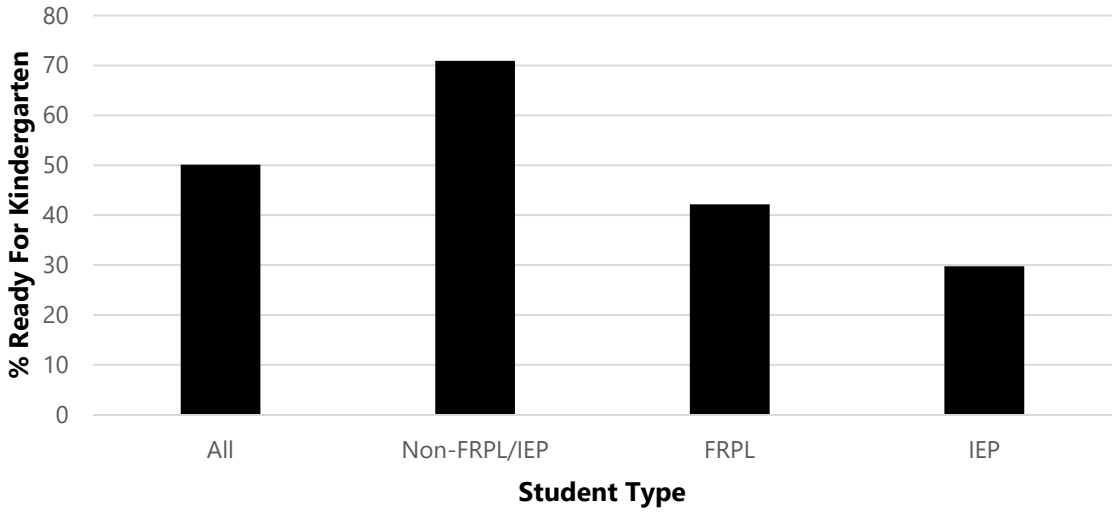
Preschool Assessments. Data on academic and social learning outcomes for state-funded preschool are collected while children are in preschool; however, Kentucky is one of only two states that do not use a single statewide preschool assessment tool. KDE allows districts to choose any one of five approved preschool assessment tools for evaluating students' progress in preschool. Since this data is collected using five different assessment tools, comparing student progress and achievement across Kentucky's 173 school districts is difficult.

Kindergarten Readiness

In school year 2014, 49 percent of kindergarten students tested ready. Since that time, kindergarten readiness rates have largely remained flat. Free and reduced-price lunch (FRPL) students who attended preschool were approximately 19 percent more likely to be ready for kindergarten than FRPL students who did not attend preschool.

In school year 2014, 49 percent of students entering kindergarten were ready for kindergarten, and KDE set an ambitious goal of achieving 74.5 percent kindergarten readiness by school year 2019. Since school year 2014, however, kindergarten readiness levels have largely remained flat, peaking in school year 2017 at 50.12 percent. In a meeting with OEA, KDE officials acknowledged that achieving the goal of 74.5 percent readiness by school year 2019 is now unlikely. Figure 4.E displays the kindergarten readiness rates for students entering kindergarten in school year 2017 by special education and FRPL eligibility.

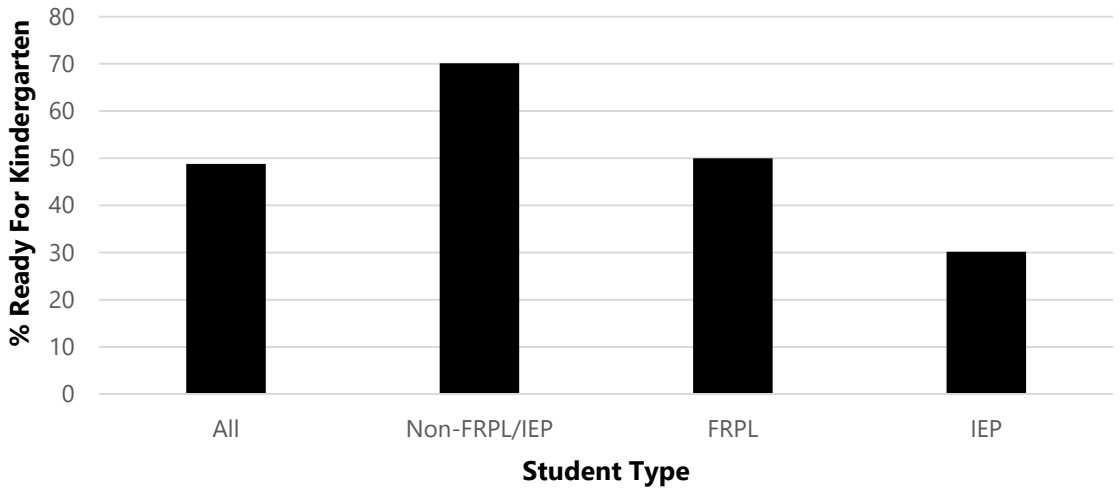
Figure 4.E
Kindergarten Readiness
School Year 2017



Note: Students who qualify for free or reduced-price lunch (FRPL) and have an individualized educational program (IEP) have been excluded from analysis of kindergarten readiness rates among FRPL students.
Source: Staff calculation using data from the Kentucky Department of Education.

Figure 4.F shows the corresponding rates for students who attended preschool.

Figure 4.F
Kindergarten Readiness Among State-Funded Preschool Students, School Year 2017



Note: Students who qualify for free or reduced-price lunch (FRPL) and have an individualized education program (IEP) have been excluded from analysis of kindergarten readiness rates among FRPL students.
Source: Staff calculation using data from the Kentucky Department of Education.

Comparing Figures 4.E and 4.F reveals similar readiness rates for all students, for non-FRPL/IEP students, and for IEP students, regardless of whether they attended preschool; however, FRPL students who attended preschool were approximately 19 percent more likely to be ready for kindergarten than FRPL students who had not attended preschool.

State-Funded Preschool Students Compared To All Students

During school years 2015 to 2017, approximately 50 percent of students who began kindergarten tested ready. In 42 percent of school districts, kindergarten readiness rates exceeded 50 percent.

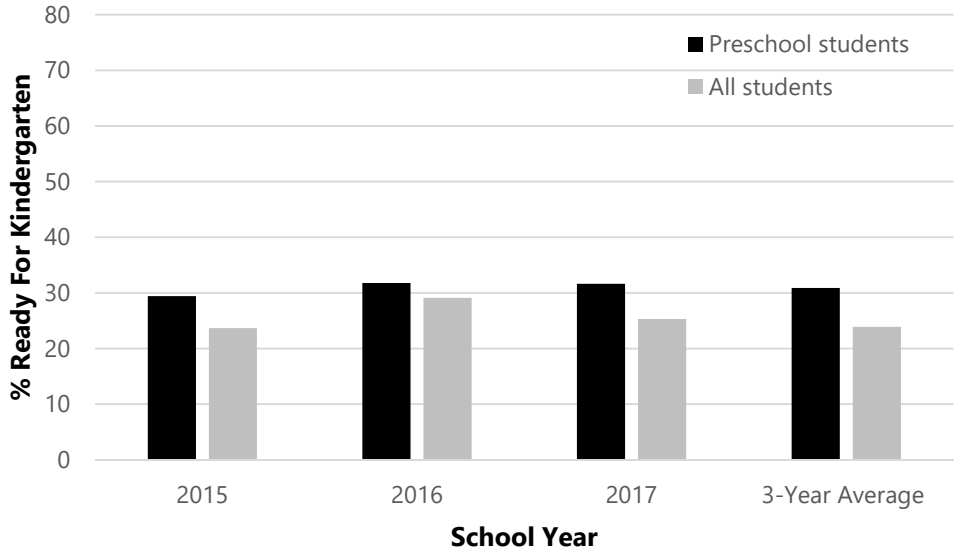
During school years 2015 to 2017, more than 140,000 children enrolled in kindergarten in Kentucky. Just over half of these students (71,309 out of 142,493, or 50.04 percent) tested ready for kindergarten on the Brigance Kindergarten Screen III. The overall percentage of students ready for kindergarten was 47.43 percent, 50.06 percent, and 50.12 percent in school years 2015, 2016, and 2017, respectively. Over the same period of time, at the district level, an average of 72 (42 percent) school districts achieved a kindergarten readiness level that exceeded 50 percent. Appendix L includes a district-by-district analysis of kindergarten readiness for school years 2015 to 2017.

In the most recent year analyzed, school year 2017, the percentage of all students who were ready for kindergarten exceeded the percent of state-funded students by just 0.6 percentage points.

A solid understanding of overall kindergarten readiness among all students entering kindergarten provides the necessary foundation for evaluating the effectiveness of Kentucky's state-funded preschool program in ensuring that students are ready to begin kindergarten. Over the 3-year period reviewed in this study, the overall statewide rate of kindergarten readiness exceeded the kindergarten readiness rate for all state-funded preschool students (48.32 percent) by just 1.7 percentage points. In the most recent year, the percent of all students ready to start kindergarten (50.12 percent) exceeded the percentage of preschoolers identified as kindergarten ready (49.53 percent) by just 0.6 percentage points.

While preschool students have historically lagged behind the state as a whole in terms of kindergarten readiness, the state-funded preschool program is making meaningful progress toward closing that gap. Since school year 2015, the percentage of all Kentucky students ready to start kindergarten has increased by 0.16 percentage points while Kentucky's state-funded preschool program has seen an increase in kindergarten readiness of 2.10 percentage points. If the state-funded preschool program and the state as a whole continue to improve at the current pace, a larger percentage of preschool students will be ready for kindergarten in school year 2018 than the percentage of all students entering kindergarten across the state who are ready. In over half the school districts in the state, preschool students are already outperforming students in their district as a whole. Figure 4.G provides a comparison of kindergarten readiness among state-funded preschool student and all students for school years 2015 to 2017.

Figure 4.G
Kindergarten Readiness Among Preschool Students And All Students
School Years 2015 To 2017



Source: Staff calculation using data from the Kentucky Department of Education.

Comparing kindergarten readiness between state-funded preschool students and the state as a whole offers an interesting point of entry for understanding the effectiveness of the state-funded preschool program; however, a more nuanced analysis is necessary to fully appreciate the true effectiveness of the program.

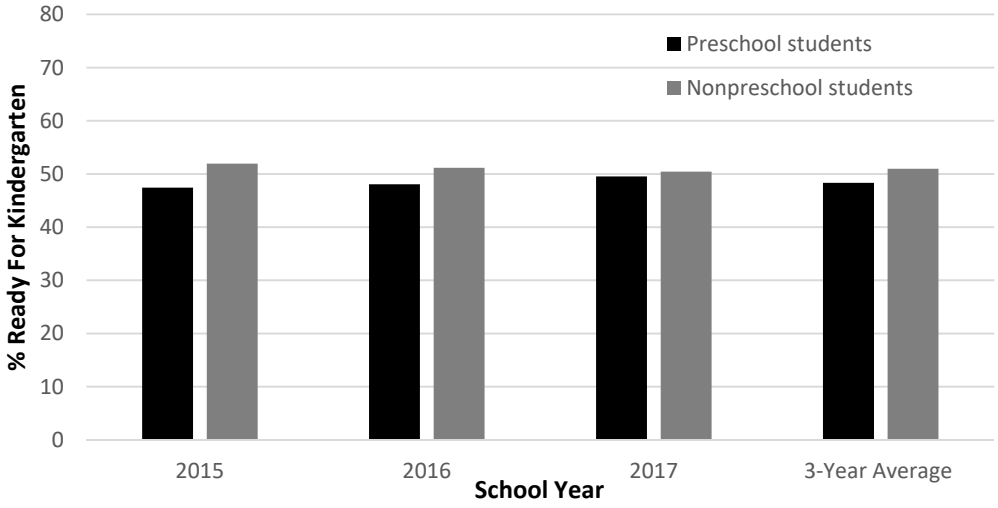
First, kindergarten readiness among state-funded preschool students should be compared to that of students who entered kindergarten from a prior setting other than preschool (all other students). Second, the state-funded preschool program was specifically designed to provide early childhood educational opportunities to the most vulnerable children in Kentucky: 4-year-olds whose families' income does not exceed 160 percent of the federal poverty line (qualifying them for free or reduced-price lunch) and 3- and 4-year-olds with an IEP. Therefore, it is prudent to compare FRPL and IEP students enrolled in a state-funded preschool program to FRPL and IEP students not enrolled in a state-funded preschool program.

Kindergarten readiness is improving at a faster pace among state-funded preschool-only students than among nonpreschool students. If the current trends continue, in school year 2018 kindergarten readiness among preschool students will exceed readiness among nonpreschool students.

At first glance, a comparison between state-funded preschool students and all other students entering kindergarten in Kentucky does not appear to tell a much different story than a comparison between preschool students and all students. Over the 3-year period of analysis, 50.99 percent of nonpreschool students tested ready for kindergarten, compared to 50.04 percent of all students and 48.32 percent of preschool students. The percentage of nonpreschool

students ready for kindergarten between school years 2015 and 2017 was 2.67 percentage points higher than the percentage of preschool students who tested as ready for kindergarten. The data suggest that nonpreschool students may be slightly more prepared for kindergarten than preschool students, but the achievement gap between the two is striking. In school year 2015, 51.53 percent of nonpreschool students entered kindergarten ready to engage and benefit from the experience, compared to 47.43 percent of preschool students—a difference of 4.1 percentage points. By school year 2017, that difference had diminished to just 0.91 percentage points, with 50.44 percent of nonpreschoolers and 49.53 percent of preschoolers achieving kindergarten readiness. Figure 4.H compares kindergarten readiness among state-funded preschool students and nonpreschool students for school years 2015 to 2017. If the current trends continue, in school year 2018 kindergarten readiness among preschool students will also exceed readiness among nonpreschool students.

Figure 4.H
Kindergarten Readiness
Among State-Funded Preschool Students And Nonpreschool Students
School Years 2015 To 2017



Note: Students who qualify for free or reduced-price lunch (FRPL) and have an individualized education program have been excluded from analysis of kindergarten readiness rates among FRPL students.
Source: Staff calculation using data from the Kentucky Department of Education.

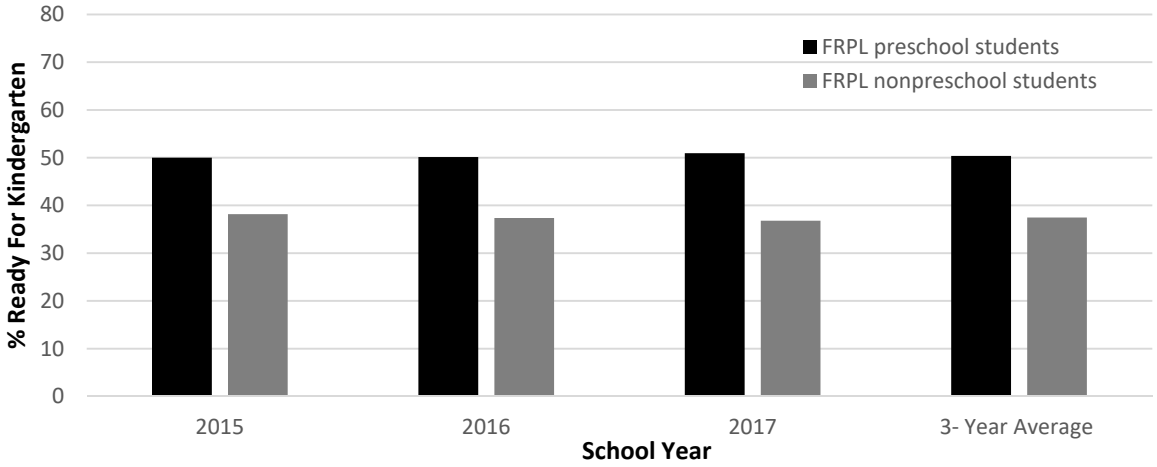
FRPL Students. The state-funded preschool program was established, in part, to ensure access to early childhood educational opportunities for children from low-income families. In school year 2017, students who qualified for the federal free or reduced-price lunch program accounted for 77 percent of new kindergarten

students with a prior setting of preschool; however, only 42 percent of FRPL-qualifying students who began kindergarten that year had attended preschool previously. This disparity was similar to that of previous years.

Over the 3 years reviewed for this report, the rate of kindergarten readiness was approximately 13 percentage points higher for FRPL students who had enrolled in preschool than for those who had not.

Comparing kindergarten readiness rates between FRPL students who enrolled in the state-funded preschool program and those who did not could offer a meaningful understanding of how well the program is achieving one of its primary objectives. Figure 4.I offers a comparison of kindergarten readiness between these groups. In school year 2015, the kindergarten readiness rate was 50 percent for FRPL students who had attended preschool and 38 percent for FRPL students who had not attended preschool. By school year 2017, the percentage of previously preschool-enrolled FRPL students who were ready for kindergarten had increased to 51 percent, while the percentage for kindergarten-ready FRPL students who had not attended preschool declined to 37 percent. Across the state that year, the percent of kindergarten-ready FRPL preschool students exceeded the percentage of kindergarten-ready nonpreschool FRPL students in 134 (77 percent) of the state's 173 school districts.

Figure 4.I
Kindergarten Readiness Among Preschool And Nonpreschool FRPL Students
School Years 2015 To 2017



Note: Students who qualify for free or reduced-price lunch (FRPL) and have an individualized education program have been excluded from analysis of kindergarten readiness rates among FRPL students.
Source: Staff calculation using data from the Kentucky Department of Education.

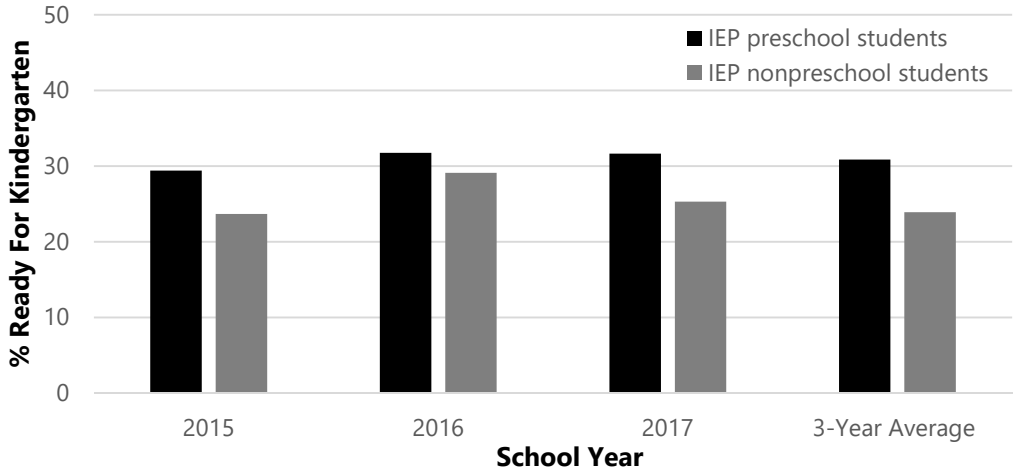
IEP Students. In addition to serving the needs of 4-year-olds who qualify for FRPL, the state-funded preschool program in Kentucky was also established to serve the needs of 3- and 4-year-olds with an IEP. In school year 2016, 24 percent of students enrolled in the state-funded preschool program qualified based on IEP status, and nearly

70 percent of all 4-year-olds with an IEP participated in preschool. These numbers are consistent with the 3 years of enrollment beginning in school year 2014. During that time, 26 percent of all preschool students had an IEP and 70 percent of 4-year-olds with an IEP enrolled in preschool, making the state-funded preschool program the most common early childhood prior setting for students with an IEP.

Over the 3 years reviewed for this study, kindergarten readiness among IEP students who enrolled in preschool exceeded that of FRPL students who did not enroll in preschool by approximately 7 percentage points.

Figure 4.J compares readiness rates of students with IEPs who enrolled in preschool and those who did not. In school year 2015, the kindergarten readiness rate for IEP students was 29 percent if the child had attended preschool and 24 percent if the child had not. By school year 2017, the percent of previously preschool-enrolled IEP students who were ready for kindergarten had increased, marginally, to 32 percent, and the percent of nonpreschool IEP students who tested ready increased to 25 percent. In school year 2017, there were 146 districts where IEP students enrolled in both preschool and nonpreschool prior settings before enrolling in kindergarten. In 87 of those districts (60 percent), the kindergarten readiness of IEP preschool students was greater than that of IEP nonpreschool students.

Figure 4.J
Kindergarten Readiness Among Preschool And Nonpreschool IEP Students
School Years 2015 To 2017

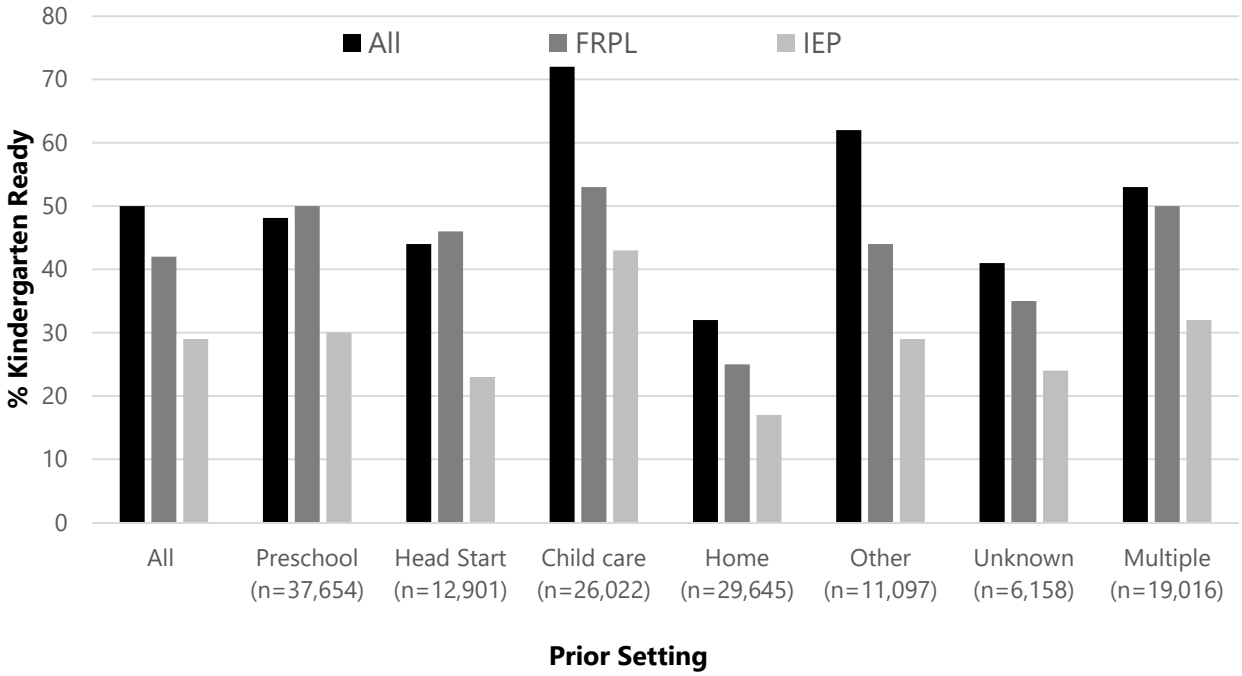


Source: Staff calculation using data from the Kentucky Department of Education.

Kindergarten Readiness By Prior Setting. While comparing preschool students to the rest of the state offers some insight into the effectiveness of the state-funded preschool setting in preparing students for kindergarten, a better understanding of the program's relative effectiveness can be obtained by comparing levels of

readiness based on students' prior settings. Figure 4.K shows the average kindergarten readiness results by prior setting for school years 2015 to 2017.

Figure 4.K
Average Kindergarten Readiness By Prior Setting, FRPL, And IEP Status
School Years 2015 To 2017



Note: Students who qualify for free or reduced-price lunch (FRPL) and have an individualized education program (IEP) are included here as only IEP students.
Source: Staff calculation using data from the Kentucky Department of Education.

FRPL and IEP students with a prior setting of preschool only outperformed all nonpreschool peers except for those enrolled in private child care or with multiple prior settings; however, more than one-third of students with multiple prior settings enrolled in preschool.

Over this 3-year period, FRPL and IEP students who enrolled in a state-funded preschool program performed better than their counterparts from any other single prior setting except for child care. FRPL child care students outperformed FRPL state-funded preschool students by 3 percentage points, and child care students with an IEP outperformed state-funded preschool students with an IEP by 13 percentage points. Students whose kindergarten enrollment data indicated multiple prior settings also slightly outperformed preschool students; however, more than one-third of students from multiple prior settings were enrolled in state-funded preschool.

Less than one-third of all students with a prior setting of home tested ready for kindergarten. Only 25 percent of FRPL students and 17 percent of students with an IEP who have a prior setting of home were ready for kindergarten. Nearly 75 percent of all students who have a prior setting of home are FRPL or special education students.

Less than one-third of all students with a prior setting of home tested ready for kindergarten. As has been reported previously in this chapter, this accounts for approximately 20 percent of all students who enrolled in kindergarten during school years 2015 to 2017. Only 25 percent of FRPL students and 17 percent of students with an IEP who have a prior setting of home were ready for kindergarten. Nearly 75 percent of all students who have a prior setting of home are FRPL or special education students.

The number of hours preschool students spend in the classroom each week can vary greatly. 704 KAR 3:410, sec. 6(3) requires that preschool students receive a minimum of 2.5 hours of classroom time, not including breakfast or lunch, per day at least 4 days per week. Many districts, however, have opted to design their preschool programs to include more than the minimum number of hours.

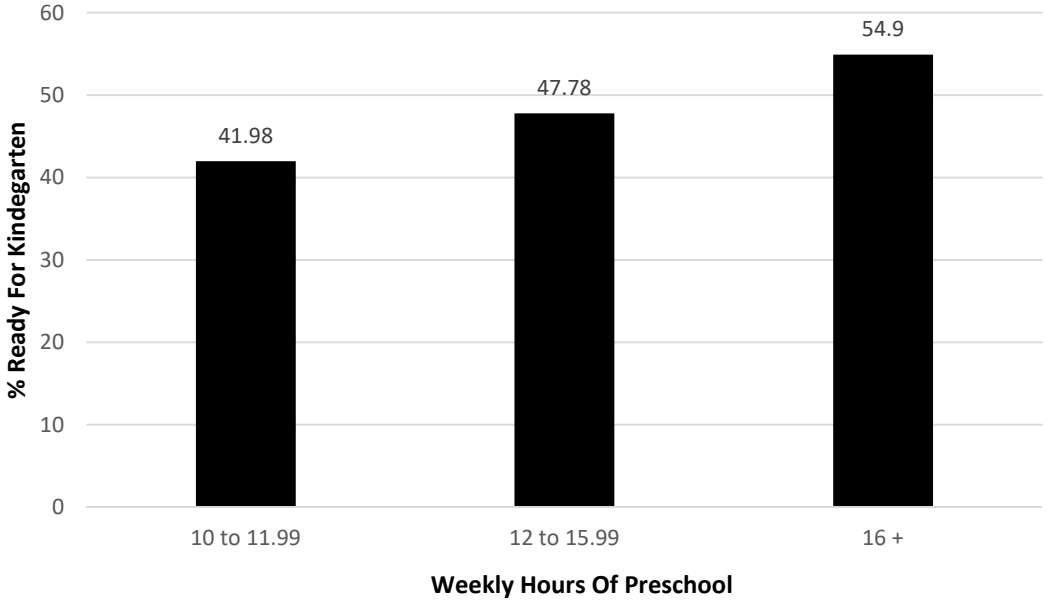
Kindergarten Readiness By Schedule Type And Hours Of Instruction. For state-funded preschool students, the number of hours they spend in the classroom each day and each week can vary greatly, depending on the program type and schedule adopted by their district. 704 KAR 3:410, sec. 6(3) requires that preschool students receive a minimum of 2.5 hours of classroom time, not including breakfast or lunch, per day at least 4 days per week. As a result of this regulation, preschool students must receive a minimum of 10 hours of instructional time each week. Many districts, however, have opted to design their preschool programs to include more than the minimum number of hours. Some districts offer half-day programs that exceed the 2.5-hour minimum, some districts offer half-day programs 5 days per week, and some districts offer a full-day preschool program 4 or 5 days per week. As a result, some preschool students are receiving more than 30 hours of instructional time each week, three times the minimum requirement. A comparison of kindergarten readiness rates based on the total number of hours spent in the classroom each week and hours of extra instructional time in full-day programs reveals a weak positive correlation between the total number of weekly hours and kindergarten readiness, but a moderate positive correlation between extra instructional time and readiness. These findings suggest that when full-day programs focus on providing students with extra instructional time, those students are more likely to be ready for kindergarten; however, when full-day programs include little or no extra instructional time, kindergarten readiness is not enhanced.

A significant difference in rates of kindergarten readiness was observed based on hours in preschool each week. The average rate of readiness in districts with more than 16 hours of scheduled preschool time per week is roughly 13 percentage points higher than the rate in districts with less than 12 hours of preschool per week.

Analysis of kindergarten readiness data and the type of schedule used by the district suggest that, although differences exist, they are not statistically significant. A significant difference in rates of kindergarten readiness was, however, observed based on hours in preschool each week. Figure 4.L shows that the average rate of readiness in districts with more than 16 hours of scheduled preschool time per week is roughly 13 percentage points higher than the rate in districts with less than 12 hours preschool per week. In districts with more than 16 hours of scheduled preschool time per week, the

average rate of kindergarten readiness is 54.9 percent, compared to 41.9 percent in districts with less than 12 hours per week.

Figure 4.L
Kindergarten Readiness By Hours In Preschool Each Week
School Year 2017

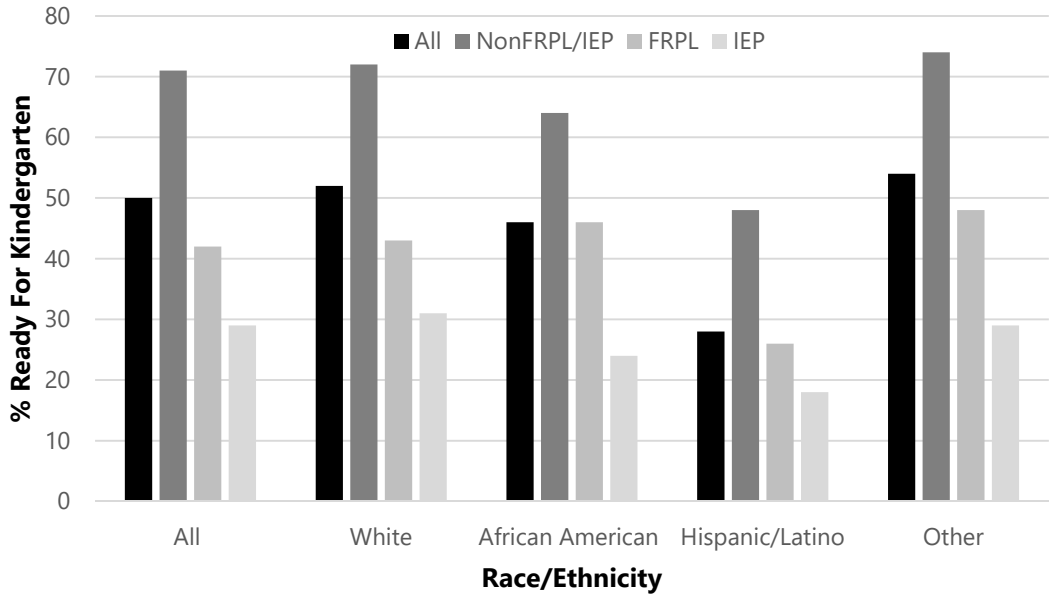


Note: Data analysis included only the 81 districts that provided OEA with schedules for their preschool program.
Source: Staff calculations using data from the Kentucky Department of Education; OEA survey.

Previous OEA research has suggested the existence of an achievement gap between white and nonwhite students beginning in the 3rd grade. Data analyzed in this study, however, suggest that students begin kindergarten on a more level playing field.

Kindergarten Readiness By Race. Previous OEA research, *Overview Of Achievement Gaps In Kentucky Schools,* suggests the existence of an achievement gap between white and nonwhite students at the elementary, middle school, and high school levels; however, data used for the current research project suggest a somewhat different picture of kindergarten readiness.[9] Figure 4.M illustrates kindergarten readiness rates by race among all children entering kindergarten during school years 2015 to 2017.

Figure 4.M
Kindergarten Readiness By Race
School Years 2015 To 2017



Note: Students who qualify for free or reduced-price lunch (FRPL) and have an individualized education program (IEP) have been excluded from analysis of kindergarten readiness rates among FRPL students.
Source: Staff calculations using data from the Kentucky Department of Education.

With the exception of Hispanic students, students of all races are achieving kindergarten readiness at similar rates; a larger percentage of black FRPL students achieve kindergarten readiness than white FRPL students.

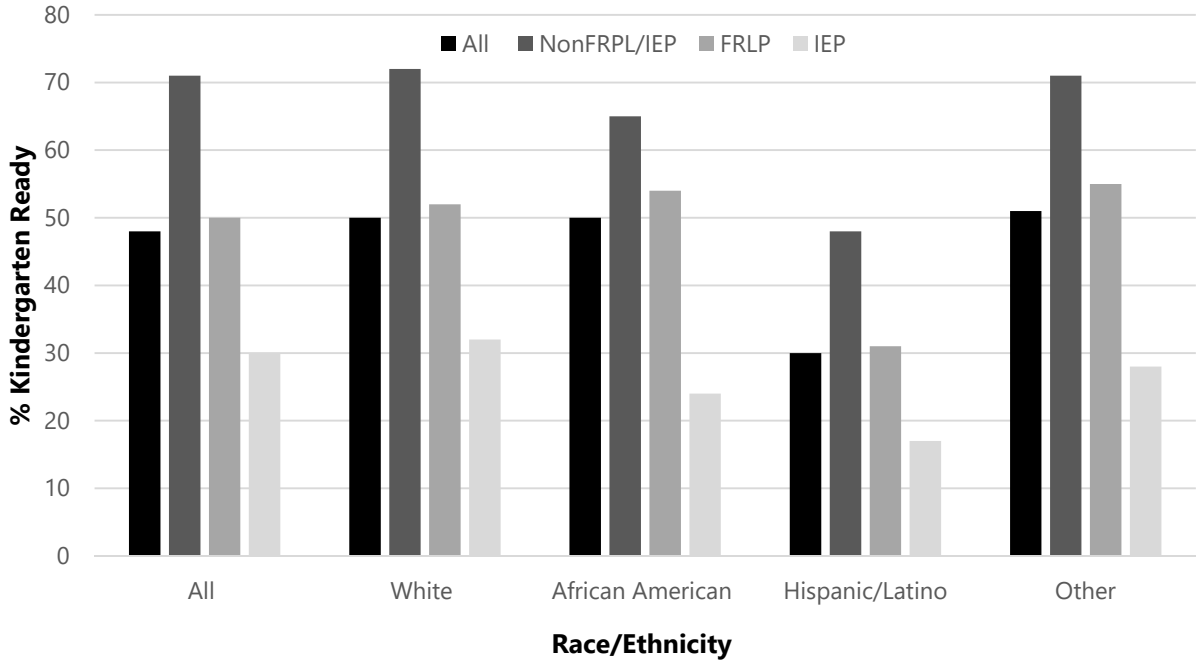
The data presented in Figure 4.M suggest several conclusions.

- With the exception of Hispanic students, students of all races are achieving kindergarten readiness at roughly similar rates. This is true for all students of each race—non-FRPL/non-IEP students, FRPL students, and IEP students.
- There is slightly more variation among IEP students than among other types of students, with 5 percentage points' fewer black IEP students achieving kindergarten readiness than white IEP students, and 6 percentage points' fewer Hispanic students than black students.
- A larger percentage of black FRPL students achieve kindergarten readiness than white FRPL students. Comparing kindergarten readiness to future indicators of academic success seems to suggest that while a well-documented achievement gap exists between white and nonwhite students by high school, most students begin kindergarten on a more level playing field, again with the exception of Hispanic students.
- Similar conclusions can be drawn from the data on kindergarten readiness among state-funded preschool students.

Figure 4.N shows average kindergarten readiness rates by race and ethnicity, FRPL status, and IEP status for state-funded preschool

students in school years 2015 to 2017. Again, with the exception of Hispanic students, students of all races are achieving kindergarten readiness at similar rates. There is slightly more variation in readiness among IEP students by race than among other classifications of students, and black FRPL students achieve kindergarten readiness slightly more often than white FRPL students.

Figure 4.N
Kindergarten Readiness Among State-Funded Preschool Students By Race
School Years 2015 To 2017



Note: Students who qualify for free or reduced-price lunch (FRPL) and have an individualized education program (IEP) have been excluded from analysis of kindergarten readiness rates among FRPL students.
Source: Staff calculations using data from the Kentucky Department of Education.

OEA is unable to offer an explanation for these results. Future investigations might consider examining the lack of kindergarten readiness among Hispanic students, and the diminished achievement gap between white and nonwhite, non-Hispanic students.[a]

[a] The fact that black FRPL students are slightly more ready for kindergarten than white FRPL students may partially be explained by the Jefferson County Kindergarten Readiness Camp. The overall kindergarten readiness rate in Jefferson County for school year 2015 was 51.78 percent. Among students who attended at least 75 percent of the 3-week camp, 74 percent tested ready for kindergarten that fall, and 70.9 percent of all students who enrolled in the camp, regardless of attendance, were ready for kindergarten. When Jefferson County was excluded from the analysis of kindergarten readiness among state-funded preschool students, black FRPL student readiness fell 4 percentage points from 54 percent to 50 percent, and white FRPL student readiness remained at 52 percent.

Long-Term Significance And Meaning Of Kindergarten Readiness

Little was known about the relationship between kindergarten readiness and future measures of academic success such as Kentucky Performance Rating for Educational Progress (K-PREP) scores, but the first class of incoming kindergarten students to complete the Brigance screener has just finished its 3rd-grade year. K-PREP scores for those students will be released to the public in November 2017. NTAPAA has suggested that if KDE continues to use the Brigance Kindergarten Screen III, a longitudinal analysis should be performed.

KDE's definition of kindergarten readiness and the uniform use of the Brigance Kindergarten Screen III in all Kentucky schools to assess kindergarten readiness are both relatively new. One recommendation from members of NTAPAA was that if Kentucky continues to use the Brigance Kindergarten Screen III, a longitudinal analysis of the tool compared to other measures of academic performance should be performed. The first class of incoming kindergarten students to complete the Brigance screener has just finished its 3rd-grade year, and Kentucky Performance Rating for Educational Progress (K-PREP) scores for those students will not be released to the public until November 2017. As a result, it has not been possible to engage in a longitudinal analysis of the long-term impact and meaning of kindergarten readiness. Researchers will have to wait nearly a decade for the first class of kindergartners who took the Brigance screener to graduate from high school. In the meantime, however, considerable research may be conducted that will help teachers, administrators, and policy makers better understand the effects of kindergarten readiness as students progress through their primary and secondary education. If future time and energy are not invested to more fully understand the long-term significance and meaning of kindergarten readiness as such data become available, the distinctions between *ready* and *not ready* will struggle to maintain value.

Recommendation 4.6

Recommendation 4.6

The Kentucky Department of Education should engage in a longitudinal assessment of the relationships between kindergarten readiness and K-PREP and other indicators of future academic success.

Preschool Assessment Data

In addition to assessment via the Brigance Kindergarten Screen III, preschool learning outcomes are assessed at the preschool level each year. Preschools in Kentucky are authorized to use one of five preschool assessment tools. Preschool assessment data are not entirely consistent with kindergarten readiness data.

The Brigance Kindergarten Screen III is the universal kindergarten readiness assessment that has been administered to all students beginning kindergarten at public schools in Kentucky since the 2014 school year, though it is not the only source of data by which preschool outcomes can be evaluated. Preschool students in state-funded preschool programs across Kentucky are assessed using one of five assessment tools. The results of preschool assessments are often used to guide preschool instruction. However, the results of these assessments do not match the results from the Brigance Kindergarten Screen III. As a result, preschool teachers, school

district administrators, and policy makers may be receiving mixed messages.

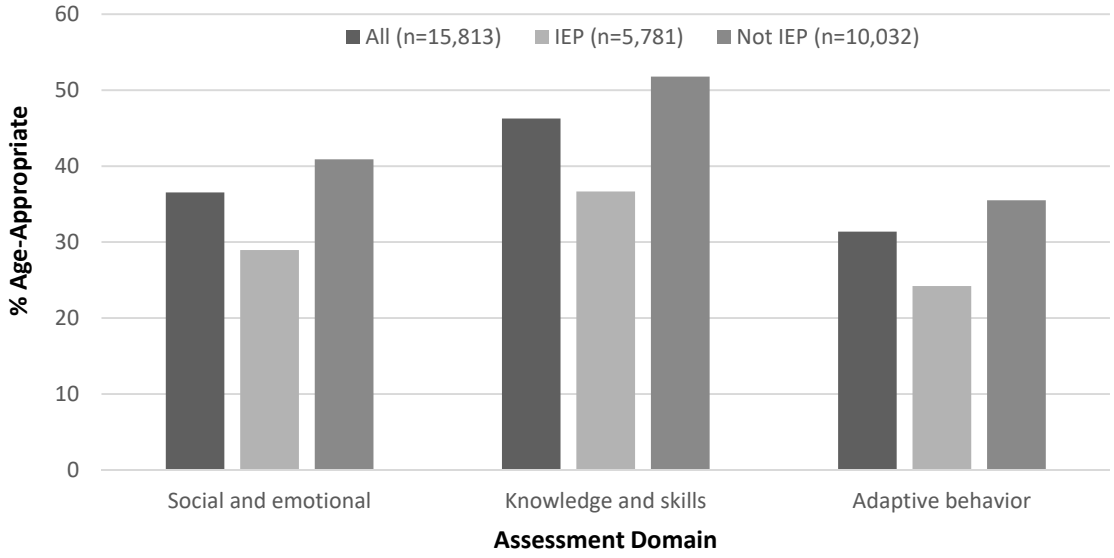
Preschool assessment and kindergarten readiness data send conflicting messages regarding social and behavioral outcomes. While kindergarten readiness data suggest that social emotional outcomes are a relative strength (73 percent average or above average), preschool data suggest the opposite (only 37 percent considered age-appropriate).

Data on academic and social learning outcomes for state-funded preschool are collected while children are in preschool and, for Kentucky public school students, at the beginning of their kindergarten year. Kindergarten readiness data, which focus primarily on academic/cognitive and language skills, appear generally consistent with academic data collected in preschool; kindergarten readiness data indicate that 50 percent of state-funded preschool students are ready for kindergarten, and preschool data show that 46 percent of preschool students have knowledge and skills appropriate for their age. However, preschool and kindergarten readiness data send conflicting messages about social and behavioral outcomes. While kindergarten readiness data suggest that social emotional outcomes are a relative strength (73 percent average or above average), preschool data suggest the opposite (only 37 percent considered age-appropriate).

Figure 4.O shows the percentage of preschool students considered age-appropriate in social and emotional skills; knowledge and skills; and adaptive behavior based on the assessments given in preschool.

Data reported in Figure 4.O are taken from preschool assessment data entered by districts into the Kentucky Early Childhood Data System. Data are collected using one of five KDE-approved preschool assessments. The Human Development Institute at the University of Kentucky aligns data from these assessments with indicators that are required for the reporting of preschool outcomes for IEP students to the US Office of Special Education Programs. In addition to the categories reported above, data gathered from the same preschool assessments are reported as the percentage of students meeting benchmarks for Kentucky early childhood learning.

Figure 4.O
Percentage Of State-Funded Preschool Students Considered Age-Appropriate On Social, Academic, And Behavioral Outcomes School Year 2016



Note: Kentucky state-funded preschools enter data for all students into the Kentucky Early Childhood Data System. In addition to students in state-funded preschool programs, this figure includes data from Head Start students who were in classes blended with state-funded preschool students.
Source: Staff calculations using data from the Kentucky Department of Education.

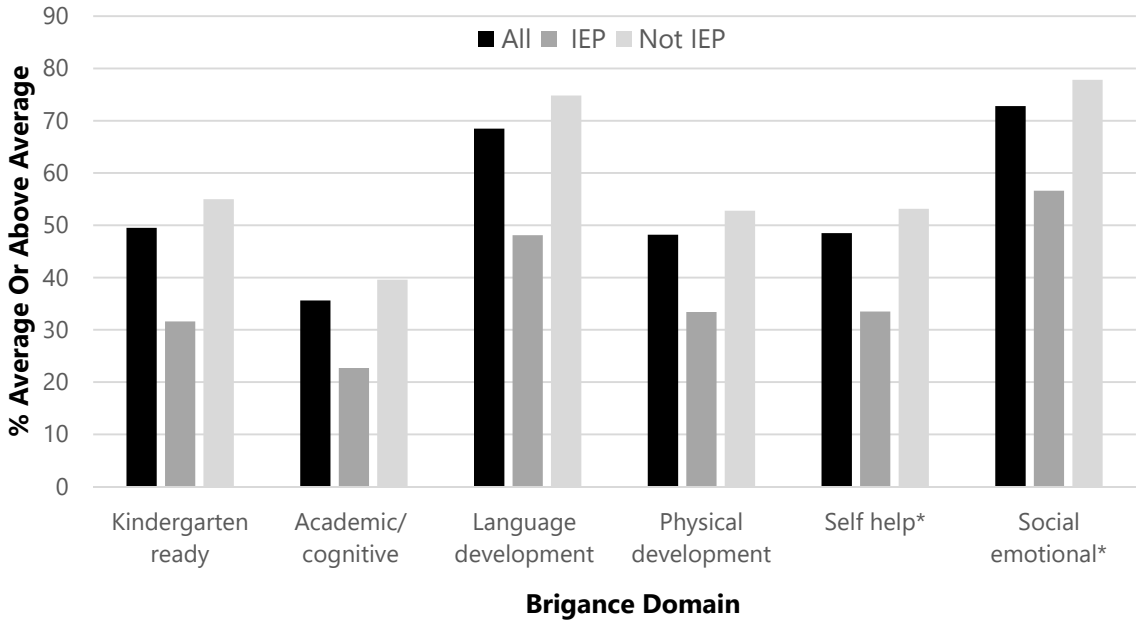
As shown in Figure 4.P, about half of all state-funded preschool students are considered kindergarten ready when they enroll in kindergarten. Readiness is based primarily on measures of students' academic/cognitive skills but also includes measures of language development and physical development.

Outcomes within the kindergarten readiness measure differ substantially. The percentage of students who are average or above average in language development is almost twice as high as the percentage for academic/cognitive skills. Across all prior settings, kindergartners score higher in language development than in academic/cognitive measures.

Self-help and social-emotional skills are reported by parents or guardians. The percentage of students considered average or above average on the self-reported social-emotional measures (73 percent) is almost twice as high as the percentage who are reported as age-appropriate in preschool data, as noted above in Figure 4.O (37 percent). This suggests that parents' reported impressions of children's social and emotional health are much different from those of teachers. Data on self-help/adaptive behavior also differ in preschool and kindergarten readiness data, but to a lesser extent. Parents' reports on kindergarten readiness data indicate that almost

half of preschool students are average or above average in self-help behaviors, while less than one-third of preschool teachers report age-appropriate self-help/adaptive behavior for preschool students.

Figure 4.P
Kindergarten Readiness Measures For State-Funded Preschool Students
School Year 2017



*The self-help and social-emotional domains are reported by parents and are not used to determine kindergarten readiness.
Source: Staff calculations using data from the Kentucky Department of Education.

Conclusion

The information, data, and analyses presented in this report suggest a commitment to early childhood education on the part of policy makers and other stakeholders. To ensure that the state-funded preschool program continues to prepare an ever-increasing number of children for kindergarten and to ensure that state resources are used to achieve maximum output, continued and regular evaluation of the program is critical.

Taken as a whole, the information, data, and analyses presented in Chapters 2, 3, and 4 of this report suggest a commitment to early childhood education on the part of policy makers and other stakeholders. To ensure that the state-funded preschool program continues to prepare an ever-increasing number of children for kindergarten and to ensure that state resources are used to achieve maximum output, continued and regular evaluation of the program is critical.

Recommendation 4.7

Recommendation 4.7

The Kentucky Department of Education should conduct a full and complete evaluation of the state-funded preschool program at least every 5 years beginning in 2020. The evaluation should be provided to the Kentucky Board of Education and to the General Assembly.

Chapter 5

Kindergarten

Introduction

Kentucky funds only half-day kindergarten. If the General Assembly were to fund kindergarten on a full-day basis, it would cost an estimated $171 million per year in SEEK funds.

This chapter compares Kentucky to its bordering states on the amount of funding that kindergarten programs receive and whether those states require full-day or half-day kindergarten. This chapter also includes a summary of the number of districts in Kentucky that offer half-day kindergarten and what it would cost districts to move to full-day kindergarten. The chapter concludes with anticipated costs of funding full-day kindergarten and whether there is an increase in reading and math K-PREP scores for students who attend full-day kindergarten.

Kindergarten Funding

Kentucky Board Of Education Budget Request

The General Assembly currently funds a half-day kindergarten program for local school districts. KDE has asked the General Assembly to fund full-day kindergarten in the 2018–2020 biennial budget. The estimated cost is $171 million per year in FY 2019 and FY 2020. Appendix M includes a summary of each district's SEEK increase (included in the KDE budget request).

Local District Expenditures

As mentioned in Chapter 2, data on district annual financial reports were not reported correctly and as required by the KDE Uniform Chart of Accounts. About half the districts used instructional level 12 to report how much their district spent on the kindergarten program. Data used to capture kindergarten expenditures were included in the OEA survey.

Recommendation 5.1

Recommendation 5.1

The Kentucky Department of Education should work with district finance officers to correctly record kindergarten expenditures on annual financial reports using instructional level 12.

Districts spent on average $3,957 per pupil on kindergarten expenses during FY 2016.

As reflected in Table 5.1, districts spent a total of $194,346,669 on salaries, benefits, and special education services for their kindergarten programs in FY 2016. This resulted in an average per-pupil expense of $3,957. The largest amount districts spent was in the general fund, where SEEK funds are recorded. General fund expenditures amounted to almost $179.5 million for kindergarten. Appendix N includes a breakdown, by district, of FY 2016 kindergarten expenditures.

Table 5.1
District Kindergarten Expenditures By Source And Expense Object Code
Compared To Total Kindergarten Students And
Average Per-Pupil Expenditures
FY 2016

Source	Salaries	Benefits	Special Education	Total Expenditures	Total Kindergarten Students	Average Per-Pupil Expenditure
General fund	$153,644,960	$14,311,979	$11,534,830	$179,491,769	49,110	$3,655
State grants	518,438	38,583	39,719	596,740	49,110	12
Federal grants	6,792,582	2,271,280	5,194,498	14,258,360	49,110	290
Total funds	$160,955,980	$16,621,842	$16,769,047	$194,346,869	49,110	$3,957

Source: OEA survey results.

Bordering States

Like Kentucky, bordering states indicated that funding for kindergarten students did not differ from funding students in grades 1 through 12. West Virginia and Tennessee both fund full-day kindergarten.

A request for estimated state funding for public kindergarten was submitted to the departments of education for each of the states bordering Kentucky. As of August 21, 2017, OEA has received a response from 4 of the 7 bordering states.[a]

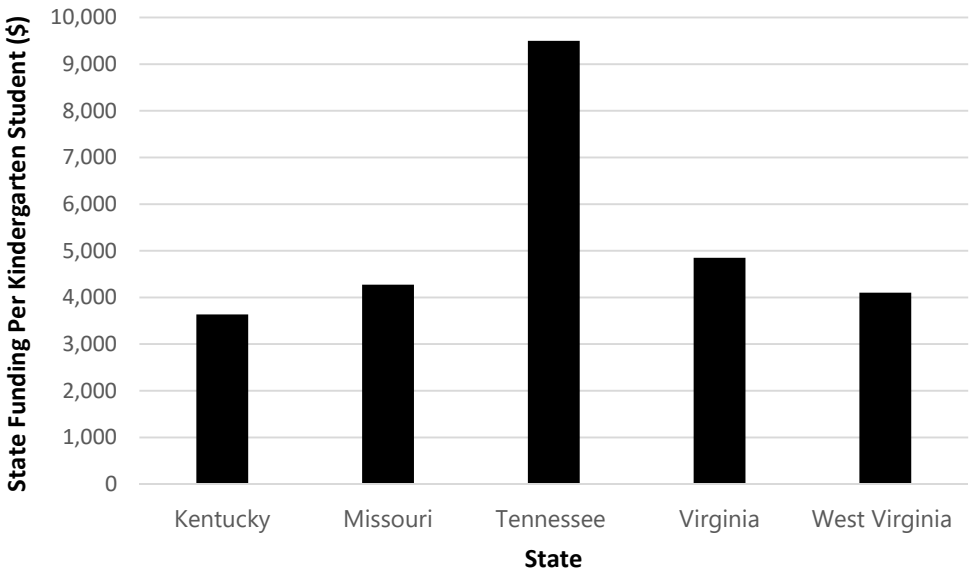
The responding states each indicated that funding per kindergarten student did not differ from the funding per student in grades 1 through 12.[b] The responding states provided the state funding per student amounts and the average daily attendance or average daily membership for the kindergarten populations.

Figure 5.A illustrates the estimated state funding per kindergarten student for Kentucky and the states that provided state funding estimates. Of the states providing kindergarten funding estimates, only Tennessee and West Virginia fund full-day kindergarten. Kentucky, which funds half-day kindergarten, provided the lowest level of state funding per kindergarten student relative to the bordering states at more than $3,600 per student, compared to the $4,100 per student provided by West Virginia for full-day instruction. Tennessee had the highest state funding per student among the bordering states at approximately $9,500.

[a] As of August 21, 2017, Illinois, Indiana, and Ohio had not responded to OEA's information request.

[b] The responses received from the departments of education for the states bordering Kentucky indicated that they do not have separate funding mechanisms specifically for kindergarten students. The responding states indicated they used formula funding per student for all grades and the average daily attendance of kindergarten students to provide an estimate of overall kindergarten funding.

Figure 5.A
Estimated State Funding Per Kindergarten Student
Kentucky And Bordering States
School Year 2016*



Note: West Virginia and Tennessee fund full-day kindergarten. None of the states listed have a specific funding mechanism for kindergarten. Each state provided an estimate based on the funding formulas used for all grades. At this time, OEA has yet to receive requested funding information for state-funded kindergarten from Illinois, Indiana, or Ohio.
*Kentucky funding per student is for the 2017 school year. Kentucky state funding for kindergarten is for half-day instruction.
Source: Staff analysis conducted on funding estimates provided by the states listed.

Only 13 states and the District of Columbia required districts to offer full-day kindergarten. However, 35 states offer full-day kindergarten.

Full-Day Kindergarten In The United States. A growing body of research suggests that full-day kindergarten programs position students for sustained academic success relative to half-day kindergarten, especially for low-income students;[10] however, according to a September 2016 report from the Education Commission of the States, only 13 states and the District of Columbia required districts to offer full-day kindergarten. Many other states offer full-day kindergarten as an option, with the ECS report finding that, within the 35 states that offer full-day kindergarten, 70 percent to 89 percent of students attended full-day kindergarten programs. The report indicates that the definition of *full-day kindergarten* varies considerably between states when accounting for the minimum number of required instructional hours for the school year. ECS reports that funding the additional hours required for full-day instruction is the primary barrier keeping other states from requiring full-day kindergarten. Table 5.2 includes the minimum number of hours required for kindergarten programs in bordering states. The number of required hours per day for kindergarten is highest in West Virginia at 5.25 hours a day; the

number of required hours per year is also highest in West Virginia: 945 hours.

Table 5.2
Kindergarten Operating Schedules
And Minimum Hours Per Day And Total Hours Per Year
For Kentucky And Bordering States
School Year 2016

State/Program	Minimum Hours Of Operation Per Day	Hours Per Year
Tennessee	4	720
Indiana	Not specified	Not specified
West Virginia	5.25	945
Missouri	3	522
Virginia	3	540
Illinois	2 for half; 4 for full	360/720
Kentucky	3	531
Ohio	2.5 for half; 5 for full	455/910

Note: OEA staff adjusted the number of instructional hours per year for Kentucky.
Source: Education Commission of the States. *50-State Review. 2016*

Types Of Kindergarten Programs

Full-Day Kindergarten

Twelve districts operated a half-day kindergarten in 2009. By 2017, nine of these districts had moved to a full-day program.

The OEA survey asked whether each district provided full-day, half-day, or both types of kindergarten programs from school years 2009 through 2017. In the 2009 school year, 12 districts offered half-day kindergarten, as reflected in Table 5.3. Over the next 8 years, nine districts switched to operating a full-day kindergarten program, with five districts switching in the past 2 years.

Table 5.3
Districts Operating Half-Day Kindergarten Programs
During School Year 2009
And Year They Switched To Full-Day Kindergarten

District	Year Switched
Anchorage Independent	2012
Beechwood Independent	2017
Boone County	Still half-day
Fleming County	2017
Jessamine County	2011
Kenton County	Still half-day
Ludlow Independent	2017
Madison County	2015
Rockcastle County	2016
Science Hill Independent	Still half-day
Scott County	2016
Walton-Verona Independent	2015

Source: OEA survey.

Cost Related To Moving To Full-Day Kindergarten

The estimated average cost per pupil of moving to full-day kindergarten varies by district, ranging from $844 to $2,927.

Districts that switched to full-day kindergarten between 2009 and the 2017 school year were asked to submit the cost estimate associated with this decision. OEA also asked for any documents that were presented at board meetings to discuss this transition. Madison County and Jessamine County provided the most detail in their responses, which are summarized below.

Madison County. Madison County reported hiring an additional 14 classroom teachers and another 14 classroom instructional assistants. In addition, Madison County provided information that stated that it would eliminate midday transportation drivers; however, because the district would be picking up additional students in the morning and transporting them home after school, it would need to hire an additional two bus drivers. The overall cost of drivers actually decreased after switching, with the loss of midday drivers, but the savings were offset by the need to add monitors to the buses to help supervise the increased number of young students, which resulted in a zero cost. Also, the additional cost of supplies needed to support full-day kindergarten was $116,000. As seen in Table 5.4, the cost of moving to full-day kindergarten was almost $1.2 million for Madison County, which amounted to a cost of $1,388 per pupil.

Table 5.4
Estimated Cost And Kindergarten Enrollment Of Districts
Switching To Full-Day Kindergarten
FY 2012 To FY 2017

District	Fiscal Year	2017 End-Of-Year Enrollment	Cost Of Moving To Full Day	Cost Per Pupil
Anchorage Independent	2012	33	$96,587	$2,927
Beechwood Independent	2017	90	75,937	844
Fleming County	2017	163	165,553	1,016
Jessamine County	2011	666	741,643	1,114
Ludlow Independent	2017	48	70,000	1,458
Madison County	2015	846	1,174,237	1,388
Rockcastle Independent	2016	196	300,000	1,531
Scott County	2016	640	956,922	1.495
Walton-Verona Independent	2015	103	122,995	1,194

Source: Staff calculations using data from the Kentucky Department of Education; OEA survey

Jessamine County. Jessamine County estimated its cost to move to full-day kindergarten at $742,000, or $1,114 per pupil. Jessamine County estimated needing an additional 13.5 kindergarten teachers and an additional 13 instructional assistants. Jessamine County also included additional custodial hours due to the increase in students in the school. Finally, the district needed additional instructional materials, professional development, and computers at a total cost of $132,000.

Full- And Half-Day Kindergarten

Four districts offer both full-day and half-day kindergarten.

Four respondents reported on the OEA survey that their districts offered both full-day and half-day programs in 2009 and continue to do so through 2017. Below is a summary of how students are placed in the full- or half-day programs, along with the estimated number of students attending the half-day program.

Campbell County. Depending on available space and parent requests, students can apply for the full-day kindergarten program in Campbell County. During the 2017 school year Campbell County Public Schools reported having 228 full-day kindergarten students and 149 half-day kindergarten students.

Corbin Independent. Corbin Schools offers both a regular kindergarten class and a Montessori-based kindergarten program. Students who attend the regular state-funded program are enrolled in a full-day kindergarten setting. Parents who wish to have a half-day kindergarten program may enroll in the Montessori program, for

which the district charges a fee. For school year 2017, a total of 31 students were attending the half-day Montessori program.

Fort Thomas Independent. Students in Fort Thomas Independent Schools attend a free half-day kindergarten program; the district charges tuition for students attending the full-day program. The full day classes have limited availability. Parents sign up for half-day or full-day during kindergarten registration. If the district receives more full-day applications than it can accommodate, there is a lottery for the available slots; however, students who were retained in kindergarten the previous year are automatically provided a free slot in the full-day program. LEP students may be offered slots in the full-day classes as well, but this is determined on an individual basis. In the 2017 school year, 87 students were enrolled in the half-day program and 100 were enrolled in the full-day program.

Oldham County. Students in Oldham County Public Schools attend a half-day kindergarten program without charge. There is a $350 yearly fee for students to attend the full-day program. Only 10 parents chose to enroll their children in only a half-day session. The district reported that it works with FRPL students or students who have other mitigating factors so that income is not a barrier to enrollment in the full-day program.

Half-Day Kindergarten

There are only six districts that offer half-day kindergarten, of which three recently moved from full-day to half-day.

During the 2009 school year, 12 districts offered half-day kindergarten; by the end of school year 2017, the number was cut in half. Table 5.5 shows the districts that offered full-day programs but moved to half-day programs. Only three districts—Boone, Kenton, and Science Hill—still provide only half-day kindergarten as of August 2017. Table 5.5 includes the districts that offered full-day kindergarten in 2009; now, however, only six districts offer half-day kindergarten.

Table 5.5
Districts Operating Full-Day Kindergarten
During School Year 2009
And Year They Switched To Half-Day Kindergarten

District	Year Moved To Half-Day Kindergarten
Pendleton County	2013
Silver Grove Independent	2015
Southgate Independent	2015

Source: OEA survey.

Districts saved much as $1,093 per pupil switching from a full-day to a half-day kindergarten program.

Table 5.6 includes data for the three districts that switched to offering a half-day kindergarten program and the year they switched. Pendleton County saved $200,000 by switching to half-day kindergarten, representing a savings of $1,093 per pupil. While Pendleton County switched to offering only half-day services, half-day students attend day care for free after their half-day kindergarten program ends. Pendleton County also offers additional services to students who need them, such as speech language and physical therapy, during the noninstruction time. The cost of transporting kindergarten students in the middle of the day was part of the decision to move to this program design.

Silver Grove Independent's savings included $5,000 in supplies and $52,000 in salaries. Southgate Independent provided a cost savings for salaries only. Its cost savings was small due to the small number of children served. Officials at Southgate Independent schools stated that after they moved to half-day, their enrollment went up slightly, causing them to add an additional instructional assistant, so the savings was smaller than estimated. The superintendent also indicated that the district wants to resume full-day kindergarten and will be evaluating that in the near future.

Table 5.6
Estimated Savings And Kindergarten Enrollment
Of Districts Switching To Half-Day Kindergarten
FY 2013 To FY 2015

District	Fiscal Year	End-Of-Year Enrollment	Savings Moving To Half Day	Per-Pupil Savings
Pendleton County	2013	183	$200,000	$1,093
Silver Grove Independent	2015	17	57,000	3,353
Southgate Independent	2015	23	19,535	849

Source: Staff calculations using data from the Kentucky Department of Education; OEA survey.

Open-Ended Responses To OEA Survey About Kindergarten

The majority of responses to the OEA survey on kindergarten indicated that it was underfunded and the state needed to fund full-day classes.

The OEA survey included an open-ended question asking if the district had any additional comments that related to kindergarten. A total of 31 districts provided responses, and 21 of those responses commented that the kindergarten was underfunded or that the state needed to fund full-day kindergarten. An Eastern Kentucky district that has a very large percentage of students receiving FRPL stated,

> It is expensive to cover the cost of full day Kindergarten because it is only covered at 50 percent. These students need

> services quickly and they are funded the least. Earlier intervention is key for [kindergarten] students.

Another response, from a Western Kentucky district with a little over half of its students living in poverty, stated,

> The half day of state unfunded kindergarten costs and the 40 percent of unfunded transportation costs seriously and negatively impacts our district. If the district did not have to bear the impact of the unfunded half day and the 40 percent loss of transportation we would be able to provide more mental and behavior[al] support for schools, more Response To Intervention (RTI) interventionists for our struggling students, lower teacher to student ratios, college and career coaches, and other very needed supports for our schools.

Full-Day/Half-Day Kindergarten Outcomes

Because 163 districts offer full-day kindergarten, it is difficult to compare outcomes for students who attend full-day versus half-day.

Kentucky statute does not require full-day kindergarten, but, during the 2017 school year, all but 10 districts offered full-day kindergarten. Because a relatively small number of students attend half-day kindergarten in Kentucky, it is difficult to compare outcomes for those students relative to those who attend full-day kindergarten using summary statistics alone.

Demographic makeup of students attending full-day versus half-day kindergarten varies. Districts offering full-day have FRPL of 66.5 percent compared to half-day at 46.5 percent FRPL. In addition, among students attending half-day kindergarten, a greater percentage scored proficient on math and reading K-PREP tests.

Table 5.7 shows the 2016 school year 3rd-grade math and reading proficiency rates for students from districts that offered only half-day kindergarten compared to students from districts that offered full-day kindergarten during the 2013 school year. The 3rd-grade math proficiency rate for students who were in full-day kindergarten was nearly 48 percent, which was 3.6 percentage points lower than that for students who were in half-day kindergarten. The 3rd-grade reading proficiency rate for students who were in full-day kindergarten was more than 53 percent, which was 4.6 percentage points lower than that for students who were in half-day kindergarten. Table 5.6 also illustrates some of the differences between the full-day and half-day kindergarten populations. For example, more than 66 percent of students in districts offering full-day kindergarten received FRPL compared to 46 percent in districts that offered half-day kindergarten during the 2013 school year.

Table 5.7
Selected Summary Statistics For Full-Day Kindergarten
Compared To Half-Day Kindergarten
Kindergarten Year 2013, K-PREP Year 2016

Instructional Day	Total Students*	% FRPL	% White	% Black	% Hispanic	% Other Race	% Proficient Reading**	% Proficient Math**
Full-day	46,296	66.5%	75.4%	11.2%	7.2%	6.1%	53.6%	47.8%
Half-day	6,747	46.5	83.8	3.2	6.4	6.6	58.2	51.4

*Student population numbers reflect those who were enrolled in kindergarten in 2013 who also had K-PREP reading and math scores in 2016.
**Proficiency percentages are for 3rd-grade students during the 2016 school year who were in kindergarten during the 2013 school year.
Source: Staff analysis conducted on data provided by the Kentucky Department of Education.

When controlling for population differences, a logistic regression model determined that students who were in full-day kindergarten were more likely to score proficient on K-PREP reading and math tests.

While the proficiency rates in reading and math were higher for students in districts offering half-day kindergarten, in order to control for population differences, a logistic regression model was used to determine whether there was a statistically significant difference in the performance of 3rd-grade students on the K-PREP reading and math assessments for students who attended full-day or half-day kindergarten during the 2013 school year.[c] The logistic regression models seek to control for differences in the student populations. The models were structured as shown in Equation 1, with rates of proficiency on the K-PREP assessments for 3rd-grade students in the 2016 school year representing the dependent variables for the models. Two separate models were run for reading and math.

Equation 1: $$\ln\left(\frac{p\,(Student\ is\ Proficient)}{p\,(Student\ is\ not\ Proficient)}\right) = \beta_0 + \beta FULL/HALF + \beta GAP + \beta DEMOGRAPHICS$$

Whether a student attended full-day or half-day kindergarten during the 2013 school year ($\beta FULL/HALF$) represents the explanatory variable of note for each model. The models also controlled for participation status of programs associated with gaps in achievement (βGAP) such as the free and reduced-price lunch program as well as demographic controls for race/ethnicity and gender ($\beta DEMOGRAPHICS$). The intercept term (β_0) completes the model equation.

When controlling for all explanatory variables, the first model indicates that students who attended full-day kindergarten were 1.08 times as likely to score proficient or better on the K-PREP reading assessment as those who attended half-day kindergarten. For the K-PREP math assessment, the modeling indicated that students

[c] During the 2013 school year, 11 districts offered half-day kindergarten and four offered both full- and half-day.

who were in full-day kindergarten in 2013 were 1.12 times as likely to score proficient or better as those students who attended half-day kindergarten. Table 5.8 provides the odds ratios and standard errors associated with each of the explanatory variables within the models.

Table 5.8
Logistic Regression Modeling Output

	K-PREP Reading Model		K-PREP Math Model	
Explanatory Variables	**Odds Ratio**	**Standard Error**	**Odds Ratio**	**Standard Error**
Full-day kindergarten	1.08	0.03	1.12	0.03
FRPL	0.42	0.01	0.41	0.01
LEP	0.32	0.02	0.40	0.02
Homeless	0.73	0.03	0.67	0.03
IEP	0.47	0.01	0.39	0.01
Male	0.85	0.02	1.11	0.02
Asian	1.58	0.13	2.29	0.18
Black	0.38	0.01	0.45	0.01
Hispanic*	—	—	—	—
Two or more races	0.75	0.03	0.76	0.03
Other race**	0.64	0.13	—	—

Note: Half-day kindergarten is omitted from the list of explanatory variables due to being a comparison group. The explanatory variables "white" and "female" were also omitted for the same reason. K-PREP = Kentucky Performance Rating for Education Progress; FRPL = free or reduced-price lunch; LEP = limited English proficiency; IEP = individualized education program.
*The "Hispanic" variable was not statistically significant in either of the models.
**The "other race" variable was not statistically significant in the K-PREP math model.
Source: Staff analysis conducted on data provided by the Kentucky Department of Education.

Appendix A

District Document Request

Dear Superintendent,

In November 2016, the Education Accountability and Assessment Review Subcommittee assigned the Office of Education Accountability to study the Kentucky preschool and kindergarten programs and school attendance. As part of this study, OEA is surveying superintendents. This survey will provide information for OEA staff to answer research questions and potential questions from members of the subcommittee. Here is the link to the survey: https://www.surveymonkey.com/r/R65LG9K.

For your convenience, we have attached a PDF copy of the survey that can be distributed to your staff to gather requested information before completing the online survey.

It is necessary to collect documents and data maintained at each school board office. It is requested that these documents be sent electronically. Please return all of the requested information by April 10, 2017.

Please provide the following:

1. The most recent evaluation of your preschool program.[a]
2. A copy of the district's written preschool plan with procedures that includes the preschool recruitment process.
3. A copy of every preschool classroom schedule in your district.
4. A copy of the estimated and actual cost increase that was presented to your local board of education if your board of education voted to move from half-day kindergarten to full-day kindergarten (or vice versa) between 2009 and 2017.
    a. The information provided should include a breakdown of personnel/benefits, equipment and supplies, along with any additional cost for transportation or savings on transportation cost due to not having to provide mid-day transportation to these students.
5. If your district is not offering full-day kindergarten, please provide the following:
    a. An estimate on what it would cost your district to move to full-day kindergarten. The information provided should include a breakdown of personnel/benefits, and supplies, along with any additional cost for transportation or savings on transportation cost due to not having to provide mid-day transportation to these students.
    b. The number of additional classrooms needed to accommodate full-day kindergarten and if your district has the available land to build the additional classrooms.
6. If schools within your district offer day care services to preschool students, please provide fees charged for each type of day care service.

All documents can be emailed to OEAsurvey@LRC.KY.GOV.

[a] Item number 1 was later clarified to submit the program evaluation required in 704 KAR 3:410.

Thank you for providing the requested information. If you have any questions please call Sabrina Olds or Bart Liguori at 502-564-8167.

Appendix B

Superintendent Survey

Introduction. In November 2016, the General Assembly's Education Assessment and Accountability Review Subcommittee (EAARS) requested that the Office of Education Accountability (OEA) conduct research on preschool, kindergarten, and school attendance. As part of this study, OEA is surveying superintendents.

This survey will provide information for OEA staff to answer research questions and potential questions from members of the subcommittee.

Please submit your answers no later than April 10, 2017. If you have questions regarding the survey please contact Sabrina Olds at 502-564-8167 or Sabrina.Olds@lrc.ky.gov. You may also contact Bart Liguori, research manager, at 502-564-8167 or Bart.Liguori@lrc.ky.gov.

Thank you for participating in our survey. Your feedback is important.

1. Please select your district:
(All 173 school districts in service as of March 2017 were listed)

2. Name and Title of individual completing survey:

3. Telephone number in case we would need to follow up for more information on a response?

4. What type of state-funded preschool program is your district offering during the 2016-2017 school year? Please select all that apply.

- A standard half-day, 5-day-a-week program single session
- A half-day, 4-day-a-week program in a single session with the fifth day for services to children and their families, such as home visits, special experiences for children, or parent training
- A half-day, 4-day-a-week program in a double session with the fifth day for services to children and their families, such as home visits, special experiences for children, or parent training
- A full-day, 4-day-a-week program with the fifth day for services to children and their families, such as home visits, special experiences for children, or parent training
- A locally designed program approved by the Commissioner of Education
- We contract with another district, another public agency, private school, or preschool program
- Other (please specify)

5. How many days per week does your district offer preschool (check all that apply)?
- 2
- 3
- 4
- 5

If you checked more than one box, please explain

6. If your district offers both full-day and half-day preschool schedules, please explain the process for determining which students are admitted to the full-day schedule.

7. Has your district enrolled tuition-based preschool students in the 2016-2017 school year?
- Yes
- No

8. How many preschool students in your district pay tuition?

9. Did tuition-paying students attend full-day or half-day preschool?
- Full day
- Half day
- Both full day and half day

10. Does your district charge tuition for preschool services on a "sliding scale" based on parents' income?
- Yes
- No

11. How much does your district charge for the tuition-based preschool services? Please round to the nearest $5 increment. If your district charges tuition on a "sliding scale" based on income, please describe that in the comments section below.

	Dollar Amount	Billing Frequency
Fee		

Comments

12. Does your district offer a non-traditional preschool program for example, a Montessori Program?
- Yes
- No

13. Which of the following non-traditional preschool programs does your district provide in addition to state-funded preschool?
- Montessori
- Other non-traditional preschool program

14. How many students does your district enroll in Montessori or other non-traditional preschool programs?

15. If your district offers a Montessori program or any other non-traditional preschool program, how much does your district charge? Please round to the nearest $5 increment. If your district charges tuition on a "sliding scale" based on income, please describe that in the comments section below.

	Dollar Amount	Billing Frequency
Fee		

Comments

16. Do schools in your district offer wrap-around child care for preschool students that is not part of the traditional instructional day

- for half of a day during the school's instructional day?
- for the day that preschool is not in session?
- before school?
- after school?
- some schools do and some do not (please explain)

17. Approximately how many eligible children in your district are enrolled in state-funded preschool this school year?

- 100%
- 75.1% to 99.9%
- 50.1% to 75%
- 25.1% to 50%
- 0.1% to 25%
- 0%

18. Why do you think eligible preschool students do not enroll in preschool in your district? Please check all that apply.

- All students eligible for state-funded preschool in my district enrolled in state-funded preschool
- Some eligible students attend Head Start
- Some eligible students attend private preschool, such as religious academies, YMCA, and non-public schools
- Some eligible students are receiving child care subsidies through the Child Care Assistance Program (CCAP)
- Some parents do not want their children to enroll in school before they have to attend kindergarten
- Some eligible students do not attend due to preschool not being a full instructional day, 5 days a week
- Transportation
- Other (please specify)

19. What recruitment strategies does your district use to recruit eligible students to state-funded preschool?

20. Does your district provide transportation for preschool students?

- My district does not provide preschool transportation.
- My district provides transportation only from home to preschool
- My district provides transportation only to home from preschool
- My district provides transportation to and from preschool

21. Please indicate the number of driver assistants/bus monitors dedicated to preschool transportation in your district this year?

	Number
District-employed driver assistants	
Student Workers	
Volunteers	

Comments

22. Did your district apply for the Tier 2 Preschool Partnership Grant?

- Yes
- No

23. Please explain why your district did or did not apply for a Tier 2 Preschool Partnership Grant?

24. Do you have any additional comments that relate to preschool?

25. How much did your district spend on preschool services in the 2015-2016 school year? Expenditures will need to be reported by the general fund, state grants in the special revenue fund, and federal grants in the special revenue fund.

	Amount
General Fund	
Preschool teacher salaries	
Classified aide salaries	
Director of preschool salaries	
Substitute salaries	
Benefits (excluding state on-behalf expenses)	
Supplies and equipment	
Special education salaries, benefits and contract services	
Transportation	

26. State grants in the special revenue fund?

	Amount
Preschool teacher salaries	
Classified aide salaries	
Director of preschool salaries	
Substitute salaries	
Benefits (excluding state on-behalf expenses)	
Supplies and equipment	
Special education salaries, benefits and contract services	
Transportation	

27. Federal grants in the special revenue fund?

	Amount
Preschool teacher salaries	
Classified aide salaries	
Director of preschool salaries	
Substitute salaries	
Benefits (excluding state on-behalf expenses)	
Supplies and equipment	
Special education salaries, benefits and contract services	
Transportation	

28. What type of kindergarten program did your district offer in each of the following school years? Please check all that apply.

Year	Full Day	Half Day
2008-2009		
2009-2010		
2010-2011		
2011-2012		
2012-2013		
2013-2014		
2014-2015		
2015-2016		
2016-2017		

29. How much did your district spend on kindergarten programs in the 2015-2016 school year? Expenditures will need to be reported by the general fund, state grants in the special revenue fund, and federal grants in the special revenue fund.

	Amount
General Fund	
Kindergarten teacher salaries	
Classified aide salaries	
Substitute salaries	
Benefits (excluding state on-behalf expenses)	
Special education salaries, benefits and contract services	

30. State grants in the special revenue fund

	Amount
General Fund	
Kindergarten teacher salaries	
Classified aide salaries	
Substitute salaries	
Benefits (excluding state on-behalf expenses)	
Special education salaries, benefits and contract services	

31. Federal grants in the special revenue fund

	Amount
General Fund	
Kindergarten teacher salaries	
Classified aide salaries	
Substitute salaries	
Benefits (excluding state on-behalf expenses)	
Special education salaries, benefits and contract services	

32. Do you have any additional comments that relate to kindergarten?

Appendix C

Preschool Partnership Grants Tier I And Tier II
FY 2017

District	Tier 1 Amount	Tier II Amount
Anderson County	$0	$150,000
Ballard County	0	101,525
Bardstown Independent	20,550	0
Barren County	25,000	0
Bell County	0	120,886
Bellevue Independent	0	150,000
Boone County	0	150,000
Boyle County	0	149,361
Bullitt County	23,164	0
Caldwell County	25,000	0
Calloway County	0	98,242
Campbell County	0	150,000
Casey County	0	150,000
Caverna Independent	0	150,000
Christian County	0	146,375
Clinton County	0	150,000
Corbin Independent	0	138,243
Cumberland County	25,000	0
Daviess County	0	150,000
Dayton Independent	0	116,908
Elliott County	0	27,000
Erlanger-Elsmere Independent	0	150,000
Fayette County	0	107,475
Frankfort Independent	0	108,800
Franklin County	25,000	0
Fulton County	24,565	0
Garrard County	25,000	0
Glasgow Independent	0	149,500
Graves County	0	149,475
Grayson County	25,000	0
Green County	0	150,000
Greenup County	0	84,538
Hancock County	25,000	0
Hardin County	0	150,000
Hart County	0	150,000
Hazard Independent	0	150,000
Henderson County	0	150,000
Hopkins County	0	97,000
Jefferson County	24,990	0
Kenton County	0	150,000
Lee County	7,050	0

District	Tier 1 Amount	Tier II Amount
Livingston County	0	150,000
Ludlow Independent	25,000	0
Madison County	0	80,000
Marion County	0	122,298
McCracken County	25,000	0
Middlesboro Independent	0	89,814
Monroe County	0	150,000
Montgomery County	0	150,000
Murray Independent	25,000	0
Newport Independent	0	150,000
Ohio County	0	149,690
Oldham County	19,700	0
Owensboro Independent	0	150,000
Owsley County	0	54,961
Pulaski County	20,543	0
Rowan County	25,000	0
Russell Independent	0	94,083
Shelby County	0	150,000
Simpson County	25,000	0
Southgate Independent	24,050	0
Todd County	0	98,762
Trigg County	17,350	0
Warren County	0	127,901
Washington County	0	118,024
Webster County	0	150,000
Whitley County	0	150,000
Williamstown Independent	25,000	0
Woodford County	25,000	0
Total	$531,962	$5,980,861

Source: Staff analysis of data from the Kentucky Department of Education.

Appendix D

Tuition-Based Preschool
FY 2016

District	Program Type	Number Of Students Enrolled	Annual Tuition Rate
Anderson	Half-day	23	$2,000
Ballard	Half-day	1	1,000
Bardstown Independent	Half-day	69	1,300
Barren	Full-day	40	3,040
Bath	Half-day	10	1,520
Beechwood Independent*	Half-day	3	1,150
Berea Independent	Full-day	11	1,000
Boyle	Half-day	15	1,900
Boyle	Full-day	21	3,800
Burgin Independent	Half-day	3	1,050
Caldwell	Half-day	1	900
Campbell	Half-day	4	2,850
Carlisle	Full-day	3	1,900
Cloverport Independent**	Full-day	3	1,000
Corbin Independent	Half-day	32	2,000
Corbin Independent	Full-day	38	3,750
Fort Thomas Independent	Half-day	11	2,300
Frankfort Independent	Half-day	10	1,500
Frankfort Independent	Full-day	10	0
Franklin	Half-day	10	1,520
Glasgow Independent	Full-day	7	2,650
Grant*	Full-day	4	3,500
Graves	Half-day	20	1,500
Green	Full-day	1	2,600
Hancock	Half-day	6	1,000
Harlan Independent	Half-day	25	1,500
Harlan Independent	Full-day	23	3,000
Harrison	Half-day	16	1,250
Henderson	Half-day	100	1,800
Jackson Independent	Full-day	1	1,520
Jefferson	Full-day	124	5,550
Jessamine	Half-day	31	2,250
Kenton*	Half-day	7	1,200
Lawrence	Full-day	3	2,000
Lewis	Full-day	9	1,900
Livingston	Half-day	20	1,000
Lyon	Half-day	16	1,000
Marion	Full-day	32	2,280
Meade	Half-day	7	1,600

District	Program Type	Number Of Students Enrolled	Annual Tuition Rate
Montgomery	Full-day	41	2,000
Murray Independent	Half-day	1	2,000
Nelson	Half-day	28	1,900
Ohio	Half-day	10	1,250
Oldham	Half-day	10	3,800
Owensboro Independent	Half-day	20	1,750
Pendleton	Full-day	3	1,500
Pikeville Independent	Full-day	2	1,000
Pulaski	Half-day	13	1,520
Raceland-Worthington Independent**	Half-day	29***	1,650
Raceland-Worthington Independent**	Full-day	***	2,750
Rowan	Half-day	25	1,900
Scott	Half-day	8	3,000
Shelby	Half-day	9***	3,230
Shelby	Full-day	***	3,800
Spencer	Half-day	25***	2,000
Shelby	Full-day	***	3,000
Taylor	Full-day	6	2,470
Todd	Full-day	24	1,200
Trimble	Full-day	8	3,800
Union**	Full-day	20	1,800
Warren	Full-day	31	1,800
Washington	Half day	17	1,200
Webster	Half-day	8	1,900
Webster	Full-day	2	3,800
Woodford	Half-day	20	1,935

* District enrolls only the children of faculty and staff.
** District charges tuition on a sliding scale based on parents' income.
*** Total number of tuition-based students enrolled in the district. The district did not specify how many students were enrolled in a half-day program versus a full-day program.
Source: OEA survey.

Appendix E

Preschool Expenses By Source
FY 2016

District	General Fund	State Grants	Federal Grants	Total Expenditures
Adair County	$0	$429,961	$0	$429,961
Allen County	126,751	479,530	24,199	630,479
Anchorage Ind.	Contract	Contract	Contract	Contract
Anderson County	77,606	587,395	0	665,001
Ashland Ind.	0	136,000	935,000	1,071,000
Augusta Ind.	15,886	76,451	7,302	99,639
Ballard County	83,595	325,437	28,843	437,874
Barbourville Ind.	0	71,873	9,040	80,913
Bardstown Ind.	529,325	544,709	313,160	1,387,195
Barren County	133,382	1,123,158	7,019	1,263,559
Bath County	115,326	187,878	81,084	384,288
Beechwood Ind.	12,180	49,161	22,448	83,788
Bell County	123,298	161,838	69,694	354,830
Bellevue Ind.	40,641	131,506	16,449	188,596
Berea Ind.	53,267	160,648	84,458	298,373
Boone County	384,467	1,319,110	73,076	1,776,653
Bourbon County	320,994	200,247	952,580	1,473,820
Bowling Green Ind.	54,269	255,680	29,872	339,821
Boyd County	160,312	276,998	1,037,121	1,474,431
Boyle County	116,940	573,406	61,967	752,314
Bracken County	0	213,898	7,369	221,267
Breathitt County	—	—	—	—
Breckinridge County	24,267	71,401	850,386	946,054
Bullitt County	815,675	1,440,191	75,746	2,331,612
Burgin Ind.	160	84,285	5,928	90,373
Butler County	254,277	415,912	51,700	721,889
Caldwell County	0	375,426	13,414	388,840
Calloway County	111,920	507,981	313,852	933,753
Campbell County	52,041	519,234	26,403	597,678
Campbellsville Ind.	38,387	184,783	34,474	257,644
Carlisle County	13,002	215,579	71,270	299,851
Carroll County	0	135,557	455,042	590,599
Carter County	40,722	522,512	59,237	622,471
Casey County	323,158	114,000	19,188	456,347
Caverna Ind.	0	239,624	11,766	251,390
Christian County	46,987	1,236,501	147,750	1,431,238
Clark County	667,168	1,071,991	202,652	1,941,811
Clay County	14,416	324,463	46,688	385,566
Clinton County	0	346,183	24,339	370,522
Cloverport Ind.	0	35,247	28,520	63,768
Corbin Ind.	228,755	383,067	0	611,822

District	General Fund	State Grants	Federal Grants	Total Expenditures
Covington Ind.	52,473	1,378,167	58,752	1,489,392
Crittenden County	49,016	245,169	12,963	307,149
Cumberland County	Contract	Contract	Contract	Contract
Danville Ind.	0	289,793	0	289,793
Daviess County	214,138	1,861,414	57,326	2,132,878
Dawson Springs Ind.	1,618	98,105	10,238	109,961
Dayton Ind.	67,940	243,223	33,087	344,250
East Bernstadt Ind.	0	216,057	4,845	220,902
Edmonson County	62,905	402,888	15,272	481,065
Elizabethtown Ind.	162,068	280,800	12,299	455,167
Elliott County	2,002	46,820	19,138	67,960
Eminence Ind.	5,691	72,205	2,914	80,810
Erlanger-Elsmere Ind.	61,760	340,337	0	402,097
Estill County	1,008,504	270,000	186,000	1,464,504
Fairview Ind.	12,200	85,771	0	97,971
Fayette County	1,326,812	4,595,172	295,321	6,217,305
Fleming County	30,000	92,582	35,700	158,282
Floyd County	162,501	155,368	416,650	734,519
Fort Thomas Ind.	82,739	119,970	18,447	221,156
Frankfort Ind.	71,660	119,804	21,780	213,244
Franklin County	153,821	551,584	89,153	794,558
Fulton County	107,815	143,905	27,273	278,993
Fulton Ind.	0	86,149	26,366	112,515
Gallatin County	70,000	251,000	0	321,000
Garrard County	284,643	418,955	0	703,598
Glasgow Ind.	455,370	514,084	0	969,455
Grant County	43,042	276,957	0	320,000
Graves County	541,138	782,543	33,785	1,357,466
Grayson County	0	623,055	0	623,055
Green County	138,247	120,009	0	258,256
Greenup County	390,924	109,558	24,562	525,044
Hancock County	—	—	—	—
Hardin County	19,318	2,442,902	0	2,462,220
Harlan County	0	60,494	170,934	231,428
Harlan Ind.	48,019	230,727	9,044	287,790
Harrison County	13,353	338,587	33,519	385,459
Hart County	94,088	494,072	14,761	602,921
Hazard Ind.	2,984	122,675	17,981	143,640
Henderson County	343,368	1,292,689	73,347	1,709,404
Henry County	160,068	465,016	10,212	635,296
Hickman County	158,829	161,447	71,240	391,516
Hopkins County	6,515	1,049,715	91,620	1,147,850
Jackson County	0	587,364	325,931	913,295
Jackson Ind.	—	—	—	—
Jefferson County	3,140,705	5,123,322	19,672,918	27,936,946
Jenkins Ind.	23,800	81,905	8,255	113,960
Jessamine County	6,453	1,188,277	37,780	1,232,510

District	General Fund	State Grants	Federal Grants	Total Expenditures
Johnson County	45,378	51,248	23,081	119,707
Kenton County	232	1,687,214	113,756	1,801,202
Knott County	15,691	327,916	0	343,607
Knox County	82,108	747,793	72,832	902,733
LaRue County	39,868	223,708	105,431	369,007
Laurel County	297,109	923,411	43,337	1,263,857
Lawrence County	0	555,245	0	555,245
Lee County	*	*	*	*
Leslie County	0	255,033	17,054	272,087
Letcher County	47,500	283,773	25,564	356,837
Lewis County	114,703	558,584	14,127	687,414
Lincoln County	0	110,387	895,689	1,006,076
Livingston County	697,706	187,808	270,987	1,156,500
Logan County	21,506	751,228	97,596	870,330
Ludlow Ind.	4,108	139,305	12,139	155,552
Lyon County	1,500	140,265	5,869	147,634
Madison County	42,365	1,068,011	107,721	1,218,096
Magoffin County	61,640	39,705	75,543	176,887
Marion County	367,082	397,220	41,782	806,084
Marshall County	154,116	677,694	28,371	860,181
Martin County	15,400	77,375	29,570	122,346
Mason County	296,565	474,379	40,089	811,033
Mayfield Ind.	49,874	367,722	30,376	447,972
McCracken County	90,690	825,458	112,612	1,028,760
McCreary County	13,983	932,671	81,975	1,028,628
McLean County	30,385	209,070	24,033	263,487
Meade County	3,900	650,077	43,606	697,583
Menifee County	0	11,953	8,740	20,693
Mercer County	269,000	507,000	165,000	941,000
Metcalfe County	0	373,422	35,541	408,963
Middlesboro Ind.	138,527	144,286	19,908	302,721
Monroe County	0	342,237	8,352	350,589
Montgomery County	273,677	536,558	64,281	874,516
Morgan County	29,508	12,912	2,894	45,314
Muhlenberg County	—	—	—	—
Murray Ind.	101,215	185,335	18,587	305,137
Nelson County	360,780	600,310	43,672	1,004,762
Newport Ind.	45,326	206,605	28,615	280,546
Nicholas County	429,953	275,356	0	705,309
Ohio County	0	825,449	6,751	832,200
Oldham County	85,045	48,132	1,072,108	1,205,286
Owen County	137,906	350,133	14,014	502,054
Owensboro Ind.	150,324	867,688	50,012	1,068,024
Owsley County	0	31,844	0	31,844
Paducah Ind.	152,081	150,992	1,900,288	2,203,361
Paintsville Ind.	18,690	7,023	226,116	251,829
Paris Ind.	7,244	87,762	13,347	108,354

District	General Fund	State Grants	Federal Grants	Total Expenditures
Pendleton County	45,271	508,143	47,767	601,180
Perry County	—	—	—	—
Pike County	2,050	268,239	56,466	326,755
Pikeville Ind.	56,109	44,479	59,519	160,107
Pineville Ind.	15,000	85,636	4,856	105,492
Powell County	25,615	204,881	88,827	319,323
Pulaski County	0	1,023,508	33,930	1,057,438
Raceland-Worthington Ind.	3,689	134,208	0	137,897
Robertson County	73,079	35,115	74,907	183,101
Rockcastle County	408,722	50,240	28,597	487,559
Rowan County	250,838	643,725	43,214	937,777
Russell County	202,532	407,924	34,342	644,798
Russell Ind.	0	178,482	335,156	513,639
Russellville Ind.	26,481	207,203	33,405	267,088
Science Hill Ind.	1,735	112,369	11,168	125,272
Scott County	103,276	1,533,072	67,474	1,703,821
Shelby County	396,027	960,652	63,550	1,420,229
Silver Grove Ind.	92,043	59,832	73,930	225,804
Simpson County	—	—	—	—
Somerset Ind.	62,245	193,556	6,467	262,268
Southgate Ind.	0	66,757	5,926	72,683
Spencer County	122,111	367,437	47,680	537,228
Taylor County	21,721	265,707	45,769	333,196
Todd County	40,089	659,658	56,471	756,219
Trigg County	144,117	304,476	45,642	494,235
Trimble County	87,785	75,411	61,222	224,418
Union County	0	330,973	61,665	392,638
Walton-Verona Ind.	18,755	243,371	23,792	285,918
Warren County	0	1,848,541	125,308	1,973,848
Washington County	84,478	135,123	30,819	250,420
Wayne County	112,108	392,282	117,148	621,538
Webster County	0	394,192	32,636	426,828
West Point Ind.	18,972	38,501	8,280	65,752
Whitley County	372,130	584,567	96,267	1,052,964
Williamsburg Ind.	0	208,349	0	208,349
Williamstown Ind.	0	107,217	657,181	764,398
Wolfe County	*	*	*	*
Woodford County	127,412	519,808	32,927	680,147
Total	$22,162,768	$75,380,388	$36,642,123	$134,185,279

Note: Numbers are rounded to the nearest dollar; Contract = preschool services for that district are outsourced to an outside agency; — = no response; * = no program.
Source: OEA survey.

Appendix F

Preschool Driver Assistants By Type And Number Of Bus Drivers FY 2017

District	District-Employed Driver Assistants	Student Workers	Volunteers	Bus Drivers
Adair County	13	11	0	44
Allen County	25	21	4	40
Anderson County	18	0	0	45
Ashland Independent	4	0	0	17
Augusta Independent	0	1	0	2
Ballard County	4	0	0	20
Barbourville Independent	0	2	0	2
Bardstown Independent	5	0	0	19
Barren County	17	0	0	57
Bath County	1	7	0	28
Bell County	11	0	0	40
Bellevue Independent	3	0	0	0
Berea Independent	4	4	0	6
Boone County	20	0	0	240
Bourbon County	2	0	0	31
Bowling Green Independent	6	0	0	38
Boyd County	7	5	12	34
Boyle County	8	8	0	37
Bracken County	0	29	0	19
Breathitt County	6	0	0	35
Bullitt County	50	0	0	96
Burgin Independent	2	0	0	5
Caldwell County	4	0	0	26
Calloway County	6	0	0	46
Campbell County	2	0	0	60
Campbellsville Independent	8	8	0	8
Carlisle County	0	20	0	8
Carroll County	5	0	0	17
Carter County	0	0	50	66
Casey County	4	0	0	39
Caverna Independent	3	0	0	8
Christian County	28	0	0	87
Clark County	12	0	0	51
Clay County	10	5	0	51
Clinton County	5	0	0	24
Corbin Independent	1	0	0	19
Covington Independent	7	0	0	22
Crittenden County	11	0	0	21
Danville Independent	2	0	0	10
Daviess County	18	0	0	123

District	District-Employed Driver Assistants	Student Workers	Volunteers	Bus Drivers
Dawson Springs Independent	1	0	0	3
East Bernstadt Independent	2	0	0	1
Edmonson County	4	0	0	36
Elizabethtown Independent	6	0	0	14
Elliott County	8	0	0	20
Eminence Independent	1	0	0	3
Estill County	35	0	0	33
Fairview Independent	1	1	0	9
Fayette County	79	0	0	247
Fleming County	0	0	0	31
Floyd County	8	4	0	70
Fort Thomas Independent	1	0	0	2
Frankfort Independent	4	0	0	7
Franklin County	16	0	0	58
Fulton County	7	2	0	6
Fulton Independent	1	0	0	1
Gallatin County	3	0	0	25
Garrard County	13	0	0	33
Glasgow Independent	4	0	0	13
Grant County	25	3	0	53
Graves County	14	0	0	70
Grayson County	32	0	0	58
Green County	5	0	0	28
Greenup County	11	18	0	42
Hancock County	2	0	0	23
Hardin County	20	0	0	202
Harlan County	0	0	0	54
Harlan Independent	2	0	0	3
Harrison County	4	2	0	35
Hazard Independent	1	0	0	3
Henderson County	13	0	0	76
Henry County	20	8	0	27
Hickman County	5	3	0	7
Hopkins County	18	0	0	68
Jackson County	3	39	0	41
Jackson Independent	1	0	0	2
Jefferson County	457	0	0	912
Jenkins Independent	1	0	0	5
Jessamine County	26	0	0	103
Johnson County	0	0	0	42
Kenton County	24	0	0	142
Knott County	7	0	0	41
Knox County	24	3	0	57
LaRue County	2	0	0	27
Laurel County	0	54	0	79
Lawrence County	21	1	0	34

District	District-Employed Driver Assistants	Student Workers	Volunteers	Bus Drivers
Leslie County	10	0	0	23
Letcher County	2	0	0	36
Lewis County	6	28	0	33
Livingston County	5	0	0	23
Logan County	5	0	0	50
Ludlow Independent	0	0	0	1
Lyon County	1	0	0	13
Madison County	16	12	0	141
Magoffin County	16	0	0	40
Marion County	15	14	0	39
Marshall County	6	0	0	54
Mason County	18	11	0	32
Mayfield Independent	8	0	0	17
McCracken County	8	0	0	57
McCreary County	5	0	0	42
McLean County	10	0	0	19
Meade County	7	65	0	66
Mercer County	5	0	0	41
Metcalfe County	8	0	0	24
Middlesboro Independent	0	0	0	8
Monroe County	10	7	0	23
Montgomery County	4	0	0	48
Muhlenberg County	7	0	0	65
Murray Independent	3	9	10	8
Nelson County	28	0	0	69
Newport Independent	2	0	0	4
Nicholas County	16	0	0	18
Ohio County	130	0	0	50
Oldham County	10	0	0	109
Owen County	2	28	27	29
Owensboro Independent	6	6	0	28
Owsley County	5	0	5	14
Paducah Independent	9	0	0	24
Paintsville Independent	3	0	0	2
Paris Independent	1	0	0	9
Pendleton County	23	8	5	35
Perry County	12	0	0	62
Pike County	0	200	25	134
Pikeville Independent	2	0	0	6
Pineville Independent	3	0	0	3
Powell County	19	0	0	22
Pulaski County	3	46	20	121
Raceland-Worthington Independent	2	0	0	5
Robertson County	2	6	0	5
Rockcastle County	30	8	0	47
Rowan County	35	13	0	40

District	District-Employed Driver Assistants	Student Workers	Volunteers	Bus Drivers
Russell County	6	0	0	53
Russell Independent	5	0	0	16
Russellville Independent	2	0	0	10
Science Hill Independent	3	0	0	3
Scott County	6	0	0	67
Shelby County	11	0	0	65
Simpson County	2	0	0	25
Somerset Independent	3	0	0	12
Spencer County	16	4	0	28
Taylor County	4	35	0	27
Todd County	6	0	0	33
Trigg County	6	0	0	32
Trimble County	4	0	0	17
Union County	3	0	0	37
Walton-Verona Independent	1	0	0	12
Warren County	35	0	0	169
Washington County	4	10	3	20
Wayne County	12	0	0	57
Webster County	7	0	0	26
West Point Independent	1	0	0	2
Whitley County	46	22	0	52
Williamsburg Independent	3	0	0	5
Williamstown Independent	4	0	0	10
Woodford County	18	0	0	42

Source: OEA survey; Kentucky Department of Education.

Appendix G

Demographics Of 4-Year-Old State-Funded Preschool Students, School Years 2014 To 2016 Compared To All Students Entering Kindergarten School Years 2015 To 2017

This table illustrates the demographic makeup of state-funded 4-year-old students enrolled in preschool in school years 2014 to 2016 and compares those students to all students who entered kindergarten in school years 2015 to 2017. OEA originally intended to include additional demographic data in this table, such as percent of black and Hispanic students and IEP status; however, in a majority of districts there were an insufficient number of children in these categories to report.

	Percent White		Percent FRPL		Percent IEP	
District	Preschool	All	Preschool	All	Preschool	All
Adair County	85.28%	88.94%	80.98%	75.04%	29.45%	16.42%
Allen County	90.67	91.41	84.70	69.81	26.49	13.71
Anchorage Ind.	—	95.24	—	0.00	—	0.00
Anderson County	89.55	89.85	58.96	47.80	43.66	18.56
Ashland Ind.	80.36	84.40	83.04	72.76	41.96	16.75
Augusta Ind.	93.10	94.92	86.21	72.88	34.48	25.42
Ballard County	92.19	91.13	63.28	61.35	30.47	17.02
Barbourville Ind.	98.15	96.88	72.22	73.75	14.81	15.63
Bardstown Ind.	57.32	69.37	83.49	64.17	28.35	17.46
Barren County	86.57	88.94	82.03	67.56	39.75	27.93
Bath County	90.43	94.51	79.79	73.98	29.79	11.99
Beechwood Ind.	53.13	87.69	75.00	19.23	18.75	5.38
Bell County	98.96	99.09	89.58	85.06	44.79	17.99
Bellevue Ind.	85.96	80.00	87.72	74.48	43.86	22.07
Berea Ind.	88.24	83.26	70.59	54.51	30.59	12.45
Boone County	66.51	78.87	73.81	41.48	39.63	9.92
Bourbon County	70.69	75.08	78.45	70.90	24.14	12.88
Bowling Green Ind.	43.08	54.99	91.92	65.09	23.08	11.33
Boyd County	94.74	95.14	56.84	62.09	80.00	21.60
Boyle County	90.13	90.61	79.83	57.09	33.91	19.71
Bracken County	91.21	96.47	70.33	69.26	34.07	20.85
Breathitt County	97.52	97.34	76.40	81.11	31.68	23.97
Breckinridge County	91.23	89.06	71.93	69.57	36.84	15.56
Bullitt County	89.70	91.47	81.27	52.66	29.78	11.24
Burgin Ind.	87.50	90.60	79.17	50.43	41.67	25.64
Butler County	93.62	89.23	82.27	65.49	33.33	18.68
Caldwell County	77.50	83.33	90.00	70.37	15.50	7.64
Calloway County	86.19	90.30	89.55	66.90	20.90	12.55
Campbell County	86.67	89.71	71.43	49.72	49.05	13.97
Campbellsville Ind.	63.64	70.72	85.23	78.84	23.86	11.30
Carlisle County	92.59	90.60	79.63	59.06	46.30	19.46

	Percent White		Percent FRPL		Percent IEP	
District	**Preschool**	**All**	**Preschool**	**All**	**Preschool**	**All**
Carroll County	75.00	80.78	89.42	71.98	24.04	6.54
Carter County	99.28	96.26	82.61	72.42	27.17	16.67
Casey County	87.10	86.88	88.39	78.52	32.26	16.54
Caverna Ind.	70.43	72.28	92.17	88.04	31.30	26.63
Christian County	55.25	52.59	83.57	74.55	23.01	10.91
Clark County	78.57	81.81	82.54	69.62	56.75	18.10
Clay County	98.73	97.74	63.29	83.07	57.59	23.14
Clinton County	92.00	91.86	74.67	83.73	26.67	21.00
Cloverport Ind.	100.00	100.00	76.19	45.68	—	16.05
Corbin Ind.	97.73	97.38	77.27	60.75	37.88	11.78
Covington Ind.	41.68	46.41	94.20	88.18	26.87	15.58
Crittenden County	90.52	93.46	75.00	59.48	21.55	9.80
Cumberland County	100.00	92.04	91.30	81.86	43.48	23.01
Danville Ind.	51.63	63.81	90.22	72.62	24.46	16.01
Daviess County	74.47	81.28	77.76	56.19	28.20	15.67
Dawson Springs Ind.	89.61	92.70	88.31	79.78	31.17	19.66
Dayton Ind.	89.91	90.48	81.65	81.82	34.86	20.35
East Bernstadt Ind.	98.90	97.67	79.12	65.12	29.67	18.02
Edmonson County	98.25	96.60	67.54	65.99	22.37	17.69
Elizabethtown Ind.	63.82	67.08	85.53	60.12	24.34	12.68
Elliott County	100.00	97.72	82.35	77.19	—	11.79
Eminence Ind.	67.12	78.53	86.30	59.32	21.92	11.30
Erlanger-Elsmere Ind.	64.56	66.56	86.08	74.88	27.22	9.46
Estill County	96.55	96.65	73.56	70.08	24.14	14.23
Fairview Ind.	94.20	94.71	88.41	80.59	—	10.00
Fayette County	29.77	51.25	84.30	56.19	26.83	10.75
Fleming County	91.00	92.48	93.00	74.44	28.00	11.84
Floyd County	97.70	97.25	75.86	84.62	60.92	18.91
Fort Thomas Ind.	78.69	89.13	49.18	11.71	45.90	7.36
Frankfort Ind.	59.38	68.67	85.94	64.46	29.69	19.88
Franklin County	67.96	70.94	80.36	63.52	34.37	12.51
Fulton County	60.00	59.15	82.50	78.17	65.00	27.46
Fulton Ind.	28.95	44.34	94.74	83.96	—	9.43
Gallatin County	83.73	88.15	86.75	73.28	24.10	15.70
Garrard County	92.92	92.12	69.91	54.34	25.66	11.74
Glasgow Ind.	68.25	68.26	84.67	75.21	32.48	23.47
Grant County	91.89	90.92	87.84	73.49	35.14	14.53
Graves County	86.80	89.04	76.40	61.07	45.69	24.12
Grayson County	94.30	95.14	71.84	67.06	41.14	19.43
Green County	89.87	91.33	78.48	70.12	30.38	21.93
Greenup County	94.00	95.52	85.00	73.25	36.00	14.85
Hancock County	93.22	94.74	72.88	54.68	31.36	15.50
Hardin County	58.73	66.72	85.82	65.18	32.15	15.10
Harlan County	95.18	95.06	89.07	85.93	22.83	18.15
Harlan Ind.	85.71	84.91	82.86	76.10	24.29	15.72
Harrison County	88.18	89.07	85.22	70.56	20.20	13.66

	Percent White		Percent FRPL		Percent IEP	
District	**Preschool**	**All**	**Preschool**	**All**	**Preschool**	**All**
Hart County	91.44	90.63	73.87	71.89	42.79	25.59
Hazard Ind.	83.16	82.11	82.11	67.89	12.63	10.09
Henderson County	68.56	75.94	86.29	62.22	25.49	14.15
Henry County	87.84	91.63	72.07	61.31	31.08	17.42
Hickman County	79.25	80.25	75.47	70.06	62.26	34.39
Hopkins County	73.66	80.59	77.62	58.49	50.69	20.63
Jackson County	99.19	98.20	47.97	76.12	29.27	21.72
Jackson Ind.	100.00	100.00	57.69	67.50	—	—
Jefferson County	28.41	44.21	89.05	68.39	21.69	8.51
Jenkins Ind.	100.00	95.19	85.29	88.46	—	13.46
Jessamine County	74.65	81.90	86.09	58.50	27.67	11.18
Johnson County	96.30	97.93	77.78	70.12	66.67	12.03
Kenton County	79.55	86.82	74.65	42.33	37.77	10.88
Knott County	98.08	97.51	81.41	78.28	35.90	24.71
Knox County	98.98	97.00	62.12	81.16	12.63	10.68
LaRue County	86.55	87.13	86.55	67.49	40.34	16.70
Laurel County	96.42	95.08	74.76	73.68	41.62	18.78
Lawrence County	96.67	96.77	83.33	72.66	42.50	23.66
Lee County*	—	98.41	—	81.27	—	11.16
Leslie County	100.00	99.75	76.96	72.84	21.66	12.35
Letcher County	99.17	98.29	70.25	75.07	53.72	30.71
Lewis County	93.97	96.84	81.90	78.70	37.93	20.71
Lincoln County	88.71	90.09	74.19	65.62	38.71	12.70
Livingston County	89.09	91.67	82.73	68.84	30.00	14.86
Logan County	85.94	89.93	75.00	59.46	38.44	20.81
Ludlow Ind.	95.95	92.90	93.24	72.90	37.84	21.29
Lyon County	87.80	90.23	81.71	59.07	12.20	6.98
Madison County	82.46	85.29	77.35	57.96	40.35	13.76
Magoffin County	100.00	97.99	77.78	84.31	61.11	19.11
Marion County	76.99	79.42	87.17	69.78	35.40	18.25
Marshall County	94.90	96.55	86.05	58.72	19.05	9.65
Martin County	100.00	98.69	62.16	80.17	75.68	23.97
Mason County	77.83	79.05	71.70	69.43	38.68	21.45
Mayfield Ind.	33.97	44.49	94.74	81.89	41.63	25.20
McCracken County	82.01	86.55	86.12	52.71	35.22	12.42
McCreary County	97.46	97.43	85.07	85.29	43.66	30.57
McLean County	93.33	93.51	85.83	64.59	37.50	20.54
Meade County	87.58	87.81	82.61	57.23	33.54	14.95
Menifee County	100.00	96.55	76.92	76.63	—	17.24
Mercer County	77.39	80.22	83.48	69.00	40.87	19.63
Metcalfe County	96.28	95.83	94.68	82.29	25.53	19.01
Middlesboro Ind.	83.33	82.73	89.39	85.14	51.52	16.47
Monroe County	82.45	85.78	93.62	81.20	29.79	23.13
Montgomery County	87.59	90.27	76.32	67.99	36.09	18.13
Morgan County	100.00	98.94	—	75.42	—	19.07
Muhlenberg County	88.06	91.20	83.29	63.35	39.79	24.08

	Percent White		Percent FRPL		Percent IEP	
District	**Preschool**	**All**	**Preschool**	**All**	**Preschool**	**All**
Murray Ind.	72.97	77.80	83.78	49.76	44.59	12.68
Nelson County	89.93	93.35	75.69	56.05	39.93	16.79
Newport Ind.	48.08	55.26	96.79	92.11	20.51	11.54
Nicholas County	100.00	94.20	83.33	72.46	36.36	17.03
Ohio County	83.64	87.29	82.08	70.97	26.49	15.35
Oldham County	70.12	85.17	66.51	25.43	28.19	7.27
Owen County	91.49	93.77	79.79	68.05	30.32	17.40
Owensboro Ind.	58.14	63.45	91.22	77.28	24.50	13.24
Owsley County	100.00	98.80	84.21	90.36	—	13.86
Paducah Ind.	37.82	39.43	89.92	81.20	39.50	11.18
Paintsville Ind.	—	96.35	—	57.29	—	10.42
Paris Ind.	59.32	54.69	84.75	79.17	23.73	10.42
Pendleton County	93.15	91.62	79.45	71.51	38.81	20.67
Perry County	97.52	97.45	83.17	78.64	30.20	17.85
Pike County	98.74	97.07	58.49	74.17	30.19	13.71
Pikeville Ind.	95.45	89.68	31.82	44.52	63.64	10.00
Pineville Ind.	95.65	96.58	91.30	76.92	28.26	17.95
Powell County	93.94	94.99	76.77	79.16	63.64	21.44
Pulaski County	91.48	92.55	87.67	73.44	30.44	16.20
Raceland-Worthington Ind.	95.08	93.72	90.16	62.78	24.59	9.87
Robertson County	100.00	95.77	66.67	67.61	—	15.49
Rockcastle County	96.35	96.98	80.73	72.03	36.98	24.79
Rowan County	93.20	93.66	84.14	69.52	22.01	10.90
Russell County	82.01	83.47	87.05	80.46	23.38	13.15
Russell Ind.	95.51	93.57	77.53	48.58	41.57	13.61
Russellville Ind.	44.12	50.63	93.14	82.70	34.31	19.41
Science Hill Ind.	83.02	88.03	83.02	66.67	35.85	19.66
Scott County	70.80	78.84	73.94	47.65	39.25	16.22
Shelby County	41.30	67.84	88.53	53.20	29.45	12.94
Silver Grove Ind.	100.00	97.96	76.00	73.47	—	—
Simpson County	68.62	77.56	70.29	60.76	45.61	21.68
Somerset Ind.	78.52	81.22	82.55	73.76	34.23	19.89
Southgate Ind.	44.83	56.90	65.52	72.41	—	—
Spencer County	92.06	92.36	67.72	46.35	33.86	13.62
Taylor County	85.71	91.13	91.93	66.94	25.47	11.90
Todd County	75.56	79.81	70.37	68.45	27.04	23.67
Trigg County	78.42	81.32	87.05	66.74	22.30	12.07
Trimble County	100.00	94.67	85.71	66.00	—	9.33
Union County	78.71	87.50	88.61	66.45	26.24	15.57
Walton-Verona Ind.	90.79	93.87	76.32	47.10	53.95	18.06
Warren County	64.22	69.56	84.67	61.17	27.85	13.02
Washington County	76.25	77.40	75.00	73.46	51.25	23.59
Wayne County	85.19	84.83	91.69	79.36	26.75	19.27
Webster County	79.33	76.95	73.18	63.52	41.34	15.97
West Point Ind.	94.44	82.98	83.33	72.34	27.78	—
Whitley County	97.52	98.12	85.54	77.50	31.82	18.93

	Percent White		Percent FRPL		Percent IEP	
District	**Preschool**	**All**	**Preschool**	**All**	**Preschool**	**All**
Williamsburg Ind.	95.24	92.31	89.52	81.07	18.10	13.61
Williamstown Ind.	87.04	91.24	88.89	64.43	25.93	13.40
Wolfe County*	N/A	96.42	N/A	80.65	N/A	24.01
Woodford County	55.95	73.74	83.73	53.96	31.35	14.87
State	70.07%	76.10%	82.25%	64.79%	30.98%	14.21%

Note: FRPL= free or reduced-price lunch; IEP = individualized education program; — = data are not reported pursuant to the Family Educational Rights and Privacy Act. When the number of students in a particular category is less than 10, the number and percentage are not reported.
* No preschool program
Source: Kentucky Department of Education.

Appendix H

P2R Recruitment Evaluation Summary
School Years 2013 To 2017

Source: Kentucky Department of Education.

Subsection Of 704 KAR 3:410, Sec. 5	Findings	Recommendations	Strengths
(1) Enrollment of eligible children in the preschool program is at the discretion of the parent or legal guardian.	0	2	1
(1) Each local school district establishes and maintains an active recruitment process that systematically assures enrollment of eligible children.	4	11	10
(1)(a) Notification of the right to participate is presented in the parent's primary language or natural mode of communication.	1	7	9
(1)(a) Identification of all eligible children regardless of race, sex, creed, color, national origin, or handicapping condition.	1	4	0
(1)(c) Written documentation to demonstrate that emphasis has been given to recruiting those eligible children not currently served by a preschool program.	4	7	2
(1)(d) Contact to agencies and programs serving local preschool children or their families to encourage participating in the recruitment process, taking into account the demographic makeup of the community and the needs of the children and their families.	1	6	3
(3) All educational records are kept confidential according to the requirements of the Family Education Rights and Privacy Act regulation, 34 CFR Part 99.	2	3	0

Examples of recruitment findings discussed in KDE P2Rs include:

- "The Child Find newspaper article incorrectly identifies at-risk income eligibility as 150% of federal poverty level (FPL). Preschool income eligibility for at-risk four-year-olds is 160% of the federal poverty level. The district must provide evidence that recruitment materials have been updated with accurate FPL information."
- "While [the] County implements a recruitment plan, it's unclear if the plan emphasizes recruitment of eligible children not currently served by a preschool program. From 2012–2013 to 2014–2015, the percentage of students eligible for free lunch in the district increased from 37% to 39% and the percentage of students eligible for free lunch enrolled in the early childhood center decreased from 56% to 50% (source: KDE qualifying data). During the same time period, the enrollment of at-risk preschool students declined from 70 students to approximately 30."

- "Recruitment strategies seem limited. It's unclear if a written plan is used to implement intentional and varied recruitment strategies, as well as ensure the district reaches eligible children not currently served by a preschool program."

Examples of recruitment recommendations discussed in KDE P2Rs include:

- "According to the principal, the Temporary Assistance to Needy Families (TANF) list has been used for recruitment in the past. Recently, she has been unable to obtain the list, despite several attempts through e-mail. Since the TANF list is commonly used as a recruiting tool, it is recommended that the district enter into a formal agreement with community-based services to obtain this resource. A visit to the supplying agency may be required. A formalized procedure and timeline, including contact names and phone numbers and/or e-mail addresses, could be useful. Upon review of [the district's] eligible enrollment counts for the last five years, it appears the district has increased the number of students with disabilities served from 45% to 47%. Inversely, the number of students being served who qualify due to at-risk, up to 160% of the federal poverty rate, has decreased from 55% to 53%. According to qualifying data collected by the Kentucky Department of Education (KDE) the estimated percentage of children qualifying for free lunch is 100%. It is reasonable to believe a higher percentage of at-risk students would be served by [the district's] preschool program. When reviewing recruitment procedures, it may benefit the district to reassess ways they connect with at-risk families."
- "[The district] and [the local Head Start chapter] collaborate to recruit eligible students. A booth is provided to Head Start during school festivals, and the partnership distributes brochures, fliers, newsletters and articles. However, the free and reduced lunch data suggest there are at-risk students who enroll in kindergarten without the benefit of preschool services. It is recommended that [The district] and [the local Head Start chapter] develop a written recruitment plan with measurable targets for identifying, recruiting and enrolling at-risk children living in the district, including children who live up to 160% of the federal poverty level (FPL)."

Examples of recruitment strengths discussed in KDE P2Rs include:

- "[The] school district has an active recruitment process that includes special events with a festive atmosphere in which parents can enroll their children and also find out information about other services. These recruitment fairs are conducted in collaboration with Head Start and other partners such as health services."
- "District indicates strong collaborative efforts with early childhood partners and families through preschool staff participation on the community early childhood council and in the early intervention services including First Steps and completion of the transition process both for preschool and kindergarten. Strong child find and recruitment activities occur through the school year and include a variety of media modalities and agencies."

Appendix I

Percentage Of Eligible Preschool Students Enrolled By County
School Years 2014 To 2016

This table shows the number of preschool-eligible students who began kindergarten in school years 2015 through 2017 and the percentage of eligible students who had enrolled in state-funded preschool the previous year. For this table, FRPL students who also qualified for an IEP are counted as IEP students only.

	FRPL		IEP		Total Eligibility	
District	**# In K**	**% In P**	**# In K**	**% In P**	**# In K**	**% In P**
Adair County	369	25.20%	98	48.98%	467	30.19%
Allen County	426	40.61	99	71.72	525	46.48
Anchorage Ind.	0	0.00	—	0.00	—	0.00
Anderson County	282	34.04	139	84.17	421	50.59
Ashland Ind.	461	12.80	131	35.88	592	17.91
Augusta Ind.	31	58.06	15	66.67	46	60.87
Ballard County	142	38.73	48	81.25	190	49.47
Barbourville Ind.	101	33.66	25	—	126	33.33
Bardstown Ind.	347	60.52	114	79.82	461	65.29
Barren County	496	56.45	303	72.28	799	62.45
Bath County	316	17.09	59	47.46	375	21.87
Beechwood Ind.	47	48.94	14	—	61	47.54
Bell County	452	11.06	118	36.44	570	16.32
Bellevue Ind.	80	35.00	32	78.13	112	47.32
Berea Ind.	106	38.68	29	89.66	135	49.63
Boone County	1,605	29.22	433	78.98	2,038	39.79
Bourbon County	364	20.05	77	36.36	441	22.90
Bowling Green Ind.	544	34.56	110	54.55	654	37.92
Boyd County	335	4.48	151	50.33	486	18.72
Boyle County	241	55.60	107	73.83	348	61.21
Bracken County	153	27.45	59	52.54	212	34.43
Breathitt County	257	32.68	99	51.52	356	37.92
Breckinridge County	332	7.83	91	23.08	423	11.11
Bullitt County	1,282	39.08	315	76.19	1,597	46.40
Burgin Ind.	39	58.97	30	66.67	69	62.32
Butler County	235	34.04	85	55.29	320	39.69
Caldwell County	279	55.91	33	93.94	312	59.94
Calloway County	397	49.12	88	63.64	485	51.75
Campbell County	445	20.00	152	67.76	597	32.16
Campbellsville Ind.	239	24.27	39	53.85	278	28.42
Carlisle County	66	37.88	29	86.21	95	52.63
Carroll County	325	21.54	32	78.13	357	26.61
Carter County	582	30.41	165	45.45	747	33.73
Casey County	340	28.82	87	57.47	427	34.66
Caverna Ind.	119	62.18	49	73.47	168	65.48

	FRPL		IEP		Total Eligibility	
District	**# In K**	**% In P**	**# In K**	**% In P**	**# In K**	**% In P**
Christian County	1,491	34.81	247	73.68	1,738	40.33
Clark County	616	15.91	202	70.79	818	29.46
Clay County	587	8.52	205	44.39	792	17.80
Clinton County	248	31.85	80	50.00	328	36.28
Cloverport Ind.	33	39.39	13	—	46	41.30
Corbin Ind.	282	23.76	63	79.37	345	33.91
Covington Ind.	922	48.92	195	90.26	1,117	56.13
Crittenden County	163	44.17	30	83.33	193	50.26
Cumberland County	136	18.38	52	38.46	188	23.94
Danville Ind.	254	51.18	69	65.22	323	54.18
Daviess County	1,185	57.64	396	80.05	1,581	63.25
Dawson Springs Ind.	113	43.36	35	68.57	148	49.32
Dayton Ind.	154	39.61	47	80.85	201	49.25
East Bernstadt Ind.	92	57.61	31	87.10	123	65.04
Edmonson County	242	52.07	78	65.38	320	55.31
Elizabethtown Ind.	257	41.25	62	59.68	319	44.83
Elliott County	180	6.11	31	—	211	8.06
Eminence Ind.	93	58.06	20	80.00	113	61.95
Erlanger-Elsmere Ind.	410	24.39	58	74.14	468	30.56
Estill County	280	33.21	68	61.76	348	38.79
Fairview Ind.	123	43.90	17	—	140	44.29
Fayette County	4,905	33.72	1,077	62.67	5,982	38.93
Fleming County	343	20.12	63	44.44	406	23.89
Floyd County	1,137	2.20	316	16.77	1,453	5.37
Fort Thomas Ind.	60	36.67	44	63.64	104	48.08
Frankfort Ind.	84	46.43	33	57.58	117	49.57
Franklin County	843	27.16	192	69.27	1,035	34.98
Fulton County	80	16.25	39	66.67	119	32.77
Fulton Ind.	79	37.97	10	—	89	40.45
Gallatin County	223	51.12	57	70.18	280	55.00
Garrard County	296	41.89	73	79.45	369	49.32
Glasgow Ind.	350	48.57	142	62.68	492	52.64
Grant County	510	25.49	120	65.00	630	33.02
Graves County	422	45.73	220	81.82	642	58.10
Grayson County	447	29.98	164	79.27	611	43.21
Green County	218	20.18	91	26.37	309	22.01
Greenup County	439	14.35	106	33.96	545	18.17
Hancock County	148	40.54	53	69.81	201	48.26
Hardin County	1,690	43.55	472	80.72	2,162	51.67
Harlan County	651	33.64	169	42.01	820	35.37
Harlan Ind.	102	45.10	25	68.00	127	49.61
Harrison County	393	35.88	90	45.56	483	37.68
Hart County	288	31.94	142	66.90	430	43.49
Hazard Ind.	130	52.31	22	54.55	152	52.63
Henderson County	846	61.11	230	85.65	1,076	66.36
Henry County	221	52.49	77	89.61	298	62.08

	FRPL		IEP		Total Eligibility	
District	**# In K**	**% In P**	**# In K**	**% In P**	**# In K**	**% In P**
Hickman County	63	20.63	54	61.11	117	39.32
Hopkins County	680	30.29	322	79.50	1,002	46.11
Jackson County	323	11.15	121	29.75	444	16.22
Jackson Ind.	51	27.45	—	—	55	29.09
Jefferson County	14,455	27.27	1,987	59.59	16,442	31.18
Jenkins Ind.	80	27.50	14	—	94	32.98
Jessamine County	974	44.56	213	84.04	1,187	51.64
Johnson County	435	—	87	20.69	522	4.79
Kenton County	1,174	37.31	346	86.99	1,520	48.62
Knott County	350	24.57	149	37.58	499	28.46
Knox County	773	20.18	114	32.46	887	21.76
LaRue County	244	27.87	74	64.86	318	36.48
Laurel County	1,268	19.40	401	55.11	1,669	27.98
Lawrence County	355	34.37	154	66.23	509	44.01
Lee County	184	N/A	28	N/A	212	N/A
Leslie County	259	50.97	50	94.00	309	57.93
Letcher County	388	9.54	234	27.78	622	16.40
Lewis County	312	18.91	105	41.90	417	24.70
Lincoln County	475	6.11	109	22.02	584	9.08
Livingston County	157	40.76	41	80.49	198	48.99
Logan County	329	45.29	155	79.35	484	56.20
Ludlow Ind.	86	53.49	33	84.85	119	62.18
Lyon County	115	51.30	15	66.67	130	53.08
Madison County	1,236	25.73	350	72.29	1,586	36.00
Magoffin County	331	—	95	11.58	426	3.76
Marion County	380	34.47	125	64.00	505	41.78
Marshall County	588	36.22	109	51.38	697	38.59
Martin County	280	—	110	25.45	390	8.97
Mason County	313	30.67	127	64.57	440	40.45
Mayfield Ind.	305	38.36	128	67.97	433	47.11
McCracken County	713	31.84	204	67.16	917	39.69
McCreary County	410	40.98	214	72.43	624	51.76
McLean County	181	37.57	76	59.21	257	43.97
Meade County	471	39.28	152	71.05	623	47.03
Menifee County	159	—	45	—	204	5.39
Mercer County	354	35.31	126	74.60	480	45.63
Metcalfe County	248	54.03	73	65.75	321	56.70
Middlesboro Ind.	178	16.85	41	82.93	219	29.22
Monroe County	247	50.20	96	58.33	343	52.48
Montgomery County	606	21.29	205	46.83	811	27.74
Morgan County	285	—	90	—	375	—
Muhlenberg County	479	41.96	249	60.24	728	48.21
Murray Independent	167	23.35	52	63.46	219	32.88
Nelson County	422	36.97	154	74.68	576	47.05
Newport Ind.	402	30.35	57	56.14	459	33.55
Nicholas County	161	21.74	47	51.06	208	28.37

	FRPL		IEP		Total Eligibility	
District	**# In K**	**% In P**	**# In K**	**% In P**	**# In K**	**% In P**
Ohio County	602	40.20	157	64.97	759	45.32
Oldham County	526	42.21	172	68.02	698	48.57
Owen County	212	51.42	67	85.07	279	59.50
Owensboro Ind.	775	49.94	155	86.45	930	56.02
Owsley County	128	10.16	23	—	151	10.60
Paducah Ind.	577	10.92	91	51.65	668	16.47
Paintsville Ind.	94	0.00	20	0.00	114	0.00
Paris Ind.	134	28.36	20	70.00	154	33.77
Pendleton County	298	36.91	111	76.58	409	47.68
Perry County	607	39.21	168	72.62	775	46.45
Pike County	1,251	5.76	267	17.98	1,518	7.91
Pikeville Ind.	121	—	31	45.16	152	11.84
Pineville Ind.	71	40.85	21	61.90	92	45.65
Powell County	309	9.39	107	58.88	416	22.12
Pulaski County	1,153	36.43	311	64.31	1,464	42.35
Raceland-Worthington Ind.	124	35.48	22	68.18	146	40.41
Robertson County	40	—	11	—	51	19.61
Rockcastle County	316	32.59	148	47.97	464	37.50
Rowan County	441	47.17	79	86.08	520	53.08
Russell County	570	32.81	109	59.63	679	37.11
Russell Ind.	212	21.23	72	51.39	284	28.87
Russellville Ind.	157	41.40	46	76.09	203	49.26
Science Hill Ind.	61	49.18	23	82.61	84	58.33
Scott County	762	41.47	325	76.92	1,087	52.07
Shelby County	702	49.00	206	74.76	908	54.85
Silver Grove Ind.	30	43.33	—	—	38	55.26
Simpson County	303	32.01	142	76.76	445	46.29
Somerset Ind.	211	39.34	72	70.83	283	47.35
Southgate Ind.	36	38.89	—	—	44	47.73
Spencer County	231	41.56	82	78.05	313	51.12
Taylor County	284	40.85	59	69.49	343	45.77
Todd County	216	62.04	102	71.57	318	65.09
Trigg County	249	38.55	53	58.49	302	42.05
Trimble County	174	6.90	28	—	202	6.44
Union County	250	54.80	71	74.65	321	59.19
Walton-Verona Ind.	111	28.83	56	73.21	167	43.71
Warren County	1,763	43.22	442	73.98	2,205	49.39
Washington County	224	15.18	96	42.71	320	23.44
Wayne County	415	63.37	127	81.10	542	67.53
Webster County	292	28.77	88	84.09	380	41.58
West Point Ind.	27	37.04	—	—	34	44.12
Whitley County	654	23.09	201	38.31	855	26.67
Williamsburg Ind.	120	65.83	23	82.61	143	68.53
Williamstown Ind.	102	34.31	26	53.85	128	38.28
Wolfe County	167	N/A	67	N/A	234	N/A
Woodford County	364	41.76	124	63.71	488	47.34

	FRPL		IEP		Total Eligibility	
District	**# In K**	**% In P**	**# In K**	**% In P**	**# In K**	**% In P**
State average	482.73	33.07	126.38	60.37	609	39.20
State median	288.00	34.68	87.00	65.00	375	42.05
State total	83,513	31.68	21,864	62.43	105,377	38.06

Note: K = kindergarten; P = preschool; — = data are not reported pursuant to the Family Educational Rights and Privacy Act; N/A = no preschool program. When the number of students in a particular category is less than 10, the number and percentage are not reported.
Source: Kentucky Department of Education.

Appendix J
Percentage Of Students With Prior Setting Home Eligible For Preschool School Years 2015 To 2017

Source: Kentucky Department of Education.

Appendix K

Responses From The Members Of The National Technical Advisory Panel On Assessment And Accountability

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September 12, 2017

From: Ronald K. Hambleton, NTAPAA Consultant

To: Joshua Collins and Bart Liguori

Concerning: Brigance Screens III Review

I was pleased to accept the OEA request to review the Brigance Screens III for use in Kentucky to assist in kindergarten readiness determination of young children. I have been a university professor for 48 years, and teach graduate students about the review process for psychological tests according to national professional technical standards for educational and psychological tests. Perhaps I should add that the work was completed independently of other NTAPAA members and involved reading various memos from the two of you, the Brigance Screens III Technical Manual, and the News Release No. 17-102 on the topic of "Public Comment Sought on Every Student Succeeds Act Plan." I apologize for submitting my review late to you. Illness in my family has taken up most of my time for the past several weeks.

Technical Merits and Weaknesses of the B S III

In reviewing the B S III I was conscious of the OEA request: Determine the validity of the kindergarten readiness of 5 year olds using the B S III. I can say that many aspects of the Brigance are impressive: Developers of the instrument seem highly competent (I know some of the people, and I have considerable respect for Curriculum Associates); the Brigance, in some form, has been used for 40 years across the country (this seemed encouraging to me also); and I like the theoretical/conceptual basis for the instrument. At the same time, and this is Kentucky's primary interest, what is the published evidence to support validity of the scores for determining readiness for kindergarten? This question is not directly answered in the Technical Manual.

Here are my thoughts:

Procedural validity. When I learned about the relatively high percent of students being identified in Kentucky my first thought concerned the norming of the instrument. But after reading instructions for administering the instrument, I became concerned about the complexity of the administration of the instrument. I wondered what role/impact the administration of the Instrument might have. Administering tests to children ages 4 and 5, is always going to be challenging, but the pages of instructions seemed complicated to me (see p. 12, for example) and subsequent pages for administering the Instrument to special needs children. How much training did administrators receive, and did that administration include practice and feedback? I did like the "station method of screening" but wondered if it was used in Kentucky.

Let me comment now on specific validity evidence reported in chapter 9.

Test content validity. I thought the evidence for content validity was high. In the manual three studies, albeit dated (1984, 1985, and 1986), were cited. A more recent study (around 2012) was mentioned too, and I was impressed with the methods and findings. The details on the new instrument were extensive and highly supportive of the skills and content in the current version (see chapters 1 and 7 of the manual).

Construct validity based on internal structure. Here the goal is to see if the structure among subtest (domain) scores and total scores is consistent with the theory underlying the instrument. It was useful and very important too to see these results reported among "same aged peers." I'm not an expert with SEM analyses, but the results, more or less, seemed to support the three underlying domains in the model. I am less confident about the meaning of the second factor when the total score is a weighted sum of the domain scores but I don't think the second order factor is very useful here. (What I would have liked to see instead would be the correlation matrices for the three domains at each age group. The correlations too could have been adjusted for the levels of reliability among the domain scores.)

Validity evidence coming from DIF analyses. These types of analyses are an important source of validity evidence. Showing consistency of student performance for gender groups and ethnic groups at ability levels within an age group and across age groups is important, and there was little or no evidence of problems. Sample sizes though were not large, and so I think power to detect problematic items was not high. Still, I was happy to see the analyses.

Validity evidence coming from associations with other variables. The reported results are very encouraging, and lend support for the domain scores and total scores. Correlations were generally high when they should be (convergent validity evidence) and not so high when they were predicted to be low (discriminant validity). Correlations in Tables 9-5 to 9-8 show the findings. Many of the sample sizes for analyses are low (e.g, 70, 50, 42, 46, 25, and 23 for several of the studies). I did not feel that these correlations provide "strong validity" and as noted, not all of the correlations were what was expected. Still, the evidence was, for the most part, in the hypothesized directions at the various age groups.

Validity evidence from known groups. I very much like this kind of evidence. Sort students into binary disability groups (Yes and No) and then compare the subgroup performance on the domain and total scores. I like the analysis and it is often used in establishing the validity of psychological tests. Again, the evidence is encouraging. In nearly every comparison involving students with autism, speech/language impairment, developmental delay, and other sorts of impairments, BS III score differences were in the expected directions.

Summary of validity evidence. On page 85 of the technical manual the authors provided a summary of what they believed to be evidence to support to uses of the B S III:

--test content is supportive
--factor structure is as expected
--absence of DIF across gender and ethnic differences (at all age groups)

--correlations between B S III domain and total scores and other key psychological variables are as expected.

So, I agree with the authors of the technical manual that the evidence to support validity is substantial (I would not say "strong') and it does come from many different sources and that is highly desirable. At the same time, several shortcomings of the evidence for extension to Kentucky could be offered:

1. A sample size of 167 for norming, and other statistical analyses at the age group of interest is very small. I agree that the collection of evidence from all of the age groups is supportive of validity, and I was happy to read it all. But the bottom line is that a sample of 167 is potentially driving the classification for over 50,000 students from Kentucky and this does not seem acceptable to me.

2. Not all the evidence reported in chapter 9 is consistent with predictions, and little attention is given to those inconsistencies in the summary of validity results on page 85. Sampling errors were certainly a factor for some of the inconsistencies. Findings too were more about the directions of the findings rather than specific hypotheses that were being tested. These are weaker statements than might be desired.

3. None of the validity evidence, diverse as it was, addressed Kentucky's primary question: Is this a valid instrument for student classifications at the time of entry into kindergarten? In other words, where is the evidence for the validity of the instrument with respect to school readiness determination? I doubt that data from a small sample of students should be driving the cutoff score and norms for Kentucky. The total validity sample for the B S III may be representative of the country but who knows about the representativeness of the sample of students in one age group, and one age group in Kentucky?

Reliability evidence. Inter-rater reliability results, and internal consistency information from chapter 8 are useful information and positive. What I wanted to see was test-retest reliability results for age 4-5 and kindergarten results as this is the age group of interest in Kentucky but these results were not reported. I'm not sure why they were not reported.

Conclusions

Soliciting independent reviews of the technical merits of the B S III has considerable merit and I was pleased to be part of that review process. At the same time, following up with one or more validity studies carried out with the B S III and your own Kentucky data makes considerable sense to me. Validity evidence that will be specific to Kentucky students is ultimately how you should be making your final decision and, from my experience, such critically important studies as can be carried out with your own data.

Ultimately, the intention is to use the B S III for kindergarten entrance, but currently the instrument is administered but not used. Though perhaps not the intention, it is exactly the design that is needed to ultimately validate, in part at least, the instrument for use in Kentucky. The primary advantage is that both qualified and unqualified students are included in the sample

and a cutoff score can ultimately be chosen that best separated students into those qualified and those who were not qualified for entry into kindergarten. The one flaw in the design is the time these students had in kindergarten may have impacted the results. Is this possible—how long were students in school before the assessment was done? I did not take a look at the characteristics of the dataset (the available time allowed by the state for this review was very short), but it will be at least as valuable as any technical reviews of the technical manual as the data relates specifically to a relevant and large sample of Kentucky students.

In summary, I thought the evidence to support the construction of the instrument was strong and impressive. That this instrument has been around in some form for 40 years is impressive. The validity evidence is definitely supportive of the scores and their uses, but the truth is that the sample sizes are modest, in my judgment, and not all of the evidence is consistent with the theory. Still, the manual is fairly typical of many psychological instruments and technical manuals. For myself, I thought the norming for the age 4 to 5 group was problematic—samples are small as 167 is just not large enough to produce generalizable results.

Some Final Thoughts

1. I far exceeded the time allocated for this review task. The chapters (7 and 8) on the Standardization and Reliability of the Brigance scores require very special attention. Sample sizes are not very large, the representativeness of the samples needs to be checked against national statistics, and for each age group. Apparently smoothing was used to fix up the distributions. Here, again, I would like to know about the details. I think too that more attention should be given to these chapters with complex and critically important analyses. A lot is being done, and details on the work are not extensive.

2. In the manual many reasons are offered for low performance of students including poor test conditions, poor rapport of students and administrators, and problematic behavior of students. Before questioning the norms and cutoff scores because of the high failure rate in Kentucky, I would like to know more about the actual test administration process.

3. I should have gone to the Buros Mental Measurement Yearbooks to read any reviews of the Brigance Screens III. Had I written such a review, I would have been positive about the instrument but would have shared some concerns about the norming and cutoff score determinations. Perhaps, however, I should have read these sections of the manual more closely than I did.

4. I think it should be full-speed ahead with the analyses of the wonderful database from 50,000 Kentucky five year olds. Curriculum Associates may be willing to assist with the analyses since they too would benefit from the findings. Perhaps, for example, they might react to a proposed set of analyses or make suggestions for analyses.

My final thought: I think I would continue collecting data on the B S III but I would not use it until I could support a cutoff score based on evidence compiled in Kentucky. The instrument itself has considerable merit, but to date, I don't think there is sufficient evidence to support the

cutoff score. Keep in mind too that data collection lasting only 10 to 15 minutes should be supplemented with both teacher and parent data, and where necessary, perhaps the B S III should be readministered.

HARVARD
GRADUATE SCHOOL OF EDUCATION

DANIEL KORETZ
HENRY LEE SHATTUCK PROFESSOR OF EDUCATION

MEMO

To: Bart Liguori, Joshua Collins, Sabrina Olds, Albert Alexander, Chris Joffrion

Cc: Jim Pelligrino, Marianne Perie, Phoebe Winter, Ron Hambleton

From: Dan Koretz

Date: August 31, 2017

Subject: Comments on the use of the Brigance III

Given the time constraints, I have not been able to do a full review of the use of the Brigance for Kindergarten and special-needs screening in Kentucky. The Technical Manual, while reasonably thorough, does not include all of what I would want to evaluate, and in the short time available, I have located only two other relevant papers. However, I have studied the Brigance technical manual and reviewed two independent papers, and on that limited basis I will offer some comments, with the hope that this is early enough that others on the panel can respond if they choose to.

I'll first make some comments about the test and its documentation, and I will end with some suggestions about the use of the Brigance.

COMMENTS ON THE BRIGANCE AND DOCUMENTATION

Differences between the standardization sample and the Kentucky population

The memo OEA sent us notes that the Brigance standardization sample was different from the Kentucky population in terms of the percentage of students eligible for free- and reduced-price lunch (FRPL):

> The incidence of students qualifying for Free and Reduced-priced lunch (FRPL) was less than 40% in the sample. For Kentucky the incidence rate for FRPL was approximately 60% for all students.

The Brigance manual does not provide FRPL data. Rather, the variable they used counts students who were either eligible for FRPL or in a family receiving Medicaid. This must identify a higher percentage than a pure FRPL variable. The Brigance manual notes this on p.

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62, arguing that FRPL alone will result in an undercount of poverty because of refusals. However, I am aware of no data that allow one to quantify this overestimation.

However, it appears that this difference in sample composition accounts for only a modest amount of the difference in performance between Kentucky students and the Brigance standardization sample. I reweighted the 2017 Kentucky data using both the percentage given in the Brigance manual, 38.9%, and an assumed FRPL-only rate of 35%. The mean total scores using both percentages rounded to 66, compared with the mean of 62 in your data. This would increase the mean standardized score only from 86 to approximately 89. Of course, if the true FRPL rate in the Brigance sample were lower than 35%, the effect would be greater, but it would have to be much lower than the stated value to account for most of the difference in mean scores.

Reliability

The technical report does not provide a generalizability analysis, which would provide an overall estimate of reliability taking into account error from item sampling, inconsistency of student performance over time, and scoring. However, the facet-by-facet reliability coefficients are all high, suggesting that the overall reliability would be reasonable.

Validity

In my opinion, the validity evidence is incomplete and somewhat problematic.

The manual correctly notes that several types of evidence are pertinent, and it provides content-based evidence, evidence based on internal structure, discriminant-convergent evidence (which it incorrectly labels in places as "criterion-related" evidence), predictive evidence, and evidence bearing on fairness. All are important, but the most important for OEA's purposes is predictive evidence: how well do Brigance scores predict whether a student is ready for kindergarten or has special needs. This is because those are the primary inferences the test is used to support.

Convergent-discriminant evidence. This evaluates the correlations of Brigance scores with scores on other tests. Ideally, one would find strong correlations between tests of related domains and somewhat weaker correlations between tests of different domains. Because scores from different domains are often quite high, the differences in the strength of these correlations are often small.

Only a portion of the convergent-discriminant evidence provided in the manual is relevant to the OEA's questions because some reflects other age groups (e. g., the data for infants and toddlers in Table 9-5), and some includes five-year-olds in a wide age range (e.g., the correlations with Vineland-II scores in Table 9-6 on p. 88, which are based on a sample of only 46 children aged 36 to 95 months—and hence very few five-year-olds). Considering only the data that include five-year-olds, I would characterize the evidence as mixed. Some of the convergent correlations (between related domains) are not high, and some of the divergent correlations (between unrelated or less related domains) are comparably large. For example, consider table 9-6. The authors highlight two convergent correlations of 0.53 and 0.68, and

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they note in the text two divergent correlations that are very low (0.09 and 0.28). However, two other divergent correlations are comparable to one of the convergent correlations: the correlations between Brigance language development and Vineland Motor Skills and Daily Living Skills are 0.54 and 0.59, respectively.

Predictive evidence. Predictive evidence is the most important in this case, but this evidence is the least persuasive of any presented in the Technical Manual. It is not clearly identified; some is lumped together under criterion-related evidence, and some is in a separate chapter (10) on "accuracy."

One form of predictive evidence compares Brigance scores of students who have been classified by other means. (This is labeled "test-criterion validity evidence and appears on pp. 84 ff.) The logic is that, say, students identified as having developmental delays should have lower mean Brigance scores than other students. A total of 21 of these standardized mean differences are presented. About half of these mean differences are not statistically significant. All but four are less than one standard deviation, and 15 are less than 0.75 standard deviation. They range down to 0.11 standard deviation. What this means is that in most comparisons, the Brigance scores of identified and non-identified students overlap a great deal. This is not surprising, but it has important implications for the appropriate use of Brigance scores, which I will address in the next section.

A second form of predictive evidence, found in the Accuracy chapter, is data on sensitivity and specificity. Sensitivity is the proportion of true positives: the proportion of students who should be identified who are identified by the test. Specificity is true negatives: the proportion of students who should not be identified who are not identified by the test.

The sensitivity and specificity reported in Tables 10-1 and 10-2 are high, particularly for developmental delays: both roughly 0.9. As expected given the construction of the test, the figures for identified advanced development are considerably lower.

However, if I correctly understand the Technical Report (see pp. 88 ff.), these estimates are potentially misleading. They do not reflect the accuracy in predicting later developmental status. Rather, they simply estimate the consistency of Brigance results with the classifications from another, longer test. Moreover, these results are for fairly extreme cuts: the top decile, and the lowest-scoring students, ranging from the bottom decile to the bottom quintile. For any given correlation between measures, classification consistency increases as cut scores become more extreme. It isn't clear from this what degree of sensitivity and specificity the Brigance scores will show in predicting actual delays in Kentucky students.

CONCLCUSIONS AND RECOMMENDATIONS

The Technical Manual presents evidence that the Brigance can be useful in helping to reach decisions about special needs. However, some of the information presented—in particular, the large overlap in scores between identified and nonidentified students—makes it clear that Brigance scores taken alone are not sufficient for this purpose. It is axiomatic in measurement that consequential decisions about individuals should not be made based on a test score alone. The data in the Technical Manual simply make this concrete.

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The technical manual provides less information relevant to kindergarten screening. The evidence that would be most relevant, the sensitivity and specificity analysis in Chapter 10, appears not to be based on actual performance in kindergarten.

The Technical Manual does not offer guidance about how Brigance scores should be combined with other information about students. Moreover, it provides no information about the characteristics of students who are incorrectly classified by the test.

Making use of the Brigance would require addressing the large differences between Kentucky's experience and the identification rates reported in the Brigance Technical Report. It makes no sense to use the Brigance cuts and classify half of the students in Kentucky as having developmental delays.

I don't think it is practical to adjust the rates reported in the Technical Manual analytically to make them useful in the Kentucky population.

I would not simply re-set Brigance cut scores to obtain identification rates similar to those in the Technical Manual. Matching the manual should not be the goal. Rather, the goal should be helping to identify the right students. Moreover, simply re-setting cut scores will give you no information about the accuracy of the predictions based on Brigance scores.

The best way to decide how to use the Brigance, if at all, is to collect your own data. This would be both slower and more burdensome than simply setting new cut scores but will be more defensible and more useful for both educators and students. Specifically, I recommend that you administer the Brigance to a representative sample of Kentucky students, collect additional data about them to the extent feasible, and then collect data about their performance after school entry. A short-term longitudinal database of this sort would allow you to determine how much additional information the Brigance offers and how best to use scores in the Kentucky context.

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KU THE UNIVERSITY OF KANSAS
The Center for Assessment
& Accountability
Research & Design

To: Joshua Collins, Legislative Research Committee

Bart Liguori, Office of Education Accountability

From: Marianne Perie, Member of NTAPAA

CC: Phoebe Winter, Daniel Koretz, Ronald Hambleton, and Jim Pellegrino

Date: September 8, 2017

Re: Brigance Screener III

At the request of the legislative research committee, I have reviewed the technical documentation and data related to the Brigance Screener III. I have also reviewed the memos provided by my fellow advisory committee members, Phoebe Winter and Daniel Koretz. I agree with their comments and will not repeat them here.

We were asked to comment on the validity of the screener as used to assess kindergarten readiness and screen students with disabilities. Specifically, we were asked about the generalizability of the Brigance Screener to the Kentucky population. I will address the second request first.

I believe the sample of the Brigance Screener was intended to represent a national sample, not a sample specific to any particular state. That seems appropriate as most states do not want to know only how their students compare to other students in their state but to all students in the country. To me, the validity question is really examining how well the standardization sample represents the intended claims made about students in any state in the country.

Having said that, I believe the authors of the technical report overstate the adherence of the study sample to the national demographics. The data appear to over-represent white students in the northeast from urban areas with higher incomes. To the extent that the sample had a great proportion of students from all of these categories signals a more privileged sample. One breakdown the report does not give is census categories on communities. Suburban and urban students are grouped together and compared to

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rural students. Because it appears that cities such as New York, Chicago, and Los Angeles were included, care should have been taken to stratify the sample by the size of cities and separate those from towns and suburban areas. Given that Kentucky does not have a large city, I would be more comfortable with the sample if I knew what proportion of students in the sample came from such a locale.

The size of 1929 students with only 167 students used to standardize the age 5 Kindergarten test seems low, although the range of 107 sites across 33 states is strong. However, there is low internal consistency on two components: language development at 0.71 and reading readiness at 0.73. For the total test score the 95% confidence interval would be +/-5.88 points. Even with this interval, the mean score of 85 within Kentucky is well below the national mean of 100 and cannot be explained solely by error.

As far as the validity, I agree with my colleagues that the evidence for criterion and predictive validity is lacking. The content validity appears reasonable, and the measure includes the components similar to other Kindergarten readiness instruments I have reviewed. However, more evidence is needed showing that students performing at or above the "readiness cut score" succeed without additional supports. If the concern is that the cut may be high given the sample, there are variables that make validity evidence more difficult. Specifically, a student below the cut score would likely receive additional supports. If that student then succeeds, it is difficult to determine whether the success was due to the interventions of if the cut score was too high.

As far as the claim that this instrument may provide early identification of students with disabilities, I did not see sufficient evidence to support that claim. Again, the research behind the measures and the development of the instrument seems to support the claim; however, there is not sufficient criterion-related evidence to fully support this broad claim. What percentage of students who took this instrument and not identified were later determined to have a developmental disability? Conversely, what percentage of students who did not have a disability or were not developmentally delayed were identified by the instrument as having these conditions?

The majority of the validity evidence focused on either the total score or domain scores. Nothing I saw provided evidence of the interpretation. I would have liked to see

a chi-squared analysis of classification accuracy. I would ask for additional criterion evidence from Curriculum Associated and I would monitor the students performing just below the readiness cut score.

As an aside, I would avoid the classification “not ready” as it puts the onus on the child rather than the institution. Saying “may need additional supports” puts the focus back on the institution.

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TO: Joshua Collins, Bart Liguori, Ph.D.
Kentucky Legislative Research Commission
From: Phoebe Winter
CC: Ron Hambleton, Dan Koretz, Jim Pellegrino, Marianne Perry
NTAPAA
Date: August 31, 2017
Re: Review of and Comments on the Use of the *Brigance Screens III* as a Kindergarten Readiness Indicator in Kentucky

I reviewed Dan Koretz's memo and concur with his conclusions, particularly that Kentucky should set its own cut score for determining kindergarten readiness, if the *Brigance Screens III* continues to serve as a kindergarten readiness assessment. A judgmental process that is confirmed/refined by longitudinal data might be a reasonable approach (more information about the test itself and the uses of scores is needed before deciding on a standard-setting approach).

It is hard to determine whether using the *Brigance Screens III* as a kindergarten readiness assessment is appropriate. The technical manual states

> Results from administering the *BRIGANCE® Screens III* are used to (1) identify as early as possible children who may have developmental delays or disabilities as well as children who may have advanced development or giftedness so that any necessary referrals for further testing or special services can take place as soon as possible; (2) determine school readiness by assessing a child's mastery of those age-appropriate skills that prepare the child for the classroom and promote the child's future success; and (3) monitor progress over time by administering assessments as pretest and post-test evaluations. (page 2)

However, no specific information about its use as an indicator of readiness is given, nor is any information about the validity of its use as a readiness indicator provided. How Kentucky uses the results, the interpretations made about student performance based on scores, and the effects of scores on instructional planning and placement are some of the important factors that would go into deciding whether the use of *Brigance Screens III* scores as a screener is a valid one.

Given the issues I found after reviewing the technical manual, in conjunction with the issues Dan raised, the use of *Brigance Screens III* as a screener for special education services in Kentucky should be carefully reviewed. Again, what is done with the results of the assessment will contribute to the validity of its use (e.g., referral for further evaluation vs. placement into special education services), and the issue of potential over-identification needs to be examined.

I have added a few points below based on my analysis and have tried not to repeat Dan's observations/evaluations, which I agree with in the main. I found the technical report wanting, perhaps because I'm used to manuals produced for statewide achievement tests, which are much more

comprehensive than the *Brigance Screens III* manual. Like Dan, I would like to review other data. However, there is enough in the manual to allow me to make the above recommendations.

I also reviewed the *Buros MMY* evaluation of the test, and I can send a summary if you would like.

Brigance Screens III Cut Scores (for initial identification of students with developmental delay/disability)

The *Brigance Screens III* cut scores for identifying children with developmental delays or those who were at risk for academic difficulties were set by comparing scores on the *Brigance Screens III* with scores on a "broader" assessment, the *IED III Standardized*. Cut scores on the *Screens III* were set to meet specified criteria for false positives and false negatives. (The technical manual characterizes this as accuracy research, but it is actually standard setting.) The test developers used the entire standardization sample to determine the cuts and did not conduct a cross validation study, which I consider to be a serious flaw.

I looked for reports of other uses of the *Brigance Screens III* to see if results were similar to the standardization sample (quickly – not a serious literature search) and found that the Rochester Early Childhood Assessment Project used the *Screens III* and its "at risk" rules in 2014-2015 and 2015-16 to assess its incoming pre-K students[1]. In 2014-15, 36% of the students in the Rochester project were assessed as functioning below the normal range, and in 2015-16, 37% were found as functioning below the normal range. In the *Brigance Screens III* standardization sample, 29 (13%) of 230 4-year-olds were below the cut. While this is a different age group than used in Kentucky, the Rochester students, like Kentucky students, were classified into below normal range at a rate much higher than in the *Brigance Screens III* standardization sample.

Correspondence between _Brigance Screens III_ Standardization Sample and Kentucky Student Population

It is difficult to tell the degree to which the *Brigance Screens III* sample corresponds to the Kentucky student population in terms of demographics, because data describing the *Brigance Screens III* sample is collapsed across all ages (except for sex). On the next page is a comparison of the 2017 sample from the KYDE web site and the standardization sample, which should be interpreted taking this caveat into account.

- Kentucky likely has a higher number of white students than the standardization sample (even higher than shown, since the Brigance white category includes Latinx students).
- The discrepancy between FRPL is quite large, and is likely larger than it appears since the Brigance also includes students who are not in FRPL but receive Medicaid.

[1] Infurna, C.J., Hightower, A.D., Van Wagner, G., Strano, L., Lotyczewski, B.S., Montes, G., MacGowan, A., Smith, M., Dangler, P., Hooper, R., Lubecki, L., & Embt, K. (2015). Rochester Early Childhood Assessment Partnership 2014-2015 eighteenth annual report. Children's Institute Technical Report T15-010; Infurna, C.J., Hightower, A.D., Van Wagner, G., Strano, L., Lotyczewski, B.S., Montes, G., MacGowan, A., Dangler, P., Hooper, R., Boyle, R., Lubecki, L., Embt, K., & Breitung, D. (2016). Rochester Early Childhood Assessment Partnership 2015-2016 nineteenth annual report. Children's Institute Technical Report T17-001; https://www.childrensinstitute.net/research/early-childhood

Kentucky 2016-17

Code	District Name	Demographic	Number Tested	KY %	Screens III Kinder %		
999	State	All Students	46,582				
999	State	Male	23,856	51	52		
999	State	Female	22,726	49	49		
					Screens III		
				KY %	Full (all ages) Sample %		Brigance Notes
999	State	White (Non-Hispanic)	35,170	75.5	71.5		For the Brigance, Hispanic not separated out, likely included in white or African American
999	State	African American	4,855	10.4	12.5		
999	State	Hispanic	3,389	7.3		19.5	Latinx origin (independent of Brigance race category)
999	State	Asian	835	1.8	4.8		
999	State	American Indian or Alaska Native	72	0.2	0.5		
999	State	Native Hawaiian or Other Pacific Islander	58	0.1	1.2		
999	State	Two or more races	2,203	4.7	6.3		
999	State	Limited English Proficiency	2,951	6.3		10.7	Brigance languages other than English in home
999	State	Free Reduced Price Meals	29,805	64.0	38.9		Brigance is FRPL or Medicaid
999	State	Students with Disabilities	5,542	11.9		13.5	Brigance special ed/gifted services

3

Validity Evidence

In its discussion of "validity evidence based on association with other variables," the manual emphasizes convergent evidence, bolding evidence of convergent validity in tables 9-5 and 9-6. These correlations can be best interpreted by comparing them to the correlations between variables that one would expect to have weaker relationships than the relationships between converging variables. I have highlighted cells with correlations that would be expected to be less than the bolded correlations (i.e., provide evidence of divergent validity). In five out of six cases (the exception is Table 9-5, motor vs language development), these correlations are within the range of the correlations purporting to show evidence of convergent validity. While the positive associations among *like* variables is a necessary component of validation for this test, they should be interpreted in light of these other relationships. The correlations between the *Brigance Screens III* and intelligence tests and subtests are more in line with expectations (Tables 9-7 and 9-8). However, most of the validity and reliability data are analyzed for the full group of students, which could mask some grade-level/age-group-specific issues.

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Table 9-5. Correlations of *Screens III* Scores with the *BDI-2™* Domains

	Screens III Standardized Domains				
BDI-2	Physical Development	Language Development	Adaptive Behavior	Academic Skills/ Cognitive Development	Total Score
Infant/Toddler					
Motor	**0.68**	0.53	0.56	—	0.57
Communication	0.39	**0.42**	0.14	—	0.12
Cognitive	0.61	0.34	0.33	—	0.24
Adaptive	0.47	0.32	**0.47**	—	0.41
Personal-Social	0.48	0.26	0.22	—	0.13
Two years old and older					
Motor	**0.35**	0.15	—	0.33	0.45
Communication	0.51	**0.52**	—	**0.52**	0.44
Cognitive	0.55	0.46	—	**0.26**	0.56
Adaptive	0.47	0.55	—	0.19	0.37
Personal-Social	0.56	0.51	—	0.53	0.45

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Table 9-6. Correlations of *Screens III* Scores with the *Vineland™-II* Scores

	Screens III Scores		
Vineland-II	Physical Development	Language Development	Total Score
Motor Skills	**0.53**	0.54	0.51
Communication	0.48	**0.68**	0.45
Daily Living Skills	0.28	0.59	0.53
Socialization	0.09	0.43	0.52

4

Appendix L

Kindergarten Readiness By District
School Years 2015 To 2017

This table shows the percentage of all students and preschool students ready for kindergarten by school district and by FRPL and IEP status. For this table, FRPL students who also qualified for an IEP are counted as IEP students only.

	Percent Of Students Ready For Kindergarten					
	All Students		FRPL Students		IEP Students	
District	All	Pre.	All	Pre.	All	Pre.
Adair County	42.78%	39.77%	39.52%	39.56%	14.93%	17.02%
Allen County	40.41	—	38.08	—	16.48	—
Anchorage Ind.	87.76	—	—	—	—	—
Anderson County	52.98	52.29	46.40	52.04	37.78	41.75
Ashland Ind.	43.34	41.48	39.30	44.44	23.00	15.38
Augusta Ind.	42.59	44.44	40.00	46.67	36.36	40.00
Ballard County	58.80	66.22	53.66	66.67	29.73	47.06
Barbourville Ind.	65.07	80.65	59.57	73.53	54.55	75.00
Bardstown Ind.	61.39	66.10	61.88	71.15	30.69	32.53
Barren County	54.86	59.50	52.30	62.36	34.90	38.65
Bath County	38.98	42.50	35.25	38.24	16.67	26.67
Beechwood Ind.	75.21	37.04	41.86	29.41	27.27	—
Bell County	38.47	41.06	38.01	40.97	15.48	23.33
Bellevue Ind.	51.49	58.90	47.30	67.86	32.14	32.00
Berea Ind.	60.27	58.82	54.81	62.50	27.59	—
Boone County	58.65	42.23	40.74	42.04	36.10	36.63
Bourbon County	50.36	44.76	43.70	41.04	30.88	27.50
Bowling Green Ind.	55.78	39.53	44.12	42.25	22.62	20.75
Boyd County	54.87	52.63	48.99	58.33	45.87	—
Boyle County	58.62	57.96	48.84	57.39	37.36	32.84
Bracken County	46.42	40.70	46.62	45.45	21.28	28.57
Breathitt County	44.03	55.03	40.66	56.98	30.49	39.29
Breckinridge County	46.98	56.62	44.41	63.89	29.03	21.43
Bullitt County	50.09	42.62	39.82	46.17	28.06	28.72
Burgin Ind.	48.15	41.94	48.65	58.33	25.00	—
Butler County	46.83	51.81	37.99	47.37	34.15	39.58
Caldwell County	54.55	48.15	50.18	52.63	19.35	36.36
Calloway County	48.91	38.73	43.88	40.40	17.86	19.23
Campbell County	48.79	41.67	38.26	51.11	19.38	21.84
Campbellsville Ind.	37.04	53.49	34.30	55.93	21.88	37.50
Carlisle County	62.24	63.16	57.81	59.38	39.29	40.74
Carroll County	39.52	38.10	31.48	60.00	12.00	—
Carter County	53.24	70.02	48.26	66.02	32.5%	50.75
Caverna Ind.	43.64	50.54	50.45	61.82	23.08	26.67
Casey County	40.29	41.04	37.38	45.88	21.52	26.83

	Percent Of Students Ready For Kindergarten					
	All Students		FRPL Students		IEP Students	
District	All	Pre.	All	Pre.	All	Pre.
Christian County	46.86	45.57	43.65	49.25	23.28	23.21
Clark County	61.78	60.64	57.14	66.04	40.88	44.53
Clay County	30.60	53.56	25.15	50.57	28.40	42.27
Clinton County	37.46	47.37	39.13	51.28	13.24	16.67
Cloverport Ind.	55.41	61.22	46.43	50.00	45.45	—
Corbin Ind.	50.80	56.08	39.71	42.86	32.76	42.31
Covington Ind.	42.78	45.39	42.38	48.93	32.20	33.33
Crittenden County	48.26	55.07	37.01	46.05	32.00	42.11
Cumberland County	38.31	—	38.71	—	11.90	—
Danville Ind.	37.44	28.57	31.82	30.85	13.11	8.33
Daviess County	54.31	50.06	45.19	48.45	33.89	34.00
Dawson Springs Ind.	40.94	28.07	37.50	28.13	22.22	15.79
Dayton Ind.	44.08	57.69	43.17	64.10	31.82	39.13
East Bernstadt Ind.	52.69	53.13	48.86	57.41	38.71	34.48
Edmonson County	52.02	55.36	44.20	64.52	29.31	26.67
Elizabethtown Ind.	52.07	44.19	41.06	40.38	29.63	31.82
Elliott County	37.39	—	36.08	—	13.64	—
Eminence Ind.	53.75	45.61	42.68	51.35	20.00	27.27
Erlanger-Elsmere Ind.	40.58	29.57	34.86	36.11	12.50	9.09
Estill County	53.85	50.00	52.43	—	46.03	—
Fairview Ind.	39.74	40.48	36.52	40.98	9.09	—
Fayette County	52.53	35.81	36.94	38.71	27.36	23.23
Fleming County	45.70	42.86	38.66	47.37	13.95	—
Floyd County	53.49	66.28	51.03	70.29	45.95	50.00
Fort Thomas Ind.	79.06	54.10	64.29	58.82	41.18	33.33
Frankfort Ind.	50.3	54.05	44.00	55.26	23.08	30.00
Franklin County	47.86	39.94	37.81	43.93	25.33	26.67
Fulton County	49.61	50.00	51.39	55.56	36.84	41.18
Fulton Ind.	58.00	57.14	54.05	—	70.00	—
Gallatin County	42.02	38.71	38.31	41.51	26.67	19.35
Garrard County	48.70	50.00	45.68	58.46	25.81	20.83
Glasgow Ind.	53.01	58.22	48.03	56.65	42.86	44.71
Grant County	45.41	45.99	40.20	49.68	27.27	31.82
Graves County	67.43	68.00	61.29	60.38	60.98	66.67
Grayson County	41.07	42.07	35.42	44.83	29.81	31.30
Green County	54.57	59.65	51.74	54.55	21.82	30.00
Greenup County	57.48	72.34	54.86	69.51	35.71	50.00
Hancock County	47.20	37.00	38.57	43.48	19.15	13.33
Hardin County	49.91	40.91	45.16	46.75	32.93	20.59
Harlan County	40.00	46.79	42.00	53.64	18.59	21.21
Graves County	55.92	62.16	50.52	57.81	45.83	50.00
Harrison County	49.38	48.29	43.67	48.39	23.94	18.92
Hart County	43.36	52.63	39.29	51.19	31.86	38.10
Hazard Ind.	56.40	56.52	51.20	55.56	28.57	—
Henderson County	52.69	49.69	46.21	51.13	27.35	26.01

	Percent Of Students Ready For Kindergarten					
	All Students		FRPL Students		IEP Students	
District	All	Pre.	All	Pre.	All	Pre.
Henry County	55.85	56.63	49.28	60.19	31.43	32.76
Hickman County	68.09	70.00	70.37	75.86	43.75	45.71
Hopkins County	59.97	51.21	57.17	61.17	36.33	36.21
Jackson County	47.94	59.64	47.27	58.54	29.07	34.29
Jackson Ind.	42.31	42.86	32.00	40.00	—	—
Jefferson County	50.44	50.42	42.83	54.70	27.51	25.27
Jenkins Ind.	28.24	51.28	30.77	68.00	8.33	—
Jessamine County	47.96	48.11	39.24	48.73	28.72	30.95
Johnson County	43.54	34.92	35.63	32.50	19.40	22.22
Kenton County	53.81	34.07	39.18	36.20	25.62	26.89
Knott County	37.96	46.15	36.63	44.90	26.79	33.33
Knox County	35.09	56.15	31.42	50.00	16.25	30.30
LaRue County	44.47	33.00	38.20	37.50	28.77	24.39
Laurel County	43.05	53.42	35.46	57.19	37.76	42.74
Lawrence County	47.57	55.21	43.85	55.81	32.81	37.00
Lee County	30.43	N/A	29.11	N/A	0.00	N/A
Leslie County	48.08	56.25	45.42	58.33	26.83	—
Letcher County	43.92	72.64	38.27	71.43	36.76	63.41
Lewis County	44.49	52.52	42.56	47.76	37.36	45.00
Lincoln County	42.32	48.91	40.93	54.00	26.74	21.74
Livingston County	46.80	40.35	44.93	39.39	21.62	20.00
Logan County	47.16	41.84	42.54	45.83	22.96	22.64
Ludlow Ind.	47.02	58.33	40.00	58.62	32.26	50.00
Lyon County	49.00	37.93	38.10	41.03	8.33	—
Madison County	51.51	41.58	43.51	48.41	26.58	23.98
Magoffin County	48.50	72.73	47.59	—	34.21	—
Marion County	55.99	54.46	56.28	65.08	35.77	37.70
Marshall County	55.59	40.00	46.09	40.66	19.12	25.00
Martin County	41.09	53.08	41.96	56.25	27.72	39.47
Mason County	46.82	44.02	42.67	41.86	29.37	34.57
Mayfield Ind.	50.21	—	50.17	—	34.96	—
McCracken County	61.77	49.60	50.08	52.63	39.51	36.00
McCreary County	40.00	38.83	40.21	40.00	30.59	32.56
McLean County	35.24	26.32	29.11	29.17	18.18	15.38
Meade County	44.50	44.77	38.62	42.29	28.47	29.35
Menifee County	34.36	—	36.36	—	16.13	—
Mercer County	45.27	31.62	40.12	29.51	28.07	23.40
Metcalfe County	50.01	55.36	47.62	50.34	38.98	47.83
Middlesboro Ind.	40.93	44.44	35.50	—	38.46	—
Monroe County	59.38	57.06	59.17	62.73	37.88	39.62
Montgomery County	49.90	54.08	46.11	57.78	29.25	33.33
Morgan County	33.74	36.96	27.27	39.68	24.53	20.00
Muhlenberg County	46.93	44.69	44.57	53.61	26.82	29.31
Murray Ind.	64.90	45.45	54.09	—	40.82	—
Nelson County	54.52	52.55	48.74	53.75	33.33	30.36

	Percent Of Students Ready For Kindergarten					
	All Students		FRPL Students		IEP Students	
District	All	Pre.	All	Pre.	All	Pre.
Newport Ind.	41.11	39.06	41.09	41.35	26.00	29.17
Nicholas County	40.09	—	31.62	—	25.71	—
Ohio County	42.96	40.47	38.63	42.38	24.30	27.42
Oldham County	67.32	38.32	42.30	39.66	29.45	21.05
Owen County	64.41	65.93	58.85	69.09	45.00	50.00
Owensboro Ind.	40.81	36.24	36.67	36.32	23.78	24.19
Owsley County	45.51	70.00	47.93	—	5.00	—
Paducah Ind.	49.86	53.33	48.11	57.41	9.23	16.67
Paintsville Ind.	58.79	—	47.19	25.00	41.18	—
Paris Ind.	28.14	25.53	20.87	—	16.67	13.33
Pendleton County	43.42	41.52	42.38	50.65	27.66	26.47
Perry County	45.29	53.73	42.03	53.67	33.77	36.36
Pike County	45.92	57.42	43.26	56.77	30.30	34.15
Pikeville Ind.	73.40	76.00	58.33	64.29	66.67	69.23
Pineville Ind.	40.38	53.85	41.27	—	15.79	—
Powell County	27.89	22.52	25.59	31.75	18.27	9.52
Pulaski County	43.25	42.66	37.42	44.89	21.61	22.80
Raceland-Worthington Ind.	54.55	60.87	41.58	48.72	55.56	—
Robertson County	57.58	75.00	50.00	—	40.00	—
Rockcastle County	41.54	38.51	39.10	39.76	23.68	18.75
Rowan County	43.59	44.38	38.53	45.19	20.27	18.03
Russell County	40.62	38.03	37.23	41.45	19.23	17.65
Russell Ind.	67.91	49.46	60.21	65.22	29.82	25.00
Russellville Ind.	45.58	54.29	45.14	54.29	38.46	44.00
Science Hill Ind.	59.38	60.47	56.60	60.00	35.29	41.67
Scott County	48.59	33.58	32.38	34.26	27.46	25.62
Shelby County	56.10	40.43	46.35	47.93	24.04	20.51
Silver Grove Ind.	53.06	68.75	56.67	—	—	—
Simpson County	48.73	42.86	43.84	46.15	36.96	35.14
Somerset Ind.	45.00	41.67	43.32	39.29	26.23	28.57
Southgate Ind.	43.40	40.00	42.42	35.71	—	—
Spencer County	51.33	50.00	40.51	44.93	36.36	42.22
Taylor County	50.52	51.19	45.55	55.08	18.18	20.00
Todd County	41.99	40.57	35.75	35.51	19.51	17.57
Trigg County	43.73	38.96	39.15	43.14	21.95	17.65
Trimble County	48.71	72.22	43.95	—	18.18	—
Union County	51.07	49.02	49.34	55.56	16.95	9.09
Walton-Verona Ind.	59.08	56.82	48.60	60.00	37.74	46.67
Warren County	52.43	41.03	43.50	40.61	30.14	30.84
Washington County	43.03	53.33	41.11	54.39	26.47	27.91
Wayne County	43.18	47.74	41.22	47.40	23.53	26.21
Webster County	43.35	42.05	35.44	41.86	34.67	40.00
West Point Ind.	51.22	55.56	43.48	38.46	—	—
Whitley County	47.90	51.63	47.79	53.19	28.57	23.26
Williamsburg Ind.	47.80	51.32	46.43	50.00	30.43	25.00

	Percent Of Students Ready For Kindergarten					
	All Students		FRPL Students		IEP Students	
District	All	Pre.	All	Pre.	All	Pre.
Williamstown Ind.	54.49	38.46	46.32	36.36	23.53	27.27
Wolfe County*	34.51	N/A	32.70	N/A	17.86	N/A
Woodford County	51.02	37.93	36.66	34.31	24.51	23.21
State	50.04%	48.11%	42.36%	50.04%	29.34%	30.37%

Note: FRPL= free or reduced price lunch; IEP= individualized education program; — = data are not reported pursuant to the Family Educational Rights and Privacy Act; N/A = no preschool program. When the number of students in a particular category is less than 10, the number and percentage are not reported.
Source: OEA analysis of data from the Kentucky Department of Education.

Appendix M

General Assembly Cost For Full-Day Kindergarten, FY 2017

District	SEEK Base + Add-Ons	Tier I	Capital Outlay	FSPK	Total SEEK
Adair County	$377,796	$66,522	$9,490	$37,154	$490,962
Allen County	432,341	77,056	10,860	664,663	1,184,920
Anchorage Ind.	61,996	0	1,558	0	63,554
Anderson County	437,822	79,322	10,998	538,977	1,067,119
Ashland Ind.	469,929	83,090	11,804	671,383	1,236,206
Augusta Ind.	27,675	4,555	695	2,721	35,646
Ballard County	177,322	34,237	4,454	159,491	375,504
Barbourville Ind.	90,412	14,299	2,272	8,892	115,875
Bardstown Ind.	402,627	78,221	10,114	374,863	865,825
Barren County	665,312	116,044	16,712	1,041,136	1,839,204
Bath County	278,897	47,485	7,006	539,151	872,539
Beechwood Ind.	170,932	27,768	4,294	222,413	425,407
Bell County	373,366	64,334	9,379	744,178	1,191,257
Bellevue Ind.	87,470	15,997	2,198	8,602	114,267
Berea Ind.	134,813	22,813	3,386	295,631	456,643
Boone County	2,561,929	510,159	64,354	1,068,270	4,204,712
Bourbon County	400,664	73,498	10,064	39,402	523,628
Bowling Green Ind.	586,314	104,060	14,728	873,389	1,578,491
Boyd County	460,129	89,109	11,559	433,615	994,412
Boyle County	345,320	67,437	8,674	131,998	553,429
Bracken County	167,126	31,198	4,198	237,062	439,584
Breathitt County	278,901	49,694	7,006	27,427	363,028
Breckinridge County	404,215	75,297	10,154	146,421	636,087
Bullitt County	1,712,853	319,779	43,025	1,868,626	3,944,283
Burgin Ind.	78,875	14,247	1,981	67,782	162,885
Butler County	252,761	43,223	6,349	24,857	327,190
Caldwell County	268,582	46,739	6,746	26,413	348,480
Calloway County	407,706	81,550	10,242	40,095	539,593
Campbell County	695,751	0	17,477	0	713,228
Campbellsville Ind.	225,106	41,782	5,654	71,740	344,282
Carlisle County	69,409	12,858	1,743	135,414	219,424
Carroll County	304,128	55,348	7,640	29,909	397,025
Carter County	631,009	108,027	15,850	1,197,819	1,952,705
Casey County	324,364	57,565	8,148	31,898	421,975
Caverna Ind.	112,785	22,879	2,833	11,092	149,589
Christian County	1,372,485	258,064	34,475	134,974	1,799,998
Clark County	628,424	122,886	15,786	557,163	1,324,259
Clay County	489,707	82,539	12,301	48,159	632,706
Clinton County	206,881	36,635	5,197	20,345	269,058
Cloverport Ind.	41,542	6,545	1,044	4,085	53,216
Corbin Independent	346,036	55,680	8,692	843,072	1,253,480

District	SEEK Base + Add-Ons	Tier I	Capital Outlay	FSPK	Total SEEK
Covington Ind.	709,956	134,530	17,834	69,819	932,139
Crittenden County	203,601	37,112	5,115	20,022	265,850
Cumberland County	139,307	26,468	3,499	169,836	339,110
Danville Ind.	294,104	54,837	7,388	87,466	443,795
Daviess County	1,493,922	281,397	37,526	1,591,166	3,404,011
Dawson Springs Ind.	110,424	17,454	2,774	10,859	141,511
Dayton Ind.	137,309	22,814	3,450	13,503	177,076
East Bernstadt Ind.	105,070	16,848	2,640	186,914	311,472
Edmonson County	260,779	47,504	6,551	25,645	340,479
Elizabethtown Ind.	286,047	48,928	7,185	541,449	883,609
Elliott County	149,499	25,720	3,755	14,702	193,676
Eminence Ind.	113,884	18,325	2,861	258,026	393,096
Erlanger-Elsmere Ind.	390,974	67,462	9,821	38,449	506,706
Estill County	306,900	52,273	7,709	30,182	397,064
Fairview Ind.	94,525	15,689	2,375	199,780	312,369
Fayette County	6,314,623	361,543	158,619	176,833	7,011,618
Fleming County	329,150	58,466	8,268	528,792	924,676
Floyd County	1,011,859	191,938	25,418	1,174,364	2,403,579
Fort Thomas Ind.	350,459	55,462	8,803	514,645	929,369
Frankfort Ind.	103,912	17,970	2,610	10,219	134,711
Franklin County	898,970	172,757	22,582	663,883	1,758,192
Fulton County	79,134	15,149	1,988	7,783	104,054
Fulton Ind.	53,158	9,318	1,335	5,228	69,039
Gallatin County	216,956	39,077	5,450	607,480	868,963
Garrard County	389,752	69,466	9,791	547,423	1,016,432
Glasgow Ind.	332,005	58,382	8,340	488,491	887,218
Grant County	474,782	84,169	11,926	869,985	1,440,862
Graves County	603,293	110,334	15,155	59,329	788,111
Grayson County	535,537	95,152	13,453	52,665	696,807
Green County	208,310	36,527	5,232	391,159	641,228
Greenup County	410,328	73,718	10,307	40,353	534,706
Hancock County	233,680	44,136	5,870	22,981	306,667
Hardin County	1,942,525	372,429	48,795	2,206,041	4,569,790
Harlan County	524,684	94,935	13,180	51,598	684,397
Harlan Ind.	94,331	15,341	2,369	58,408	170,449
Harrison County	397,427	71,822	9,983	39,084	518,316
Hart County	348,932	62,830	8,765	157,057	577,584
Hazard Ind.	132,807	22,292	3,336	253,965	412,400
Henderson County	961,603	177,314	24,155	385,601	1,548,673
Henry County	273,371	48,651	6,867	444,913	773,802
Hickman County	84,393	16,931	2,120	8,300	111,744
Hopkins County	986,089	186,536	24,770	96,974	1,294,369
Jackson County	354,878	62,075	8,914	607,010	1,032,877
Jackson Ind.	39,050	6,164	981	3,840	50,035
Jefferson County	14,317,508	549,755	359,646	253,271	15,480,180
Jenkins Ind.	66,135	11,256	1,661	6,504	85,556

District	SEEK Base + Add-Ons	Tier I	Capital Outlay	FSPK	Total SEEK
Jessamine County	1,217,617	236,896	30,586	940,579	2,425,678
Johnson County	432,372	75,461	10,861	260,109	778,803
Kenton County	2,005,560	400,224	50,378	1,108,510	3,564,672
Knott County	344,798	70,407	8,661	33,908	457,774
Knox County	688,112	120,925	17,285	67,670	893,992
LaRue County	263,371	47,401	6,616	25,901	343,289
Laurel County	1,189,961	215,558	29,891	1,853,915	3,289,325
Lawrence County	377,454	69,631	9,481	37,120	493,686
Lee County	156,370	28,260	3,928	15,377	203,935
Leslie County	236,113	43,968	5,931	357,705	643,717
Letcher County	452,131	86,900	11,358	44,464	594,853
Lewis County	272,666	49,875	6,849	158,341	487,731
Lincoln County	482,732	85,579	12,126	47,473	627,910
Livingston County	177,544	32,886	4,460	15,036	229,926
Logan County	463,046	83,618	11,631	205,394	763,689
Ludlow Ind.	87,284	14,608	2,193	8,584	112,669
Lyon County	119,254	0	2,996	0	122,250
Madison County	1,548,470	283,950	38,896	1,837,015	3,708,331
Magoffin County	270,195	46,698	6,787	571,833	895,513
Marion County	398,566	73,282	10,012	39,196	521,056
Marshall County	653,549	121,064	16,417	618,457	1,409,487
Martin County	272,169	48,749	6,837	452,747	780,502
Mason County	340,160	67,374	8,545	33,452	449,531
Mayfield Ind.	293,850	48,491	7,382	507,896	857,619
McCracken County	1,046,522	196,986	26,288	734,039	2,003,835
McCreary County	424,594	72,546	10,666	41,756	549,562
McLean County	222,845	40,208	5,597	21,915	290,565
Meade County	592,990	105,372	14,895	2,075,516	2,788,773
Menifee County	158,787	26,603	3,989	15,615	204,994
Mercer County	364,421	70,565	9,154	415,594	859,734
Metcalfe County	218,115	38,146	5,478	370,876	632,615
Middlesboro Ind.	126,874	23,949	3,187	12,477	166,487
Monroe County	220,882	37,818	5,548	467,872	732,120
Montgomery County	649,647	118,071	16,318	1,003,070	1,787,106
Morgan County	275,780	47,051	6,928	156,827	486,586
Muhlenberg County	660,877	117,878	16,601	64,993	860,349
Murray Ind.	247,941	41,307	6,228	369,026	664,502
Nelson County	603,703	114,740	15,165	542,972	1,276,580
Newport Ind.	323,190	60,523	8,119	31,783	423,615
Nicholas County	160,808	27,568	4,039	272,080	464,495
Ohio County	623,943	108,685	15,673	61,360	809,661
Oldham County	1,573,174	290,167	39,517	3,059,374	4,962,232
Owen County	231,957	42,504	5,827	715,389	995,677
Owensboro Ind.	774,404	135,794	19,453	76,157	1,005,808
Owsley County	104,664	17,638	2,629	10,293	135,224
Paducah Ind.	523,983	93,847	13,162	581,277	1,212,269

District	SEEK Base + Add-Ons	Tier I	Capital Outlay	FSPK	Total SEEK
Paintsville Ind.	111,938	18,703	2,812	176,873	310,326
Paris Ind.	135,819	24,100	3,412	13,357	176,688
Pendleton County	327,489	59,049	8,226	552,775	947,539
Perry County	556,153	107,167	13,970	749,537	1,426,827
Pike County	1,157,161	207,914	29,067	1,867,273	3,261,415
Pikeville Ind.	176,008	31,770	4,422	17,309	229,509
Pineville Ind.	81,809	13,037	2,055	170,023	266,924
Powell County	285,693	49,044	7,177	28,096	370,010
Pulaski County	1,191,636	217,969	29,933	117,188	1,556,726
Raceland-Worthington Ind.	144,498	23,371	3,630	83,857	255,356
Robertson County	64,532	11,202	1,621	99,472	176,827
Rockcastle County	343,194	58,496	8,621	33,750	444,061
Rowan County	475,901	86,374	11,954	552,873	1,127,102
Russell County	546,528	99,565	13,728	585,929	1,245,750
Russell Ind.	348,110	61,095	8,744	34,234	452,183
Russellville Ind.	134,514	23,682	3,379	245,737	407,312
Science Hill Ind.	71,137	11,990	1,787	107,689	192,603
Scott County	1,192,233	226,109	29,948	1,079,129	2,527,419
Shelby County	916,813	180,620	23,030	755,995	1,876,458
Silver Grove Ind.	27,349	5,464	687	2,690	36,190
Simpson County	393,127	74,773	9,875	38,661	516,436
Somerset Ind.	193,409	35,304	4,858	232,117	465,688
Southgate Ind.	46,625	8,846	1,172	4,585	61,228
Spencer County	393,828	73,747	9,892	481,124	958,591
Taylor County	292,273	52,173	7,341	518,783	870,570
Todd County	243,728	44,160	6,123	435,232	729,243
Trigg County	258,374	48,765	6,490	25,409	339,038
Trimble County	177,306	32,687	4,454	17,437	231,884
Union County	273,045	53,543	6,859	26,852	360,299
Walton-Verona Ind.	190,786	32,569	4,792	350,799	578,946
Warren County	2,216,665	422,047	55,681	1,730,829	4,425,222
Washington County	251,862	47,109	6,326	318,915	624,212
Wayne County	403,522	72,074	10,136	39,684	525,416
Webster County	355,360	63,742	8,927	34,947	462,976
West Point Ind.*	(26,099)	(4,465)	(656)	(2,567)	(33,787)
Whitley County	620,064	107,676	15,576	60,979	804,295
Williamsburg Ind.	86,173	14,540	2,165	58,498	161,376
Williamstown Ind.	116,392	19,139	2,924	234,597	373,052
Wolfe County	177,879	40,079	4,469	17,493	239,920
Woodford County	492,296	94,968	12,366	258,712	858,342
Total	$93,746,229	$14,187,765	$2,354,853	$59,870,094	$170,158,941

Note: Numbers are rounded to the nearest dollar. SEEK = Support Education Excellence in Kentucky; FSPK = Facilities Support Program of Kentucky equalization.
*West Point Independent has declining enrollment over the past 2 years, thus the reduction in SEEK.
Source: Kentucky Department of Education.

Appendix N

District Kindergarten Expenses By Source, FY 2016

District	General Fund	State Grants	Federal Grants	Total Expenditures
Adair County	$557,077	$0	$0	$557,077
Allen County	639,337	0	61,136	700,473
Anchorage Ind.	194,677	0	0	194,677
Anderson County	935,916	52,180	157,540	1,145,636
Ashland Ind.	1,170,000	0	95,800	1,265,800
Augusta Ind.	72,098	0	1,959	74,057
Ballard County	279,780	0	58,892	338,672
Barbourville Ind.	67,793	0	70,919	138,712
Bardstown Ind.	545,716	0	473,728	1,019,445
Barren County	1,081,765	0	0	1,081,765
Bath County	661,357	0	0	661,357
Beechwood Ind.	151,930	0	1,200	153,130
Bell County	700,068	0	123,726	823,794
Bellevue Ind.	215,101	0	0	215,101
Berea Ind.	220,273	0	171,807	392,080
Boone County	3,163,000	0	0	3,163,000
Bourbon County	575,056	0	0	575,056
Bowling Green Ind.	7,645,872	0	0	7,645,872
Boyd County	655,400	0	0	655,400
Boyle County	487,063	22,499	36,928	546,490
Bracken County	388,588	0	0	388,588
Breathitt County	—	—	—	—
Breckinridge County	764,949	0	71,824	836,773
Bullitt County	2,555,708	0	0	2,555,708
Burgin Ind.	106,050	0	38,704	144,754
Butler County	709,427	0	23,052	732,479
Caldwell County	369,142	0	37,399	406,540
Calloway County	711,880	0	0	711,880
Campbell County	847,321	0	45,030	892,351
Campbellsville Ind.	323,875	0	0	323,875
Carlisle County	96,001	0	65,741	161,742
Carroll County	738,503	0	0	738,503
Carter County	820,265	0	160,581	980,846
Casey County	429,083	207,195	29,654	665,932
Caverna Ind.	101,907	0	165,357	267,263
Christian County	1,163,205	0	1,101,920	2,265,124
Clark County	—	—	—	—
Clay County	654,562	0	176,031	830,594
Clinton County	623,032	0	47,162	670,194
Cloverport Ind.	35,754	0	18,230	53,984
Corbin Ind.	484,119	0	0	484,119
Covington Ind.	1,721,716	0	188,983	1,910,699

District	General Fund	State Grants	Federal Grants	Total Expenditures
Crittenden County	308,772	0	36,962	345,734
Cumberland County	230,995	0	63,125	294,119
Danville Ind.	442,439	0	0	442,439
Daviess County	3,517,593	0	0	3,517,593
Dawson Springs Ind.	118,467	0	24,656	143,123
Dayton Ind.	295,709	0	0	295,709
East Bernstadt Ind.	135,235	0	0	135,235
Edmonson County	683,406	2,422	9,444	695,272
Elizabethtown Ind.	843,414	0	52,793	896,207
Elliott County	251,841	17,220	0	269,061
Eminence Ind.	160,560	0	0	160,560
Erlanger-Elsmere Ind.	487,086	0	0	487,086
Estill County	1,063,000	103,000	0	1,166,000
Fairview Ind.	136,256	0	0	136,256
Fayette County	17,246,139	0	2,305,165	19,551,304
Fleming County	514,000	0	0	514,000
Floyd County	1,292,590	2,160	546,869	1,841,620
Fort Thomas Ind.	804,145	0	26,400	830,545
Frankfort Ind.	185,425	0	0	185,425
Franklin County	1,697,505	0	0	1,697,505
Fulton County	165,011	0	0	165,011
Fulton Ind.	106,652	0	0	106,652
Gallatin County	421,000	0	0	421,000
Garrard County	—	—	—	—
Glasgow Ind.	446,902	0	165,704	612,607
Grant County	797,787	0	0	797,787
Graves County	1,035,275	0	192,545	1,227,820
Grayson County	1,156,926	0	107,235	1,264,161
Green County	404,128	0	46,496	450,624
Greenup County	589,118	0	105,168	694,286
Hancock County	—	—	—	—
Hardin County	4,008,573	0	608,850	4,617,424
Harlan County	943,855	0	0	943,855
Harlan Ind.	232,360	0	1,380	233,740
Harrison County	487,404	0	147,422	634,826
Hart County	620,635	0	85,548	706,183
Hazard Ind.	204,705	0	20,422	225,127
Henderson County	1,965,630	0	0	1,965,630
Henry County	373,769	0	291,917	665,686
Hickman County	161,934	0	63,291	225,225
Hopkins County	1,701,566	0	0	1,701,566
Jackson County	382,708	0	0	382,708
Jackson Ind.	—	—	—	—
Jefferson County	29,355,414	0	0	29,355,414
Jenkins Ind.	133,682	0	0	133,682
Jessamine County	2,801,707	30,197	296,765	3,128,669
Johnson County	732,267	0	0	732,267

District	General Fund	State Grants	Federal Grants	Total Expenditures
Kenton County	1,827,474	57,183	0	1,884,658
Knott County	521,555	0	436,443	957,998
Knox County	1,152,072	0	0	1,152,072
LaRue County	707,180	0	11,572	718,752
Laurel County	1,844,868	0	0	1,844,868
Lawrence County	503,444	0	90,270	593,714
Lee County	147,665	0	47,442	195,106
Leslie County	422,778	0	179,214	601,992
Letcher County	819,053	0	0	819,053
Lewis County	690,708	0	242,743	933,450
Lincoln County	—	—	—	—
Livingston County	204,350	0	66,295	270,645
Logan County	808,765	0	100,267	909,032
Ludlow Ind.	81,129	0	23,218	104,347
Lyon County	228,584	0	0	228,584
Madison County	1,390,827	89,500	168,513	1,648,840
Magoffin County	383,895	0	166,929	550,824
Marion County	—	—	—	—
Marshall County	1,203,153	0	157,422	1,360,575
Martin County	617,921	0	0	617,921
Mason County	742,099	0	0	742,099
Mayfield Ind.	463,971	0	126,969	590,940
McCracken County	2,211,403	0	0	2,211,403
McCreary County	807,573	0	156,922	964,495
McLean County	376,660	0	6,933	383,593
Meade County	1,058,776	0	0	1,058,776
Menifee County	216,042	0	0	216,042
Mercer County	839,200	0	164,000	1,003,200
Metcalfe County	309,906	0	50,564	360,470
Middlesboro Ind.	245,204	0	0	245,204
Monroe County	348,025	0	50,029	398,054
Montgomery County	1,501,497	0	67,950	1,569,446
Morgan County	606,527	0	102,997	709,524
Muhlenberg County	—	—	—	—
Murray Ind.	379,427	0	60,704	440,131
Nelson County	890,000	0	0	890,000
Newport Ind.	543,216	0	0	543,216
Nicholas County	229,258	0	0	229,258
Ohio County	1,141,411	0	134,975	1,276,386
Oldham County	2,570,884	0	0	2,570,884
Owen County	544,054	0	46,713	590,767
Owensboro Ind.	1,183,682	0	64,252	1,247,934
Owsley County	211,250	0	0	211,250
Paducah Ind.	626,095	0	590,691	1,216,786
Paintsville Ind.	218,368	0	10,516	228,884
Paris Ind.	179,126	0	0	179,126
Pendleton County	389,738	0	7,474	397,212

District	General Fund	State Grants	Federal Grants	Total Expenditures
Perry County	—	—	—	—
Pike County	13,076,959	0	414,848	13,491,807
Pikeville Ind.	305,275	0	43,284	348,560
Pineville Ind.	132,536	0	0	132,536
Powell County	737,902	0	63,243	801,144
Pulaski County	1,668,727	0	67,516	1,736,243
Raceland-Worthington Ind.	205,762	0	0	205,762
Robertson County	78,128	7,300	0	85,428
Rockcastle County	657,350	5,882	22,298	685,530
Rowan County	384,328	0	355,744	740,072
Russell County	1,026,146	0	119,529	1,145,675
Russell Ind.	520,899	0	0	520,899
Russellville Ind.	261,323	0	0	261,323
Science Hill Ind.	74,570	0	15,689	90,259
Scott County	1,785,591	0	191,454	1,977,045
Shelby County	1,257,997	0	79,248	1,337,245
Silver Grove Ind.	92,045	0	25,630	117,675
Simpson County	—	—	—	—
Somerset Ind.	356,000	0	13,013	369,013
Southgate Ind.	70,123	0	0	70,123
Spencer County	760,626	0	50,191	810,817
Taylor County	494,179	0	111,365	605,544
Todd County	405,432	0	190,894	596,325
Trigg County	524,783	0	0	524,783
Trimble County	53,174	0	116,056	169,230
Union County	425,880	0	0	425,880
Walton-Verona Ind.	402,170	0	0	402,170
Warren County	3,177,219	0	0	3,177,219
Washington County	385,809	0	69,680	455,489
Wayne County	926,854	0	224,014	1,150,867
Webster County	488,503	0	0	488,503
West Point Ind.	52,341	0	2,430	54,771
Whitley County	1,238,172	0	0	1,238,172
Williamsburg Ind.	126,831	0	60,094	186,925
Williamstown Ind.	205,243	0	68,466	273,709
Wolfe County	452,000	0	0	452,000
Woodford County	984,129	0	0	984,129
Total	$179,491,769	$596,739	$14,258,160	$194,346,669

Note: Numbers are rounded to the nearest dollar. — = no response.
Source: OEA survey.

Endnotes

[1] Kentucky. Dept. of Educ. “Uniform Chart of Accounts.” n.d. Web. Sept. 6, 2017.
[2] Kentucky. Dept. of Educ. “Preschool Program Review (P2R) Process.” n.p. n.d. Web. Sept. 5, 2017.
[3] Governor’s Office of Early Childhood. “Kentucky All STARS.” n.p. n.d. Web. Sep. 5, 2017.
[4] Kentucky. Dept. of Educ. “Interpreting The 2012 Kindergarten Screen Pilot Results.” n.d. Web. Sept. 6, 2017.
[5] Ibid.
[6] Brian French. Brigance Screens III Technical Manual. North Billerica: Curriculum Associates. 2013.
[7] Ibid.
[8] Kentucky. Dept. of Educ. “Kindergarten Readiness 2016-2017 State Results.” n.d. Web. Sept. 6, 2017.
[9] Kentucky. Legislative Research Commission. Office of Educ. Accountability. *Overview Of Achievement Gaps In Kentucky Schools*. Research Report No. 429. Frankfort: LRC, October 18, 2016.
[10] Janette Pelletier. “Ontario’s Full-Day Kindergarten: A Bold Public Initiative.” Public Sector Digest May 15 2013–June 13, 2017. Web. August 21, 2017.