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Comparing Public Preprimary Systems in South Carolina & Estonia: Closing Gaps in Educational Opportunities

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COMPARING PUBLIC PREPRIMARY SYSTEMS IN SOUTH CAROLINA & ESTONIA:
CLOSING GAPS IN EDUCATIONAL OPPORTUNITIES

By

Emily Herd

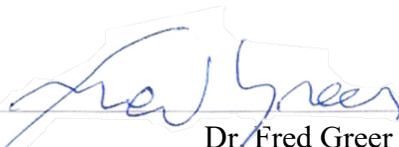
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Abstract

The following research aims to explore and compare the assets and drawbacks of the public preprimary education systems in Estonia and South Carolina for the purpose of developing policy recommendations for altering funding systems to expand access. First, preprimary education is defined along with its importance, effectiveness, and affordability. Next, funding continuity and public funding are discussed with relation to public preprimary programs. Then a basis is established for comparing Estonia and South Carolina. The methods and limitations are described. A deep dive of data organizes the programmatic and funding data of Estonia and South Carolina, highlighting enrollment, providers, curriculum, educator qualifications and compensation, preprimary funding, and primary funding. The data tell a story of two preprimary systems that result in distinct outcomes for students. South Carolina provides limited access to public preprimary education for some of the students who need it most. Further, state policies operate on the notion that early childhood education is largely outside the realm of public schooling. Subsequently, South Carolina has low enrollment in public preprimary programs and is not effectively utilizing early childhood education as a policy lever to close gaps in educational outcomes and opportunities. Estonia operates an organized system of public preprimary education that is funded and operated in a manner similar to the primary school system. Subsequently, Estonia has high rates of preprimary education enrollment and highly equitable opportunities and outcomes for students. Analysis results in three policy recommendations for improving access, availability, and continuity of preprimary programs. These recommendations support improving continuity between preprimary programs, removing

silos between preprimary and primary education systems, and eliminating parental contributions toward tuition.

Defining Preprimary Education

South Carolina has sizable and persistent achievement gaps between students based on race and socioeconomic status for many historical and cultural reasons, and the underfunded public preprimary education system is unable to effectively address the state's educational inequities. In a challenging political context, the General Assembly fails to provide sufficient resources to prepare all students to be ready for primary school. Although an imperfect comparison, Estonia has a strong record of small disparities between various student groups' achievements. Researchers have recognized Estonia's preprimary education system as one possible factor supporting their equitable achievement (OECD, 2019). Access to high-quality early childhood education may be a critical factor in "reducing or exacerbating" achievement gaps (Stanford Center for Education Policy Analysis, n.d.). Many poverty-related factors contribute to the disparities in students' achievements. Poverty limits children's exposure to forms of play, travel, and vocabulary words. Less affluent areas cannot raise as much revenue in local taxes, thereby impacting school districts' access to resources. The majority of South Carolina school administrators cite increasing teachers' salaries and expanding early childhood education programs as steps toward closing the educational achievement gap (Papantonis, 2019). Both improvements would require large influxes of resources and the support of taxpayers and policymakers. Estonia provides resources and public support for their preprimary education system through a system of centralized funding and local autonomy. A fully funded, public preprimary system is a key policy lever for societies to help close gaps between student groups.

Parents, policymakers, business leaders, educators, taxpayers, and municipal residents have a stake in ensuring students have access to the resources they need to be successful. South Carolinian government policies and policymakers do not always consider the youngest learners to be “students,” allowing them to be excluded from education systems. In contrast, Estonian policies and policymakers recognize preprimary programs as a voluntary first stage of public education. Public early childhood education programs are a societal investment in the next generation of thinkers, leaders, and community members.

As research continues to provide evidence of the short- and long-term benefits of preprimary education, there is growing concern internationally for families’ access to early childhood education programs (UNICEF, 2019). Helping children is mostly uncontroversial, but the approach—particularly public financing—can create disagreement. Some advocates want to target resources at children with the direst needs, and other groups advocate for universal access. There is greater consensus that early learning programs, regardless of the student population, should be high-quality and affordable. Many families want or need somewhere safe and nurturing to send their children before they enter compulsory primary school. Children’s guardians may work outside of the home, recognize the value of social interactions for their children at a young age, or want to help their children prepare for primary school. Some families have access to multiple options at no cost, some encounter high fees for enrollment, and some families do not have any access to places for their children to attend. Governments must fund public preprimary education programs at levels that ensure all children have the opportunity to succeed in primary school and beyond.

Preprimary education is schooling prior to primary school. Preprimary education can be formal, in a school or center-based classroom, or informal, nonparental care in a home-based setting; public, funded with tax revenue, or private, paid for by families; full-time or part-time. Full-time care does not have a universal definition or set number of hours. In South Carolina, full-time is most often defined as 32.5 hours per week, and in Estonia, full-time is calculated at 35 hours per week (OECD, 2016). Some governments proclaim “universal” preprimary education, which may signify full availability, high levels of access, no cost to families, or even mandatory attendance. Some governments make a clear distinction between preprimary schooling years and the first level of compulsory education, including many American states. Other governing institutions encompass preprimary students in the broader public school system, such as Estonia. Governments make choices to define and situate preprimary students apart from or within the context of compulsory schooling.

Preprimary education looks different all over the world and is referred to by many names—preschool, pre-kindergarten, pre-K, early learning, childcare, early childhood education in South Carolina and eelkool, lasteaed, kindergarten, Kleinkinderschule in Estonia. The Riigikogu, Estonia’s parliamentary body, defines a preschool child care institution as follows:

- (1) A preschool child care institution (hereinafter preschool institution) is an educational institution providing care and preschool education for preschool children.
- (2) A preschool institution supports the family of a child and promotes the growth and development of the child and his or her individuality (*Preschool Child Care Institutions Act*, 1999, p. 2).

The European Union’s definition of early childhood education and care is less circular: “any regulated arrangement that provides education and care for children from birth to compulsory primary school age” (European Commission, 2020a). Preprimary education has different meanings to different people and places, but essentially it refers to the nonparental care and education of a child before enrollment in compulsory education. Preprimary education does not have a universal meaning, and as a result, preprimary institutions may share a title but may not have any other elements in common, complicating direct comparisons.

Importance of Preprimary Education

Preprimary education—by any name—is critical to the growth and development of the youngest learners. From birth to age five, children’s brains exhibit a fourfold increase in weight and reach about 90% of their full volume capacity (Brown & Jernigan, 2012). During preprimary years, children’s brains undergo “some of their most dynamic and elaborative developmental changes” anatomically and physiologically (Brown & Jernigan, 2012, p. 314). Children’s prolific brain development is not biologically guaranteed. Biological and environmental factors both influence the growth of children’s brains. According to the Centers for Disease Control and Prevention, “nurturing and responsive care” is vital to brain development; children need safe, stable environments to protect them from any stress or trauma that can negatively affect long-term brain development (Centers for Disease Control and Prevention, 2019). Unfortunately, not all children have access to nurturing environments during periods of critical brain development.

Poverty decreases opportunities for positive stimulation essential to brain development, notably rich language environments. By increasing the occurrence of negative stimulation like chaos and conflict, poverty produces toxic stress that affects the health, growth, and development of children. Chronic stress from financial instability can also diminish the quality of caregiving that parents are able to provide. These risk factors underscore how crucial “consistent high-quality care” is especially for children from low-income families (Blair & Raver, 2016). Families from less affluent communities need opportunities and resources to mitigate external factors that can hinder their long-term brain development.

Effectiveness

Research has provided evidence on the effectiveness of early childhood education to close achievement gaps and advance cognitive and noncognitive development for all students (Sanchez, 2017). Children enrolled in publicly funded early education programs are more ready for kindergarten than those who directly enter kindergarten, particularly in academic areas (Phillips et al., 2017). Studies have also found larger educational gains at the end of preprimary education programs for economically disadvantaged children and English language learners than for other students (ibid.). Public preprimary programs are an opportunity to help the brain development and preparation for primary school for all children. When all children enter primary school with a strong cognitive foundation built in a public preprimary program, gaps in student skills and abilities will be minimized.

In addition to academic benefits for students, researchers have discovered broader societal economic gains from investments in preprimary programs. According to the national advocacy organization the First Five Years Fund, every dollar invested in high-quality

preprimary programs generates up to \$7.30 in returns for American society (First Five Years Fund, 2020). The long-term economic benefits of preprimary education outweigh momentary strains on public budgets. Access to quality early education programs also has the potential to improve parents' work productivity and increase property values because of the attractiveness to homebuyers. Access to preprimary education saves money for the primary and secondary education system because of improvements in grade retention. Long-term benefits come from reductions in incarceration, violent crimes, and reliance on government assistance (First Five Years Fund, 2020). High-quality preprimary programs can cost significant sums of money because stringent regulations mandate many details to ensure children's safety and well-being, but the upfront costs of early childhood education are balanced by long-term economic and social returns for society.

Affordability

Although preprimary education offers benefits to society, families in the United States struggle to afford the exorbitant costs of high-quality early childhood education even if they have access to high-quality care. The availability of private preprimary programs does not ensure equitable access because many families cannot afford the expensive tuition rates. Early childhood education costs are increasing faster than almost all other consumer goods and services tracked by the U.S. government, a rate double that of inflation since the 1990s (Thompson, 2019). The average cost of full-time preprimary education in America is \$9,589 (Parker, 2016). In South Carolina, some center-based programs have costs comparable to public university tuition rates with waiting lists longer than a year (Self, 2019). Without access to public

services, these high costs make early childhood education unattainable for many families whose children would benefit most from educational programs prior to primary school.

The cost of preprimary enrollment varies throughout Estonia. Attendance fees at public institutions vary between 0 and 58 euros per month, which is about \$65, depending on the fees set by each municipality. The average attendance fees are 26.10 euros per month, which equates to 313.20 euros per year (Ministry of Education and Research, 2019b). In dollars, enrollment fees are less than \$30 per month and about \$350 per year (Morningstar, 2020). While parental fees for public preprimary education are a barrier to access, the costs of preprimary programs in Estonia are significantly lower than in the United States. Subsequently, fewer barriers to accessing preprimary education are reflected in higher enrollment rates.

High-quality care for children is out of reach for many families for financial reasons in America, which is compounded by geographic barriers. High-quality programs are safe, nurturing, and regulated environments. According to the Center for American Progress, in 2015 47% of families in South Carolina lived in “childcare deserts”—somewhere with no childcare options or so few licensed providers that there are greater than three children for each program spot (Malik & Hamm, 2017). Even if parents can afford preprimary education, they may not have access to any licensed providers in which to entrust the care and safety of their children.

Given the benefits of early childhood education, governments have a vested interest in ensuring that all children—future members of the workforce and participants in civic society—develop optimally and are prepared to enter primary school. Governments have the ability, but not always the capacity, to protect children’s brain development and support their

own interests by ensuring all young learners have access to preprimary programs at no cost to families.

Funding

Program costs and rates of enrollment are directly affected by government decisions to fund preprimary programs. Governments have a range of decisions around program providers, curriculum, and educator qualifications and compensation, all of which require certain levels of spending. The decisions governments make around funding mechanisms play a large role in determining program availability and access.

Preprimary funding decisions in America at the federal level were first addressed in 1964. To address poverty-driven gaps in children's preparedness for kindergarten, United States President Lyndon B. Johnson launched a "War on Poverty" and established federal support for early childhood education through the Head Start program in the 1960s. During an era of education reform, many states recognized the need for and importance of early childhood education and developed and invested in their own programs. From 1980 to 2000, 44 states dedicated some level of state funding to early education programs (Mitchell, 2001). While many have been around for decades, state-funded programs face enormous challenges, often rooted in insufficient funding. For example, Arizona began its public preprimary program in 1991 (Mitchell, 2001), but less than 20% of four-year-olds were enrolled in public preprimary programs by 2017-2018 (Friedman-Krauss et al., 2019, p. 49). Arizona ranks 37th in the nation for all reported early childhood education spending, indicating that the state does not provide nearly enough funding to increase the availability and access of its programs (ibid., p. 10). In

contrast, Florida launched their Voluntary Prekindergarten Education Program in 2005 and enrolled 77% of the state's four-year-olds by 2017-2018; however, the state does not provide significant funding for the program (ibid., p. 68). As a result, the program meets very few quality benchmarks (ibid., p. 69). Public preprimary education programs need sufficient resources to be available, accessible, and effective in the education of young children.

Advances in modern brain science recognize the importance of the first five years of a child's life, but too frequently preprimary education is not a policy priority for many state governments, especially during times of economic recession. Some United States cities, such as Washington, D.C., have addressed inadequate early childhood education by creating local programs, using their own local budgets and taxing abilities. This option is not available to under-resourced areas without sufficient tax bases to draw from. Less affluent areas are at the mercy of messy politics that create huge fluctuations in state and federal funding (Conn, 2019). As a result, some places have high-quality preprimary education options while others have none. In sum, in the U.S., families' access to early childhood education varies greatly by their geographic context.

Estonian families have an entirely different experience with access to early childhood education programs. Their access is not dependent on their geographic location or their socioeconomic status. Required tuition fees may be reduced or eliminated for families unable to afford the cost of preprimary enrollment. Estonia's central government has set preprimary education as a policy priority and funds public programs as a level that allows equitable, high enrollment around the country.

Funding Continuity

Public preprimary education programs need stable access to sufficient streams of equitable funding in order to provide students and their families with services that achieve socially desirable outcomes. A preprimary program has funding continuity when a steady stream of money is available and accessible. For public programs, this may mean the agency controlling public budgets makes a long-term commitment to stable and steady allocations of public resources toward the program. Funding continuity is critical for the expansion of preprimary services. For programs to serve children in safe environments with qualified, nurturing educators, they need sufficient and ongoing funding. When a program has stable, continuous funding then they can plan and invest resources according to their goals. For example, a public program's goal may be to increase access and availability across a region; investing in a larger facility with more teachers requires stable, long-term funding for the program to be financially sustainable. A program could commit to a long-term lease in a bigger facility as part of an expansion process, but if the program receives a fraction of the previous years' revenue, then it cannot afford lease payments and other operating costs.

Discontinuity occurs when funding amounts fluctuate year to year, which can be a result of many factors including political shifts, economic downturns, changing priorities, and changing costs. Without secure, stable funding, early childhood education programs cannot effectively plan and create systematic changes to improve access and quality. Incohesive funding sources contribute to discontinuity, too. Many laws and institutions with disparate budgeting processes converge to fund early childhood education in the United States, creating overlap in some ways while leaving gaps in eligibility and access for others. Estonia takes a more streamlined approach

by funding schools through municipal governments that receive most of their money from the central government.

Responsive governments dedicate financial resources to goods and services deemed important and of value to taxpayers. Governments around the world are expected and required to provide residents with primary education programs because they are deemed valuable investments in human capital. Society has mostly accepted that the burden of providing schools falls on governments, but for some reason, the same logic does not always extend to the education of younger learners in many countries.

Estonia's central government has made funding decisions that allow greater long-term stability and better cohesiveness with the primary school system. By contrast, preprimary education in America remains siloed from primary education in many ways, particularly its funding mechanisms. By definition, preprimary education programs are providing education to students before compulsory education begins; preprimary and primary education systems are working toward the same goal of educating students, but primary students are just slightly older. Considering preprimary and primary schools' functional commonalities, the systems are funded and operated more consistently in Estonia but remain completely distinct in America. As a result, the two countries experience extensive differences in their public preprimary programs.

Access

While primary education has its own set of challenges, primary schooling usually takes priority as a policy and budget item because of the consensus that all children in America should have access to public primary and secondary education. The United States has not reached any kind of consensus about who should have access to preprimary education and who should foot

the bill. A decentralized system of education in American governance means that each state decides how much money to allocate to preprimary education, which programs, what the programs look like, and who can access programs. As a result, the public preprimary education landscape is heterogeneous across the whole country.

Estonia, like other countries in northern Europe, has different ideas about who should access preprimary education. Estonia has established a right for every child beginning at 18 months old to attend a public institution for preprimary education (Preschool Child Care Institutions Act, 1999). The central government provides most of the funding to ensure every child has access to preprimary school, but local governments retain autonomy over many operational decisions. The Estonian preprimary system functions under a broad central structure, resulting in a more homogenous preprimary landscape than in the United States.

As research on brain development and early education evolves, investments and changes in preprimary education represent an opportunity for governments to respond to the needs of society. Preprimary education holds the potential to contribute greatly to education as a fundamental mechanism of social mobility. Governments need to address the growing number of families who need high-quality care for their children and the exponentially rising costs of preprimary programs. Preprimary education represents a chance for governments to make fruitful investments in human capital that will benefit society and the economy.

Comparing Estonia and South Carolina

Estonia and South Carolina are worth comparing because they represent different cases of public preprimary education. South Carolina's General Assembly and Estonia's central

government approach preprimary funding in two distinct ways, which affects who has access to programs and how those programs look. Although the two places have distinctive socio-cultural and historic contexts, policy sharing may help South Carolina and Estonia to improve the access, availability, and continuity of their preprimary programs.

The systems of preprimary education in South Carolina and Estonia look vastly different, particularly their funding mechanisms. South Carolina generally approaches early childhood education as a service entirely separate from primary education to be delivered by the public and private sectors, subsidized by taxpayers via multiple funding streams, but largely targeted, meaning only certain segments of the population are eligible. As mentioned previously, some U.S. cities have developed their own programs to increase access to preprimary education with the goal of universal access, which would mean full enrollment of all children at a certain age.

Washington, D.C. began a preprimary expansion program in 2008 with the goal of universal access. By 2018, approximately 85% of four-year-olds and 73% of three-year-olds in D.C. were enrolled in a public preprimary program. High enrollment comes at an enormous cost, totaling \$18,580 per pupil. The majority of funding came from the District, with small contributions from the federal government. Florida, Vermont, and Oklahoma are also making progress toward universally available preprimary education (Friedman-Krauss et al., 2019). South Carolina is not currently on the same path to universal preprimary access as these states.

All of South Carolina's programs have eligibility requirements that are either based on family income or developmental delays. The majority of American preprimary programs target students from low-income families (Duncan & Magnuson, 2013). Public preprimary education has evolved in South Carolina over the past few decades without significant funding changes. As

a result, less than 30% of all four-year-olds in South Carolina are enrolled in full-time public preprimary school, which is 6.5 hours per day, five days per week (SC Education Oversight Committee, 2019). South Carolina's targeted enrollment approach means that preprimary programs do not function in a continuous manner with the primary schools. South Carolina's public preprimary programs have eligibility criteria to target students deemed at risk of not being prepared for primary school instead of allowing universal access.

The Estonian government approaches early childhood education as a public good, enrolling approximately 89% of children ages three to six, before children enroll in primary school at age 7, in 2019 (*Eesti Statistika*, 2020). Preprimary education in Estonia operates as an organized, publicly funded school system. Preprimary schools are funded and operated in a similar manner to primary schools, but they are voluntary. However, unlike primary schools, parents are often charged tuition fees for their children to enroll in preprimary schools in Estonia—although not all municipalities charge tuition fees. These fees are capped at 20% of the national minimum salary, but any required parental contributions for a public education program are a barrier to access for families. As a measure of comparison, the United States Department of Health and Human Services defines affordable childcare as a maximum of 7% of a family's income (Whitehurst, 2017). Estonian society recognizes the value of preparing students for primary school but allows schools to charge enrollment fees.

Eligible students in South Carolina are not charged tuition fees, but families may still be unable to access state-funded early childhood education programs for their children. South Carolina's General Assembly underfunds multiple, targeted programs. In practice, this means that many children in South Carolina who are targeted for enrollment are still not gaining access

to preprimary programs. South Carolina struggles to reach young learners most in need of preprimary education services despite research findings on the economic returns of high-quality early childhood education. In contrast, Estonia's central government allows municipalities to charge limited fees to families for preprimary programs but provides access to all students who want to attend.

To ensure high rates of access and enrollment, preprimary schools in Estonia are funded mostly through local government budgets using funding from the central government. Preprimary education is funded, on average, 93% by local governments, 6% by parental contributions, and 1% directly by the central government (Ministry of Education and Research, 2019a). While local governments provide most of preprimary education funding directly to schools, most of the municipal government revenue originates in transfers from the central governments (OECD, 2016). A centralized system of funding helps municipal governments to provide equitable access to preprimary education across Estonia. South Carolina public preprimary programs are funded through federal, state, and local government bodies, but some districts do not receive any state funding for preprimary programs (SC Education Oversight Committee, 2019). The South Carolina General Assembly's decision to fund programs for specific student groups in certain districts means that many students do not have any access to preprimary education.

South Carolina and Estonia's public preprimary systems should be compared to one another to gain insight into policies and practices that can support more children and families. South Carolina's policymakers can benefit from borrowing ideas from Estonia's preprimary funding mechanisms that produce continuity between programs and with the primary school

system because these elements achieve high rates of enrollment and highly equitable outcomes. Estonia's central government can benefit from borrowing South Carolina's policies on parental contributions. Thousands of miles apart with unique cultural contexts, South Carolinian and Estonian students will be better supported with policy borrowing and knowledge sharing.

Methods

In order to gain insight into opportunities for improvement in the public preprimary education systems of South Carolina and Estonia, research was conducted using existing data from primary and secondary sources. Quantitative and qualitative data were gathered from databases, government websites, agency reports, news articles, legislation excerpts, and court documents. Data sources were found through databases such as academic Search Complete, JSTOR, and Education Source. Many sources were publicly available through the search engine Google. Process and policy data were provided by many agency reports and government websites. Contextual and anecdotal data were mostly located in news articles and court documents. Some sources were published throughout the research process and required data to be updated as it became available. Specific language and phrasing were obtained from published legislation.

Key search terms included "preprimary," "preschool," "pre-k," "pre-kindergarten," "education," "funding," "financing," "Estonia," "South Carolina," "public," and "programs" in various combinations. These phrases were selected to produce a broad range of results from many different sources. Many Estonian sources had an English language option, and some

websites originally published in Estonian were translated through the Google Translate website extension. Sources available exclusively in Estonian were not able to be incorporated into the research, which is noted as a limitation to the thesis.

Data were compiled and organized within the respective categories of background, enrollment, providers, curriculum, educator qualifications and compensation, preprimary funding, and primary funding. The data were then analyzed according to the principles of accessibility, availability, and continuity for South Carolina and Estonia independently. Then, data were compared and contrasted between South Carolina and Estonia for the next stage of analysis. Analysis was based on how the programs' central elements of funding were contributing to or detracting from enrollment. After analysis, recommendations were developed around opportunities for expansion of accessibility, availability, and continuity in both South Carolina and Estonia's public preprimary programs.

My belief in the public school system's role in social justice informs my perspectives on preprimary education. This foundation of social justice shapes the principles and goals of my research and recommendations. My unwavering drive for more equitable opportunities for students is evident throughout the thesis.

Limitations

The thesis has a few limitations to note regarding data collection, research availability, consistent comparisons, and scope. Language and vocabulary limited the availability and reliability of some data sources. Some data from recent years are not yet available, and

information became available throughout the research and writing process. Finally, the thesis is limited by the inconsistencies inherent in comparing an American state with a Baltic country. Considering the limitations, the thesis still aims to present valid conclusions and recommendations.

Data collection was limited by language barriers and vocabulary. Some available sources in Estonian were unreliable when translated by an online service. The nuances were distorted when improperly translated. These sources were omitted from the collection of research. Sources in English were also limited by vocabulary barriers. Variations of the phrase “preprimary education” like pre-primary, preschool, preK, pre-K, prekindergarten, and kindergarten added complexity to the data collection. Some valuable data sources may have been missed because of the high number of phrases to describe the same idea. This limitation was addressed by frequently repeating searches with a slightly altered search phrase.

Frequently changing information may also limit the research. Some data and conclusions from the initial stages of research no longer held true by the end of research as political and educational landscapes evolved. Additionally, comparisons are limited by variations in the most recently collected and available data. Many reports and data are from different time frames. Some facts and figures are available for 2019, but other data may only be from 2016. While limited by the availability of data, data from the 2017-2018 school year is most readily available and is used most consistently. To accommodate this limitation, the years of all data are carefully noted, and many comparisons are drawn from trends over multiple years rather than just the most recently available data.

An additional limitation to the thesis is the imperfect nature of comparing an American state with a Baltic country. South Carolina and Estonia have two separate histories and cultures, so the comparisons are inherently complex. A practice or policy might not have a consistent comparison in the other location due to structural and systematic differences. South Carolina's lack of homogeneity within its public preprimary system creates additional challenges for drawing conclusions and comparisons. However, insights can still be gained by comparing the policies and systems of these two places.

A final limitation to the thesis is simply the scope of the subject matter. The topic of preprimary education systems is broad, nuanced, and challenging to narrow down without losing accuracy. As a result, some areas of data collection, discussion, and analysis could be explored further in future research beyond the restraints of an undergraduate thesis.

Despite the limitations, the research presents conclusions and recommendations through meticulous data collection and thoughtful analysis. Challenges to the research process were overcome to the fullest extent possible to present valid research findings on the public preprimary systems in Estonia and South Carolina.

South Carolina and Estonia Preprimary Programmatic and Funding Data

South Carolina and Estonia have public preprimary systems with vastly different origins—one from a patchwork process partly to assuage the judicial branch and another emerging in a more unified way from a long history of war and invasion. Unique backgrounds contribute to differences in enrollment, providers, curriculums, educator qualifications, and

compensation. The two governments fund their preprimary programs with various formulas, through different agencies, and at various levels.

Public preprimary enrollment runs on a continuum, from zero to universal access. Many developed nations are setting goals for universal preprimary school enrollment, recognizing the humanitarian and economic importance. This goal requires abundant resources, including willing providers. Many governments cannot operationalize their preprimary goals alone and rely on private providers to educate their youngest learners. Some governments mandate a single curriculum of shared goals, objectives, and skills for all students enrolled in public preprimary schools while others give educators the freedom to make instructional decisions. Many governments set a standard of qualification for educators on the public payroll, creating huge implications for program quality. Educator compensation is often debated because their responsibilities and qualifications frequently do not align with their salaries.

Public preprimary programs must be fully funded for schools and educators to have the necessary resources to educate groups of young children. Funding should match the costs of programs and should support elements of high-quality programs. South Carolina funds their public preprimary system in any entirely separate way than the primary and secondary school system of funding. Estonia provides funding to both systems with relatively high degrees of similarity. The continuity of funding between preprimary and primary systems is a clear reflection of a society's notions of what counts as "education." A continuous system of funding is more likely to signal a society's inclusion of early childhood education in the broader system of education, whereas a disjointed funding system may signal a society's decision that early childhood education and primary education are two separate entities.

South Carolina

Background

South Carolina's State Constitution establishes, "The General Assembly shall provide for the maintenance and support of all systems of free public schools open to all children of the state" (South Carolina Constitution, 1895, p. 78). The State Constitution does not define the "systems of free public schools" that are available in the state, allowing preprimary and tertiary education systems to fall outside of this constitutional guarantee. The Constitution leaves the details of a guaranteed public-school system up to interpretation. The General Assembly does guarantee public-school enrollment for those residing in school districts between the ages of five and twenty-one (South Carolina Code of Laws, 2013) for at least 180 days per school year and at least six hours each day (National Center for Education Statistics, 2018). To help realize this guarantee, the Education Finance Act of 1977 was passed in an attempt to equitably finance the state's network of public schools and fulfill the General Assembly's constitutional responsibility (Costner, 2009).

In the decade prior to the Education Finance Act, President Lyndon B. Johnson, a former teacher, declared the War on Poverty in 1964. In an examination of inequalities in the nation's social and economic conditions, Johnson's administration identified the need for a preschool program for children from low-income families. The program would be designed to meet families' emotional, health, social, and nutritional needs with considerations for cultural responsiveness. President Johnson launched Project Head Start in 1965 as a summer program through the Economic Opportunity Act of 1964. Based on the success of the summer initiative,

the project was expanded to a nine-month program by the fall of the same year (U.S. Department of Health and Human Services, 2019).

Spurred by national education reform efforts and the popularity of Head Start, 23 states started their own preschool programs throughout the 1980s, including South Carolina (Mitchell, 2001). In 1984, the Education Improvement Act (EIA) established the Education Improvement Act Child Care Development Program (EIA 4K), South Carolina's first state-funded preprimary education program (Friedman-Krauss et al., 2019). The program targeted four-year-old students with "significant developmental deficiencies" (Kirk, 1985, p. 138). Concurrently, EIA adapted and improved the state's funding formulas for primary and secondary schools (Costner, 2009). Depending on the local property tax base, school districts received between 34-89% of their funds from the state, with a statewide average of 70% (Kirk, 1985).

The Education Improvement Act and the Education Finance Act created many changes to the implementation and financing of public schools, particularly for teachers' salaries. Legislators aimed to adjust teacher salaries for inflation and to make them regionally competitive (Kirk, 1985). In the 1990 State Appropriations Act, the South Carolina Department of Education shifted a larger financial burden onto local school districts to fund educators' and administrators' salary supplements, while expressly prohibiting the use of EIA funds to supplant local contributions (Appropriations Act, 1990). Districts with higher rates of poverty did not have large streams of property tax revenues to support the mandated salary supplements.

Watershed Moment for Preprimary Education in South Carolina: Abbeville v. State

In 1993, 40 South Carolina school districts, with high concentrations of poverty, along with individual students and taxpayers challenged the state's funding systems, claiming the

funding scheme placed unlawful tax burdens on poorer areas of the state. They alleged that the funding mechanisms resulted in inadequate educational opportunities, thereby violating the state constitution (*Abbeville County School District, et al. V. The State of South Carolina, et al.*, 1999). In its 1999 decision, the SC Supreme Court held that the South Carolina Constitution requires the General Assembly to provide each student with a “minimally adequate education” and loosely defined the conditions of this phrase (Education Law Center, 2020):

1. the ability to read, write, and speak the English language, and knowledge of mathematics and physical science;
2. a fundamental knowledge of economic, social, and political systems, and of history and governmental processes; and
3. academic and vocational skills.

In 2005, the matter was brought to court again, but the Third Judicial Circuit Court was not in a position to make policies or pass normative judgements on the policies in place. The court explained that the South Carolina Supreme Court’s decision in *Abbeville v. South Carolina* created a constitutional floor to define the State’s responsibility in providing a “minimally adequate” education. The Third Judicial Circuit’s responsibility was simply to evaluate if the state’s school system met the baseline requirements. The judge found the state was meeting “minimally adequate” standards for qualified teachers and facility conditions, although many were in disrepair (*Abbeville County School District, et al, v. The State of South Carolina, et al.*, 2005).

Important for this thesis, Third Judicial Circuit Judge Thomas W. Cooper, Jr. ruled that the early childhood education programs were not “minimally adequate” and needed state funding

to meet constitutional standards (Costner, 2009). The trial districts' high concentrations of poverty required greater funding commitments from the state to provide adequate early education programs. The court concluded, "the constitutional requirement of adequate funding is not met by the Defendants as a result of their failure to adequately fund early childhood intervention programs" (*Abbeville County School District, et al, v. The State of South Carolina, et al.*, 2005, p. 162). Judge Cooper's ruling intertwines preprimary and primary schooling. His conclusion highlights public preprimary programs as foundational to a minimally adequate education system—thereby rhetorically breaking the silos between preprimary and primary education. The judgement noted that some legislators cite First Steps as one of the best programs created by the General Assembly, but "its effectiveness was thwarted because it was never fully funded" (*Abbeville County School District, et al, v. The State of South Carolina, et al.*, 2005, p. 166). The plaintiff districts served less than half of the children in need in early childhood education programs because they did not have adequate funding. In response to the judgement, the South Carolina General Assembly developed the Child Development Education Pilot Program (CDEPP) in 2006 (Friedman-Krauss et al., 2019). The pilot program's goals emphasized school readiness and literacy—two conditions the court cited as vital to the opportunity for students to receive a minimally adequate education (South Carolina Department of Education, 2019c). Without permanent legislation, CDEPP received non-recurring appropriations (SC Education Oversight Committee, 2019). The pilot program was initiated outside of the established school finance systems for primary and secondary schools.

In a 2014 appeal, the State claimed its legislation had corrected the disputed funding schemes, but the SC Supreme Court held that the "fractured formula" continued to deny students

their constitutional right to an education (*Abbeville County School District, et al. V. The State of South Carolina, et al.*, 2014, p. 27). The League of Women Voters of South Carolina and the South Carolina Conference of the National Association for the Advancement of Colored People submitted an amicus brief to continue advocating for high-quality early childhood education in South Carolina. They outlined an abundance of evidence in support of publicly funded early childhood education programs and urged the court to affirm that a free public-school system guaranteed by the South Carolina Constitution includes “effective and adequately funded” early childhood education programs (*Abbeville County School District, et al. V. The State of South Carolina, et al.*, 2014, p. 3). They were asking the court to affirm early childhood education’s place within the constitutionally guaranteed public education system.

The amicus brief asserts that the “General Assembly has shirked its constitutional duty by failing to provide high-quality pre-kindergarten programs for all children in poverty,” particularly in the Plaintiff districts (*Abbeville County School District, et al. V. The State of South Carolina, et al.*, 2014, p. 5). In 2007-2008, 79% of children lived in poverty in the Plaintiff districts, and 94% of children lived in poverty in the eight Trial Districts, compared with a statewide average of less than 65% (*Abbeville County School District, et al. V. The State of South Carolina, et al.*, 2014). Poverty was widespread across the state, but the Plaintiff and Trial Districts experienced particularly high concentrations. Eleven years later, the Trial Districts’ rates of poverty remain relatively unchanged and approximately 30% higher than the state average (South Carolina Department of Education, 2019b). The circuit court judge had already established that a minimally adequate education was unattainable for children in poverty without early learning opportunities. South Carolina’s high concentrations of poverty, particularly in the

Trial Districts, reiterate the need for public early childhood education opportunities in these areas. Students in these areas will not have a guarantee of a minimally adequate primary and secondary education without an established foundation in a preprimary program.

Table 1

Poverty Index of Trial Districts Compared to State

S.C. School District	Poverty Index ¹ (as a percent)	
	2007-2008	2018-2019
Allendale	95.05	94.19
Dillon 2 (Dillon 4 after consolidation)	91.63	93.26
Florence 4	92.31	92.63
Hampton 2	94.06	91.45
Jasper	92.96	88.74
Lee	96.87	91.16
Marion 7 (Marion 10 after consolidation)	97.08	91.38
Orangeburg 3	91.62	90.5
State Overall	64.3	61.73

Source: South Carolina Education Oversight Committee (2008) and South Carolina Department of Education (2019)

During the 2014 appeal, Judge Pleicones questioned the connection between early childhood education and the South Carolina Constitution in his dissenting opinion, claiming that the General Assembly guaranteed residents a free public-school system “not a system of free *pre-school* programs” (*Abbeville County School District, et al. V. The State of South Carolina, et al.*, 2014, p. 56, emphasis in original). Judge Pleicones penned a dissent that clearly differentiates *education* from *early childhood education* as two separate and distinct institutions. Three years later, the Court abdicated its role in the matter on the grounds of separation of powers (Education Law Center, 2020).

¹ Poverty index is defined by the SC Education Oversight Committee as the percent of students in a district eligible for subsidized meals and/or public health coverage

Table 2*Abbeville County School District, et al, v. State Summary Table*

Year	Court	Decision / Outcome
1999	South Carolina Supreme Court	General Assembly is required to provide each student with a “minimally adequate education” and outlined the requirements
2005	Third Judicial Circuit Court	State is meeting standard of “minimally adequate” in terms of qualified teachers and facility conditions
		Early childhood education programs need state funding to meet constitutional standards
		Early childhood education programs are vital to students’ readiness and ability to receive a “minimally adequate” education
2006	Child Development Education Pilot Program	
2014	South Carolina Supreme Court	“Fractured formula” continues to deny students their constitutional right to public education
		Amicus brief advocates for publicly funded early childhood education programs
		Judge Pleicones dissents on grounds that preschools are not included in guarantee of free public-school system
2017	South Carolina Supreme Court	Court abdicates role in matter on grounds of separation of powers

The Court’s initial rulings in favor of the Plaintiffs lacked enforcement authority, and eventually the whole case was pushed out of the judicial system. Although the school finance battle may seem hopeless for the underfunded school districts of South Carolina, the Court’s reinforcement of the importance of early childhood education programs may serve as a source of hope for early childhood education advocates and families across the state. In 2014, the Child Development Education Pilot Program was codified into law as the Child Early Reading Development and Education Program (CERDEP) and continues to receive state funding (Friedman-Krauss et al., 2019). CERDEP initially received non-recurring funds at a rate of

\$3,077 per child for instructional costs, increasing to \$4,422 by 2017-2018 at a total of \$43,284,159.15—although significantly below the actual per pupil cost of operating the program (SC Education Oversight Committee, 2019). CERDEP has been solidified as a permanent program upon which the constitutional guarantee of a minimally adequate free public education rests for the residents of South Carolina. As such, the program should be funded at a level that allows voluntary enrollment of all four-year-olds in the state to ensure each child has an opportunity to receive a minimally adequate public education.

South Carolina's Publicly Funded Programs

Eligible South Carolina children and families have access to a range of publicly funded programs. Approximately 70% of four-year-old learners from low-income families were served by a formal, publicly funded early childhood education (ECE) program in 2017-2018, and about 48% of four-year-olds from low-income families were served by a full-day program (SC Education Oversight Committee, 2019). These programs include CERDEP in a public school setting or a private center, Head Start, half-day EIA 4K, and center-based (non-public) CERDEP operating outside of CERDEP eligible districts. Four-year-old students may also qualify for childcare vouchers from the South Carolina Department of Social Services. When considering access to public programs for *all* four-year-olds in South Carolina, the percent of enrollment in public, full-day programs drops to 29.2%, and the percent of enrollment in any public preprimary program drops to 42.7% for all four-year-olds. South Carolina has a long way to go in enrolling young students from low-income families and is far from universal access for all four-year-olds in the state (SC Education Oversight Committee, 2019).

Table 3*Summary of Four-Year-Old Students Living in Poverty Served Statewide (2017-2018)*

Program	Four-Year-Olds in Poverty Enrolled
Public CERDEP	9,789
Non-public CERDEP (First Steps)	1,778
Head Start	5,589
Non-CERDEP public four-year-old program	7,592
Non-public CERDEP operating in a non-CERDEP district	309
Estimated four-year-olds in poverty in public, full-day early childhood program	17,156
Total number of four-year-olds in poverty in public early childhood program (full- or part-time)	25,057
Estimated number of four-year-olds in poverty	36,018
Estimated percentage of four-year-olds in poverty served in public full-day early childhood program	47.6%
Estimated percentage of four-year-olds in poverty served by public early childhood program	69.6%
Estimated total number of four-year-olds in South Carolina	58,694
Estimated percentage of all four-year-olds served in public full-day early childhood program	29.2%
Estimated percentage of all four-year-olds served by public early childhood program	42.7%

Source: State-Funded Full-Day 4K for FY2017-18 & FY2018-19 (SC Education Oversight Committee, 2019)

Head Start

Background. Head Start is a federally funded program that promotes the school readiness of children from birth to five from families below the federal poverty line. Originating as a national summer program, Head Start has evolved into more of a partnership between the federal government and states as the first step in preparing the next generation of American residents to be ready for the work force and active civic engagement. In order to qualify, a family

of four in 2019 must have a household pre-tax income at or below \$25,750. Additionally, children who are in foster care, homeless, or receive public assistance are also eligible for Head Start (*South Carolina Head Start*, n.d.). Head Start programs may enroll 35% of children from households below 130% of federal poverty guidelines and an additional 10% of children from families above the Federal poverty line. Head Start eligibility does not guarantee enrollment. Limited funding means that there are not enough available seats in Head Start programs for all eligible children in South Carolina (*South Carolina Head Start*, n.d.). The federal government and states have a shared interest in producing high achieving students, so they share the responsibility of offering early childhood education programs to young students.

Enrollment. Within the state of South Carolina, Head Start reached 11% of all 3-year-olds and 7% of 4-year-olds in 2018 (Friedman-Krauss et al., 2019). In the 2017-2018 school year, Head Start enrolled 5,589 4-year-olds, which increased by 27% from the previous year. With an estimated 36,018 4-year-olds in poverty in South Carolina, Head Start only reaches a fraction of the target population (SC Education Oversight Committee, 2019). Head Start has been increasing its enrollment of South Carolina students in poverty, but the program requires more resources to reach all children in the target population.

Providers. Head Start programs serve children in Head Start centers, public schools, childcare centers, and family childcare homes. Certain Head Start providers offer in-home services to support children's development with family engagement (*South Carolina Head Start*, n.d.). Head Start programs support children's early learning through individualized experiences with a focus on social and emotional development, language, literacy, and concept development. All children receive nutritious meals and health screenings, and staff connect their families to

appropriate mental health, medical, and dental services (Department of Health and Human Services, 2019). With origins in broader welfare reforms, Head Start tries to support children and families with a multifaceted approach.

Curriculum. According to the Head Start Program Performance Standards, providers must use programmatic and teaching practices within the *Head Start Early Learning Outcomes Framework: Ages Birth to Five* in order to receive federal funding (Department of Health and Human Services, 2019). The U.S. Department of Health and Human Services' Office of Head Start revised the program's framework in 2015 to represent the "continuum of learning for infants, toddlers, and preschools" (U.S. Department for Health and Human Services, 2015, p. 3). The Federal government converged the expertise of practitioners, content experts, researchers, and resource centers to write the guidelines for all Head Start programs across the country. The framework intends to guide providers in aligning their curricula, assessments, and professional development with the goal of continuity across programs (*Head Start Early Learning Outcomes Framework: Ages Birth to Five*, 2015).

While the Federal government does not mandate a curriculum for Head Start providers, the Head Start Program Performance Standards identify key features that must be included in any chosen curricula. A curriculum must be research-based to adhere with current best-practices, have an "organized developmental scope and sequence," support staff training and development, align with the Early Learning Outcomes Framework, and provide standardized training procedures for implementation (Department of Health and Human Services, 2019, p. 28). Head Start's support for continuity across program providers helps to offer students early learning experiences above a determined threshold of quality.

Educator Qualifications and Compensation. As of 2016, a program’s Head Start director must have at least a baccalaureate degree with experience in staff supervision, money management, and administrative duties. Staff, described as “education managers or coordinators,” must have at least a baccalaureate degree in early childhood education or a baccalaureate degree or higher with early education teaching experience (Department of Health and Human Services, 2019, p. 54). Required teaching credentials vary by provider type. At least half of all Head Start teachers across the country need a baccalaureate degree in early childhood education, child development, or equal coursework. All center-based teachers must have at least an associate degree in a relevant field. Assistant teachers must have a state certificate, a Child Development Associate credential, or be enrolled in a credential or degree program to be completed within two years of hiring. Providers in family childcare settings must have previous experience and at least be enrolled in the relevant credential program to be completed within 18 months. Head Start funds employee’s compensation on a scale based on experience and training, but staff may not receive a rate of compensation above the average rate of pay within the program’s region (Department of Health and Human Services, 2019). Head Start uses performance standards to improve programmatic continuity but fails to implement standard policies on teacher credentials and compensation.

Child Early Reading and Development Education Program

Background. The Child Development Education Pilot Program launched in 2006 was codified as the Child Early Reading Development and Education Program (CERDEP) with the approval of Act 284, legislation establishing the state literacy program Read to Succeed.

CERDEP's goal is to increase the percentage of 4-year-olds from low-income families that are served by full-day, high-quality programs. CERDEP operates at least 6.5 hours per day, five days a week for at least 180 instructional days (South Carolina Department of Education, 2019c).

CERDEP follows the same time format of primary and secondary public schools, like a one-year early extension to primary schools.

Eligibility. When first created in 2006, the program targeted “at risk” children in the plaintiff districts in *Abbeville County School District et. al. v. South Carolina*, and by 2013 the General Assembly expanded the program to include eligible children in all districts with a poverty index of 75% or more. A year later, the poverty index for eligibility was lowered to 70%. In 2017-2018, student eligibility was defined as having a family income at or below 185% of the federal poverty line or being Medicaid eligible. A student must be eligible based on their family's income and live in an eligible district based on the average poverty index to attend a public CERDEP program in their district or a non-public CERDEP program in any district (SC Education Oversight Committee, 2019).

The Appropriations Act in 2014 expanded CERDEP statewide with funds remaining after *Abbeville* Plaintiff Districts and districts with 90% poverty indexes had been served (South Carolina Department of Education, 2019c). Regardless of family income, a student may be eligible to attend a CERDEP program if he or she scores below the 25th percentile on two development indicators and if publicly funded programs have already enrolled 75% of the projected eligible children; Act 284 states that districts will be reimbursed for these students “if funds are available,” not guaranteeing reimbursement for students at risk of developmental delays (South Carolina Department of Education, 2019b, p. 3). CERDEP was created to target

students in high poverty districts, so students at risk of developmental delays are served as a secondary target population.

Enrollment. In 2017-2018, 61% of South Carolinian four-year-old children lived in poverty—over 36,000 kids. Throughout public schools, CERDEP programs were provided to 9,789 children at full-instructional costs with 660 students still on waitlists. Districts must prioritize children on waitlists with the lowest family income when vacancies open, but waitlists do not have to be shared between providers (Károly & Gomez, 2019). Not sharing waitlists decreases efficiency when some providers have openings, but other providers still have children waiting for spots to open. CERDEP is co-administered in private preschool settings by South Carolina First Steps to School Readiness (First Steps) (Friedman-Krauss et al., 2019). First Steps served 2,195 children all full-instructional costs in 2017-2018, 1,778 of whom were 4-year-olds in poverty (SC Education Oversight Committee, 2019). First Steps serves far fewer students than public school CERDEP but offers parents a broader range of providers.

Providers. In the 2017-2018 school year, 61 out of 82 South Carolina public school districts participated in CERDEP in 589 classrooms in 244 public schools (SC Education Oversight Committee, 2019). First Steps operated CERDEP in 208 classrooms in non-public centers in the same year (SC Education Oversight Committee, 2019). First Steps may operate in faith-based, community-based, other private, and Head Start settings. First Steps operating in faith-based settings marks a distinct departure from primary and secondary education. The state constitution prohibits “direct aid to religious or other private educational institutions” (South Carolina Constitution, 1895, p. 78). The state operates on the notion that early childhood

education programs are outside of their definition of “education” entirely and are thereby operated in faith-based settings.

Curriculum. In June 2014, Act 284 created South Carolina’s Read to Succeed Program, a statewide effort to improve the state’s literacy rates. Since Act 284 also codified CERDEP, the program emphasizes the importance of reading in early childhood education programs. Districts must provide CERDEP classrooms with “a comprehensive, systematic approach to reading” in accordance with the State Reading Proficiency Plan and the district’s reading proficiency plan (South Carolina Department of Education, 2019b, p. 1). Districts are also mandated to administer readiness assessments to students, educate and involve parents in their child’s education, provide learning and development support, and identify community-based organizations supporting early literacy work (South Carolina Department of Education, 2019c).

A single curriculum is not required for all CERDEP providers. Instead, districts must provide adequate training to staff in an “approved, research-based preschool curriculum” that supports state early learning standards (South Carolina Department of Education, 2019b, p. 9). Public providers have the option of five curricula or Montessori education that all focus on early literacy, numeracy, and social and emotional development. Providers must offer a curriculum “aligned with school success” (South Carolina Department of Education, 2019b, p. 16). First Steps allows providers the choice of two curriculums (SC Early Childhood Advisory Council, 2019). Although Act 284 created CERDEP, the public and non-public providers have different standards, requirements, and curriculum options.

CERDEP’s inception was on the basis that students could not receive the opportunity of a minimally adequate education without a strong foundation in an early childhood program.

Policymakers have operationalized this goal by requiring a curriculum with the explicit goal of preparing students to be ready for primary school. Teachers must monitor student growth and skill development with readiness assessments during the first and last 45 days of school. Any results cannot exclude students from entry into an early learning program. The assessment results are added to students' portfolios to track long-term progress as they move to primary school (South Carolina Department of Education, 2019c). Student assessments can be used to measure teacher and program effectiveness as well as student progress. These measures are critical for policymakers to ensure taxpayer funds are being used effectively to support students.

When CERDEP was a pilot program (CDEPP), initial evaluations were conducted to measure student progress. Researchers found, “children in CDEPP made modest and meaningful progress in their school readiness skills” (SC Education Oversight Committee, 2009, p. 74). Yearly reports of CERDEP's effectiveness track student progress, but the utilization of various curricula and assessments means that researchers face challenges drawing broad conclusions from the data about the program's effectiveness.

Educator Qualifications and Compensation. Every CERDEP classroom must be led by a teacher certified by South Carolina in early childhood education (South Carolina Department of Education, 2019c). Instructional assistants in all public-school classrooms, including CERDEP programs, must have at least a high school diploma or the equivalent, as per state requirements. Instructional assistants must also have at least two years of experience with children under five and have completed the Early Childhood Developmental Credential within a year of hire (South Carolina Department of Education, 2019c). In private settings, each lead teacher must have at least a two-year degree in a field related to early learning and must be

progressing in a teacher education program within four years (Károly & Gomez, 2019).

CERDEP teacher requirements differ in public and nonpublic provider settings, raising questions about variations in program quality.

Teachers in these programs are compensated differently. CERDEP teachers in public schools are paid following a minimum salary schedule that considers education level and years of experience for each district. On average, First Steps teachers are compensated with lower salaries and fewer fringe benefits. In a cost-analysis study of CERDEP, researchers found public CERDEP teachers' salaries ranged from \$35,000 to \$52,000 compared to \$25,000 to \$43,000 for lead CERDEP teachers in private centers. Public school CERDEP teachers also receive benefits packages that cover subsidized health insurance with dental and vision coverage, retirement plans, and paid leave—totaling approximately 45% of their salaries. Fringe benefits for private center CERDEP educators equate to about 12% of the value of their salaries (Károly & Gomez, 2019).

A meta-analysis study finds a positive and statistically significant relationship between teacher qualifications and the quality of teacher-child interactions in early childhood education classrooms (Manning et al., 2019). Because CERDEP educators in nonpublic settings have lower qualification requirements, the quality of the programs may be lower than CERDEP in public settings. Both are publicly funded full-day preprimary programs under the broad CERDEP name, but inconsistent standards may create disparities in program quality.

CERDEP in public schools is very consistent with public primary school requirements and conditions. CERDEP in nonpublic settings—particularly faith-based settings—removes the early childhood education program from the realm of public education. The state cannot provide

direct aid to religious institutions, and nonpublic providers have different qualifications for teachers. While existing under the same legislation, CERDEP essentially operates two separate programs.

Education Improvement Act Child Care Development Program

Background. Before CERDEP, South Carolina already funded a public preprimary program. Following a national wave of educational reform efforts in 1984, South Carolina established the Education Improvement Act Child Care Development Program (EIA 4K). Children are eligible for EIA 4K if they qualify for free- or reduced-price lunch or Medicaid based on their family's income. There are also considerations for children with documented developmental delays (Friedman-Krauss et al., 2019).

Enrollment. Enrollment data for EIA 4K programs are not collected at the state level. State-level data are also not available for districts that use local revenue to provide programs for four-year-olds (SC Education Oversight Committee, 2019). Without data collection at the state level, it is difficult for researchers, policymakers, and other stakeholders to weave together pieces of information about early childhood education opportunities and enrollment across the state. Three school districts—Horry, Kershaw, and Union—qualified for CERDEP funding in 2017-2018, but opted out to receive EIA 4K funding instead. Beaufort, Horry, and Kershaw operate pre-k programs for four-year-old students at the district level (SC Education Oversight Committee, 2019). Data collection at the state level is necessary to capture a complete picture of what these programs mean collectively for children and their families in South Carolina.

Providers. EIA 4K is exclusively provided in public school settings and is administered through the South Carolina Department of Education’s Office of Early Learning and Literacy (Friedman-Krauss et al., 2019). Schools receiving funding may offer at least a half-day preschool program, although many provide full day programs (Griggs, 2013). EIA 4K operates as a direct extension of primary school with the same facilities and administration.

SC Vouchers

South Carolina’s Department of Social Services runs a voucher program to help working parents afford childcare services. Parents must be attending school, training, or working with income below 150% of the federal poverty line in order to be eligible for the program (South Carolina Department of Social Services, n.d.). In 2017, the vouchers served 22,641 children with 1,509 providers enrolled. Parents are allowed to select the care provider, which may be based in a center, group childcare home, religious setting, school, employer, or with a family member, friend, or neighbor (South Carolina Department of Social Services, n.d.). The number of four-year-old children receiving vouchers increased by 56% from 2016-2017 to 2017-2018 (5,633 children) (SC Education Oversight Committee, 2019).

Some voucher recipients are enrolled in early childhood education programs, and other parents choose to enroll their children in informal settings or use the vouchers for wraparound support services. The voucher program is not included in many evaluations of public preschool systems because one voucher does not necessarily equate to one child in a formal early education program (SC Education Oversight Committee, 2019).

Table 4*S.C. Summary of Legislation Related to Pre-Primary Education*

Legislation	Program / Purpose	Agency
South Carolina State Constitution (1895)	Guarantees free public-school system for all children in the state	South Carolina Department of Education
South Carolina Code of Laws Title 59, Chapter 63 (1976)	Defines age of attendance (5-21), 180 days/school year, 6 hours/day	South Carolina Department of Education
Education Finance Act (1977)	Established more equitable school financing system	South Carolina Department of Education
Economic Opportunity Act of 1964	Created Head Start summer program	U.S. Department of Health and Human services
		South Carolina Department of Social Services, Head Start Collaboration Office
Education Improvement Act (1984)	Established the Education Improvement Act Child Care Development Program (EIA 4K)	South Carolina Department of Education
	Adapted primary and secondary school funding formulas	
Act 284 (2014)	Codified Child Development Education Pilot Program into law (CERDEP)	South Carolina Department of Education
		South Carolina Department of Social Services
The Child Care and Development Block Grant Act of 1990	Established the funding stream to create the SC Voucher Program	South Carolina Department of Social Services

Preprimary Funding by Program

Preprimary programs need resources to build and maintain facilities, pay salaries and benefits to teachers, and purchase instructional materials. In South Carolina, the General

Assembly has control over the budget and assigns values to programs based on various factors like their costs, value to society, and funds available. Stable, continuous, secure funding streams are critical for preprimary programs to plan, develop, and invest in infrastructure and personnel.

Over the past decade, state preprimary spending per pupil has fluctuated between \$1,226 and \$3,367 in South Carolina, with a large increase in per pupil spending in 2016, which has since fallen. State spending per child was \$2,819 in 2017-2018, down slightly from the previous year, totaling \$77,572,655 of state funds spent on early childhood education programs (Friedman-Krauss et al., 2019). Total state expenditure on preprimary education is growing steadily, nearly doubling in the last decade.

Table 5

Per Pupil and Total State Spending in South Carolina 2008-2018

Year	State Spending Per Pupil (current \$)	Total State Spending (current \$)
2008	1,719	38,821,515
2009	1,633	40,596,640
2010	1,446	35,513,846
2011	1,342	35,598,474
2012	1,226	35,708,905
2014	1,817	49,838,273
2015	1,981	60,252,483
2016	3,367	79,248,973
2017	2,970	71,513,051
2018	2,819	77,572,655

Source: *The State of Preschool* (2009-2019). National Institute for Early Education Research.

Head Start. The United States Congress controls the federal budget and allocates a portion of money to the Head Start program. In 2018, South Carolina received \$116,934,865 for

Head Start programs (Department of Health and Human Services, 2019). Federal Head Start spending equated to \$8,312 per pupil in South Carolina in 2018 (Friedman-Krauss et al., 2019). As a categorical grant program, federal money is allocated using funding formulas to the local agencies that administer the state's Head Start programs. In South Carolina the South Carolina Head Start State Collaboration Office administers the program. Most funding is a set base amount from year to year with some need-based variation from poverty levels. Although the funding formula gives little consideration to a state's need, it ensures that funding levels remain relatively stable from year to year, regardless of demographic changes. In addition to the base, agencies are allocated money for changes in cost of living, training, technical assistance, expansion, and quality improvements. Other grant money is distributed for research and evaluation activities and for community collaboration. Head Start grantees are responsible for at least 20% of their costs without federal funds (Lemberg Children's Center, 2020). Head Start spending per pupil is significantly higher than South Carolina's state spending in 2018, but Head Start enrolls far fewer children and generally offers more comprehensive services than other preprimary programs.

Child Early Reading and Development Education Program. CERDEP operated in 2017-2018 at instructional costs of \$43,284,159.15, at a per pupil reimbursement rate of \$4,422 (SC Education Oversight Committee, 2019). Eligible students are not charged any fees for attending, including for an extended day, extended year, or summer program (South Carolina Department of Education, 2019c).

The General Assembly appropriates money to the South Carolina Department of Education (SCDE) for the CERDEP program through the Education Improvement Act and restricted state funding. Public school districts are funded directly by the SCDE. Allendale, Dillon 2, Florence 4, Hampton 2, Jasper, Lee, Marion 7, and Orangeburg 3—the *Abbeville* trial districts—receive first priority in the distribution of funds. Next, the remaining funds are extended to the rest of the *Abbeville* plaintiff districts. Additional funds are extended to school districts with poverty indexes of at least 90%, then 75%, and then 70%. Finally, the remaining funds are available to eligible districts in the rest of the state. Any district receiving CERDEP funds cannot also receive EIA 4K funding, and any unused CERDEP funds rollover into the next fiscal year (Karoly & Gomez, 2019).

CERDEP districts receive \$4,600 per pupil who is eligible for the 2019-2020 school year based on the 135-day student average daily membership, up from \$4,422 in the 2017-2018 school year (South Carolina Department of Education, 2019c). Regardless of provider, quality, or geographic factors, all CERDEP providers are currently reimbursed at the same rate per pupil (SC Education Oversight Committee, 2019). In 2019-2020, First Steps is piloting a program to increase reimbursement rates by up to 10% to providers with quality ratings of B or higher in order to cover a larger portion of high-quality private providers' costs (Karoly & Gomez, 2019). The pilot program ties funding to quality standards, which will hopefully support providers' efforts to improve the quality of their programs and encourage providers seeking higher reimbursement rates.

The Education Oversight Committee with the RAND Corporation completed a cost analysis of CERDEP in 2019, using 2017-2018 data. The report found three large cost drivers to

be staff compensation, local cost variation, and class size. Considering all costs, operating CERDEP in a public-school district costs about \$11,000 annually per pupil. Comparatively, operating CERDEP in a center-based setting costs approximately \$7,000 annually per pupil. The report attributes the cost differential to higher salaries and benefits in public-school programs. Enormous cost variations mean that there is a range across individual providers of how much their costs are actually reimbursed by the state. CERDEP's low reimbursement rate causes large funding gaps; this is especially true for providers with higher expenditures on staff compensation and other indicators of high-quality programming. Public providers must find alternative sources of revenue because they are required to follow a minimum salary schedule for public school teachers (SC Education Oversight Committee, 2019). School districts may be able to span the funding gap with district general funds or other public money the program has access to. Private centers, however, cannot access these public funds and must balance the budget by reducing expenditures on staff salaries and fringe benefits (Karoly & Gomez, 2019). Without minimum salary schedules, private centers may have limited abilities to fund educators' salaries. Decreased salaries in private centers may attract less qualified applicants and increase staff turnover—two conditions that are detrimental to program quality.

Alabama, Mississippi, Tennessee, and Virginia all have policies that explicitly require local funds to bridge the gap between the state's reimbursement rate and the actual cost of educating a four-year-old. South Carolina does not mandate local cost sharing, so standard mechanisms and procedures are not in place to fully fund public preprimary programs. Other sources of revenue may come from federal funds such as Title I in public school programs or the Child and Adult Care Food Program to cover the cost of food (Karoly & Gomez, 2019). South

Carolina's lack of required local contributions marks a key policy weakness because local funding does not rise to the level of program costs.

For the General Assembly to fulfill its constitutional duty of offering students the opportunity to increase their readiness for primary school, CERDEP needs to be fully funded. The state needs to prioritize funding for the program or explicitly define how local districts are expected to cover the funding gap. As it exists in its current state, CERDEP does not have the necessary funding or cost sharing mechanisms to reach all four-year-olds at risk of not being ready for primary school because of poverty.

Education Improvement Act Child Care Development Program. Through the Education Improvement Act, school districts are allocated funding based on the number of kindergarten students who qualify for free or reduced-price lunch. Districts receive at least 90% of the amount from the previous year to aid continuity. The program is funded as part of a one-cent sales tax supporting various public education projects (Friedman-Krauss et al., 2019). In 2019-2020, the State appropriated \$15,513,846 through the Education Improvement Act (South Carolina Department of Education, 2019a). EIA 4K has a stable source of revenue and continuous funding stream. In this way, its funding is more secure and predictable than the other public preprimary programs in the state. Despite its stable funding, EIA 4K fails to reach as many children as CERDEP and only offers students a half day program.

SC Vouchers. The SC Vouchers Program was first created through funding from the federal block grant in 1990. The Department of Social Services administers the voucher

program, an allowance for low-income working families to contribute to preprimary programs or wraparound services for their children. Funding comes from the Child Care and Development Fund, Social Services Block Grant, and State dollars (*SC Voucher Program Policy Manual*, 2016). Parent copayments are based on income and family size and range from \$6 to \$20 per week (South Carolina Department of Social Services, n.d.). The value of a voucher varies based on the selected provider's location and ABC Quality rating in South Carolina's Quality Rating and Improvement System. All vouchers have lower reimbursement rates per hour compared to CERDEP's flat rate (Karoly & Gomez, 2019). While it is important to recognize the value of wraparound support services as critical to educating children, parental copayments represent a significant barrier to access for many families. The program targets low-income families but requires them to contribute weekly sums of money. The variable value based on quality may help families to consider the quality of program they choose for their children. Using a set reimbursement rate would appear to give the voucher better value for money at a lower cost program, but by increasing the value of the voucher for a high-quality program, the parents may have more high-quality program options.

Primary and Secondary School Funding

South Carolina's current education funding system for kindergarten through twelfth grade has developed through a "piecemeal and fragmented" process (South Carolina Revenue and Fiscal Affairs Office, 2019). South Carolina public schools are funded by the Education Finance Act of 1977, the Education Improvement Act of 1984, restricted state funding, the Education

Lottery Act, federal programs, and the Child Development Education Pilot Program (South Carolina Department of Education, 2019a).

The State appropriated \$1,817,608,440 to the Education Finance Act in 2019-2020. The state distributes this money to 82 school districts through a standard formula. The formula designates 20 student attributes as distinct classifications. The average daily membership for each classification is multiplied by an assigned factor to reach the weighted pupil units (WPU) for each category of student attributes. Weights are assigned based on students who have various disabilities, enroll in advanced coursework, are designated as high achieving, have limited English proficiency, require academic assistance, and have a family income under a poverty threshold. Each district's WPU is summed and multiplied by a standard per pupil amount, the base student cost (BSC) (South Carolina Department of Education, 2019a). The resulting amount should theoretically represent the cost of educating all students in the school district, as determined by the state. The formula system of funding will allow more stable, predictable amounts of money to flow to public school districts.

The amount needed by the district is then divided between the state's responsibility and the district's responsibility. Each district has a determined "index of taxpaying ability" as calculated by the value of taxable property in the district relative to all other districts. The district's capacity to pay taxes is multiplied by the total statewide collective local share of funding, approximately 30%. This amounts to the total amount of funding that the local government is responsible for, and the State is responsible for bridging the gap to the determined cost of the program (South Carolina Department of Education, 2019a).

Local governments raise revenue through sales, use, excise, and property taxes. Since 2007 all owner-occupied residences have been exempted from school operating taxes in South Carolina (*South Carolina Department of Revenue, 2019*). With a regressive tax system, proportionally larger property, sales, and excise tax burdens are imposed on families with the lowest 20% of incomes compared to families with the highest 1% of incomes (Institute on Taxation and Economic Policy, 2018). The controversial use of local property taxes directly intertwines the wealth of the school district's surrounding community and the amount of funding the school district receives to educate students. Communities with less wealth base a disproportionate burden of local property taxes, and their school districts receive less revenue.

In 1984 the Education Improvement Act (EIA) initiated South Carolina's efforts to improve the quality of its school system. The State funds the program with a one-cent increase in state sales taxes. In 2019-2020, the State appropriated EIA \$861,235,000 for 22 different programs, including EIA 4K and CERDEP (General Appropriations Bill for Fiscal Year 2019-2020, 2019). EIA utilizes allocation formulas for each program based on a range of factors, including number of students, number of teachers, grants with defined eligibility, poverty levels, availability of funds, student attributes, teacher attributes, school attributes, previous allocations, district demographics, and weighted pupil units (South Carolina Department of Education, 2019a). The funding mechanisms through EIA are complex and utilize many characteristics and conditions. Increased complexity for funding mechanisms increases administrative costs and likely disincentivizes community involvement in any education finance reform.

Restricted state funding is money that the state has set aside for a specific program or purpose. CERDEP is a program that receives state restricted funding. Based on the program,

funding formulas consider factors that include average daily membership, student to instructor ratios, nominal amounts per school, district participation in federal programs, district need, and student attributes (South Carolina Department of Education, 2019a).

The Education Lottery Act funds infrastructure projects that improve school safety using funds from the Department of Education. Funding is distributed using district grant applications, prioritizing applicants with the greatest need. Most funds from the Education Lottery Act are distributed for higher education purposes (South Carolina Department of Education, 2019a).

The United States federal government offers funding for multiple programs, including for career and technical education, targeted school improvement efforts, migratory populations, youth in correctional justice facilities, rural areas, language instruction, homeless students, medical services, special education, food reimbursement, mental health services, and more. Federal funding to South Carolina amounts to over \$990 million, with some programs' funding still undetermined (South Carolina Department of Education, 2019a).

Federal, state, and local governments generate tax revenue to fund public programs. Education is a large expenditure and utilizes many formulas and budgeting processes to try and get funding to the schools, teachers, and students who need it. The U.S. Federal Government, Education Lottery Act, and state restricted funding generally fund specific programs. The Education Improvement Act considers various conditions and characteristics to distribute funds to 22 programs, including CERDEP and EIA 4K. The Education Finance Act collects data on student characteristics to try and approximate a school district's level of financial need. With all of these mechanisms working together, the state still does not provide districts with the funding they need to successfully educate students.

An independent education news organization, Education Week, ranked South Carolina 29 out of 51 for devotion to education spending and 35 for equitable distribution of funds. As bleak as these funding ratings seem, the state's average per pupil expenditure is \$11,564, which is only slightly below the national average of \$12,756, adjusting for regional differences. South Carolina's high rate and dense concentrations of childhood poverty mean that policymakers need to devote more resources—beyond the national average—for students to achieve at similar levels to their peers in other states and countries. Unfortunately, student performance is not close to the national average. Education Week ranks South Carolina 41st in student performance, 41st in socioeconomic achievement gaps, and 50th in improvement overtime (Education Week, 2019). To compete on the national stage, South Carolina needs to make changes in education finance.

In January 2019, South Carolina's Governor, President of the Senate, and Speaker of the House of Representatives penned a letter to the South Carolina Revenue and Fiscal Affairs Office to request a report on the current state of education spending and to create a new funding model with the goals of “efficiency, transparency, accountability, and affordability” and a focus on equity (McMaster et al., 2019). Policymakers and officials recognize the need for education finance reform, but it is critical for this momentum to include early childhood programs as a core tenet of the public education system.

Despite enormous education funding changes, the proposed model and report do “NOT address or impact funding...outside the basic educational program for kindergarten through 12th grade, such as 4-year-old kindergarten” (South Carolina Revenue and Fiscal Affairs Office, 2019, p. 4, emphasis in original). The system to fund primary and secondary education is expressly and actively separated from the system of preprimary education despite overlap in

legislation, providers, revenue streams, and students. If South Carolina continues to silo and underfund its public preprimary education system, then its students will continue to be deprived of a minimally adequate education. Estonia offers a striking contrast with its well-funded, continuous preprimary and primary school system.

Table 6*South Carolina Public Preprimary Program Summary*

Program	Eligibility	Full or Half Day	Cost to Parents	Providers	Curriculum	Educators
Head Start (1964)	Income-based	Full day	Free	Head Start centers, public schools, childcare centers, and family childcare homes	No single curriculum	At least half of all Head Start teachers across the country need a baccalaureate degree
						Center-based teachers must have at least an associate degree
						May not receive compensation above regional average
CERDEP Public (2006)	Income-based and average poverty index in district	Full day	Free	Public schools	Choice of 5 curricula or Montessori	Certified by South Carolina in early childhood education
	Considerations for developmental delays					Compensated with minimum salary schedule
CERDEP Non-Public (First Steps) (2006)	Income-based	Full day	Free	Faith-based, community-based, other private, and Head Start settings	Choice of 2 curricula	At least a two-year degree in related field and progressing in education program
	Considerations for developmental delays					Compensated with lower salaries and fewer fringe benefits compared to public CERDEP teachers
EIA 4K (1984)	Income-based	Half day	Free	Public schools	Approved by the SC Department of Education	Certified by South Carolina in early childhood education
	Considerations for developmental delays					Compensated with minimum salary schedule
SC Vouchers (1990)	Income-based Parents must be attending school, training, or working	Depends on provider	\$6-20 weekly	Center, group childcare home, religious setting, school, employer, family member, friend, or neighbor	No requirements	No requirements

Estonia

Background

In 1840, Elisabeth Uexküll, the widow of a baron, opened one of the earliest Estonian early childhood education centers for children ages two to eight from disadvantaged families with working mothers in Tallinn, Estonia's capital. Simultaneously, another care institution for infants opened in Järvamaa, a county in central Estonia (Torm, 2011). Estonia's earliest preprimary schools were opened with humanitarian intentions to support children from low-income families.

At the beginning of the 19th century, Estonia's tightened relations with Western Europe influenced the creation of several welfare organizations by more elite members of society. The second half of the 19th century saw the emergence of preprimary institutions by landlords, factory owners, and private individuals. Some centers were called Kleinkinderschule, originating from the British term "nursery schools", another instance of western influence. Initially early childhood education centers were rigid settings without regard for the importance of play (Torm, 2011). Since play was considered trivial, activities focused on handicraft, religion, and reading—mostly in Russian and German (Ugaste & Õun, 2008). Quickly more preprimary schools opened throughout Järvamaa and spread outside of Tallinn (Torm, 2011). Beyond their humanitarian origins, preprimary institutions were opened by individuals who realized they had a stake in early childhood education too—like factory owners recognizing the benefits of early childhood institutions for increasing their workforces.

Prominent figures in Estonian society led the opening of Tartu Estonian Preschool Society in 1905 (Torm, 2011), which is considered the inception of national preschool

institutions because the language of instruction was Estonian (Ugaste & Õun, 2008). One of their goals was to deter Russian influence, despite being under imperial Russian rule, by instructing young students in their native language. In February 1918, the Republic of Estonia was established, but was still trapped in conflict between Russia and Germany until 1920. After World War I, local governments also started opening preschool institutions, in conjunction with private individuals and societies. The Tallinn City Council opened a network of five free schools for children from low-income families in 1919 (Torm, 2011). The number of public and private preprimary institutions grew steadily.

By the early 20th Century, local governments owned one-third of preprimary schools, with the remainder provided by individuals and societies. In 1938, 78 preschools served 3,961—24.4% municipally owned—but only 6 were in rural countryside areas. Two years later, Estonian society began to perceive preschools as educational institutions, and therefore, the management of all preprimary centers was transferred to the Ministry of Education in August of 1940 (Torm, 2011). This marked an important turning point for perceptions of preprimary education; Estonian society began accepting early childhood education as a continuous part of the broader public education continuum.

The next four years, 1940 to 1944, saw tumultuous changes with the disruption of war, the re-privatization of preschools under German occupation and the disbanding of Tallinn preschools due to Soviet bombings. At the end of the 1940s, 104 preschools educated 5,453 children, mostly between three and seven years old. By 1950, the number of preschools doubled, with 81 nurseries serving children younger than three under the management of the Ministry of Health Care (Torm, 2011). The care of young children requires attention to their health and

wellbeing, so it is not uncommon for health and education agencies to work together in the provision of preprimary programs.

After Soviet occupation, a huge influx of immigration from Russia forced the expansion of the school system between 1945 and 1989. Russians and Estonians maintained widely different attitudes and cultures, so education diverged into two parallel systems of distinct Russian and Estonian schools (Krull & Trasberg, 2006). Soviet authorities created a system of unified care institutions to strategically spread communist ideologies throughout Estonia, suppressing children's expressions of individuality (Ugaste & Õun, 2008). The Soviet Union emphasized the important role of early childhood education for the social state. Preprimary schools were critical to increase the number of women in the workforce and to raise the next generation of communists through a systematic approach to cognitive development (Ugaste & Õun, 2008). The communist regime approached preprimary education as a public good to be provided by the state with specific ideological goals.

In the 1950s, attention turned to rural preschool institutions as the growing number of collective farms increased employment in the countryside. From 1951 to 1955, the state opened 2,893 new seats in preschools. By the end of the decade, state-owned preprimary schools instituted uniform systems of pedagogy. Standard models of large preprimary schools were established in more densely populated areas and eventually spread to the countryside (Torm, 2011). Booming industries and production increased the employment of women and pressured the expansion of preschools. In 1987, 747 preschools served 91,300 students, accounting for 70% of children ages one through six—although the figure represents just 55% of children in rural areas (ibid., p. 87). The early 90s saw a drop-off in Estonia's birthrate and thus a decrease

in preschool enrollment figures—dropping to just 31% of children in rural areas (*ibid.*, p. 85).

The disproportionately lower enrollment of children in rural areas had been persisting for many decades.

The Soviet regime held a steadfast commitment to a public system of education without any tuition fees, including higher education. Soviet leaders also recognized the value of educational research, mostly as an ideological strategy (Krull & Trasberg, 2006). Many Estonian educators were opposed to a centralized system of schooling imposed from Moscow that suppressed Estonian culture during the Soviet era. Their dissatisfaction swelled to public consciousness at the Estonian Teachers Conference in 1987. Moscow swiftly rejected the teachers' call for changes to the mandatory curricula, which further energized the movement for Estonian independence (Krull & Trasberg, 2006). In 1988, Estonians declared the overruling of Soviet legislation by Estonian legislation. One year later, Estonian leaders published principles for the reorganization of public education, laying the foundation for autonomy and progressive ideas to be introduced into the school system (Krull & Trasberg, 2006).

Regaining independence from the Soviet Union in 1991 brought a period of uncertainty and decision making about the development of education, including at the preprimary level. Minister of Education Ferdinand Eisen iterated the importance of maintaining certain Soviet externalities, particularly the “widely developed system of preschool establishments” despite its progress within the context of Soviet ideologies (Torm, 2011, p. 88). Essentially, the Minister of Education did not want Estonian society to reject the robust system of preprimary institutions because of their development under communist rule.

The Ministry of Education joined forces with the Ministry of Finance to inform privately owned preschools that their control would be transferred to local governments. As the country experienced ideological shifts toward privatization, contrary to Soviet notions of collectivism, the Ministries' decision to end private ownership of preschools was not supported by the central government (Torm, 2011). The operation of preprimary institutions remained divided between public and private providers.

The network of preprimary schools continued from Soviet rule, but Estonian leaders wanted to abandon a standard curriculum with collectivist practices in favor of instruction that considered children as individuals with diverse needs and characteristics. Additionally, preprimary institutions took a cooperative approach to parental engagement, rather than the strict enforcement of moral standards on children and their families (Ugaste & Õun, 2008). Estonia emphasized children's abilities, independence, and holistic development, in direct opposition to former Soviet practices in preprimary education.

By 1993, the Estonian government had passed and enforced the Estonian Law on Education and the Basic Schools and Upper Secondary Schools Act. These two documents established unified principles of school governance, finance, and operations (Krull & Trasberg, 2006). In another move away from Soviet ideas on schooling, Estonia raised the compulsory education age back to seven, forcing six-year-old students back to preschool centers and necessitating the creation of a combined preprimary and primary school setting (Torm, 2011). This combined setting physically reflected preprimary education's rightful place alongside primary education.

While all primary schools were state-owned by 1994, half of preprimary schools were privately owned. State-owned preprimary schools were financed by local government entities—municipalities, towns, and cities. When local governments assumed control over more preprimary schools, many were inexperienced and under-resourced (Torm, 2011). General education schools also struggled with their newfound autonomy. Schools did not have clear visions and were unprepared to make critical operational and instructional decisions (Krull & Trasberg, 2006). This period saw diminished attention on early childhood education and raised questions about policymakers’ understanding of the field (Torm, 2011). The years between 1994 and 2004 saw a push for Estonian education to strategize, modernize, and democratize with the impending prospects of joining NATO and the European Union—a symbol of alignment with Western ideologies. A fundamental aim was to integrate the two separate school systems (i.e., Russian- and Estonian-medium) with a cohesive curriculum, including a commitment to computer literacy (Krull & Trasberg, 2006).

Table 7

Summary of Preprimary Expansion 1840-1994

Year	Preprimary Expansion
1840	ECE center for children 2-8 from low-income families with working mothers in Tallinn
	Care institution for infants opened in Järvamaa
1850-1900	Emergence of preprimary institutions by landlords, factory owners, and private individuals
1905	Opening of Tartu Estonian Preschool Society
1919	Tallinn City Council opened a network of five free schools for children from low-income families
1938	78 preschools served 3,961—24.4% municipally owned—but only 6 were in rural countryside areas
1940	Management of all preprimary centers was transferred to the Ministry of Education
1940-1944	Re-privatization of preschools under German occupation

1945-1989	Soviet authorities created a system of unified care institutions to strategically spread communist ideologies
1950	104 preschools educated 5,453 children, mostly 3-7 years old
1951-1955	State opened 2,893 new seats in preschools
1987	747 preschools served 91,300 students (70% of children ages 1-6)
1990	Only 31% enrollment in ECE in rural areas compared to 68% enrollment in urban areas
1991	Ministry of Education joined forces with the Ministry of Finance to inform privately owned preschools that their control would be transferred to local governments but not supported by central government (not enforced)
1993	Compulsory education age raised to 7, forcing 6-year-olds back to ECE
1994	Half of preprimary schools were privately owned

In the past few years, preprimary education has gained more attention in Estonia. The Estonian Lifelong Learning Strategy addressed multiple preprimary challenges, including increasing the number of placements and gaining salary parity between preprimary and primary school educators (Ministry of Education and Research, 2014). Other current debate topics in preprimary education center around abolishing parental fees, unifying Russian and Estonian speaking schools, drafting a new national curriculum, and increasing educators' salaries.

Estonia's long history of preprimary education has mostly recognized preprimary education as the first stage along the public education continuum. While the Soviet regime violated Estonia's independence and oppressed its people, a robust system of preprimary education institutions prevailed as a positive outcome. As a result, preprimary education sits comfortably within Estonia's system of public education today and enrolls most of the country's students before they enter primary school.

Municipal Preprimary Schools

Background. According to the Preschool Child Care Institutions Act of 1999, “A rural municipality or city government shall provide all children from eighteen months to seven years of age...the opportunity to attend a preschool institution.” All children, starting at the age of 18 months, are eligible—and entitled—to attend a preprimary school though this is not required. Local governments determine the geographic catchment area where they guarantee program spots for residing children, but parents are also able to enroll their children in any vacant seats outside of their zoned preprimary institution. Children within the catchment enroll first, and then remaining seats open to residents in different municipalities. Priority is given to applicants with parents who are employed in the preprimary school’s region (Preschool Child Care Institutions Act, 1999). Public preprimary education is treated as a public good that all residents have access to.

In addition to defining eligibility, the Preschool Child Care Institutions Act outlines the functions of preprimary institutions, with considerations for age, sex, and individual needs and characteristics of each child (Preschool Child Care Institutions Act, 1999). Estonia’s public preprimary system directly contrasts the Soviet practices imposed upon them by recognizing and celebrating children’s individuality, but still operates under a standard curriculum across the whole country.

Table 8

Preprimary Education Legislation Summary

Year	Legislation	Function
1993	Estonian Law on Education	Established unified principles of school governance, finance, and operations
	Basic Schools and Upper Secondary Schools Act	

1999 (updated 2018)	Preschool Child Care Institutions Act of 1999	Government shall provide all children from 18 months to 7-years-old the opportunity to attend a preschool institution
		Outlines the function of preprimary institutions
		Created the government regulation for a standard preprimary curriculum—The National Curriculum for Preschool Child Care Institutions

Enrollment. In the 2018-2019 school year, Estonia enrolled approximately 65,000 children between one and seven years old in 612 institutions, 90% of which were municipally owned. While not mandatory, approximately 89% of children between three and six attended a formal preprimary institution in 2019 (*Eesti Statistika*, 2020). Across socioeconomic backgrounds, children have similar access to preprimary education programs (OECD, 2020). Estonia enrolls students at high rates with high levels of equitable access in their preprimary education system.

The *Estonian Lifelong Learning Strategy 2020* established a goal of “creating flexible opportunities for pre-school education” so that all children will have at least one year of participation in the curriculum prior to starting primary school. The burden of this goal falls onto local governments to ensure enough placements (Ministry of Education and Research, 2014). Over the last decade, the number of preprimary institutions has grown steadily but dropped off in the last few years; total enrollment follows a similar trend. The gross enrollment of children ages one to six has grown slightly in the past ten years, but the net enrollment of students between three- and six-years-old has consistently hovered between 86% and 90% (*Eesti Statistika*, 2020). The decrease in the number of institutions and total enrollment is likely due to a decrease in

population growth in Estonia in the past few years rather than parents choosing not to enroll their students in preprimary school.

Table 9

Preprimary Education Enrollment in Estonia 2008-2018

Year	Institutions	Enrollment (thousands)			Enrollment Percentage	
		Total	Urban	Rural	Ages 1-6 (gross)	Ages 3-6 (net)
2008	636	62	45	17	74	90
2009	635	63	47	16	73	87
2010	638	64	48	16	72	86
2011	643	66	50	17	72	87
2012	644	67	50	17	73	87
2013	652	69	51	18	75	88
2014	653	69	50	19	76	88
2015	634	68	50	19	77	89
2016	635	68	49	19	77	88
2017	628	67	48	19	77	88
2018	618	66	48	18	77	89

Source: Eesti Statistika (2020)

Providers. After multiple switches between state acquisition and privatization efforts, about 90% of preprimary schools were municipally owned in 2018 (European Commission, 2018). The proportion of public to privately owned preprimary schools is nearly identical to the primary school system (European Commission, 2018). The majority of private preprimary schools are located in urban areas, where demand is high (OECD, 2016). There are various provider settings for public preprimary schools: crèches serve children up to the age of three, preschools enroll children up to age seven, and preschools may operate in the same facilities as primary schools (Preschool Child Care Institutions Act, 1999).

Curriculum. Regardless of the provider setting, all preprimary schools operate under the same national curriculum. The Preschool Care Institutions Act, established in 1999 and updated

in 2018, created the government regulation for a standard preprimary curriculum throughout Estonia. The National Curriculum for Preschool Child Care Institutions establishes the objectives, principles, and organization of teaching and learning as well as the expected skills and development of children. These objectives and principles function as a broad set of standards that still allow for flexibility and adaptability. One intended function of the national curriculum is to support quality learning environments for all students (OECD, 2020). Striving for continuous and comprehensive development of students, the national preschool agenda also recognizes the importance of cooperation between schools and students' families (Kikas & Lerkkanen, 2010). Working alongside families to support their children, preprimary schools approach development and learning more holistically with greater emphasis on children learning at their own paces to master competencies. Estonia's curriculum focuses on play, social, cognitive/learning, and self-regulating skills. The content areas are as follows: the child and their environment, speech and language, mathematics, Estonian as a second language, art, music, and physical education (Preschool Child Care Institutions Act, 1999). Students enrolled in preprimary schools who complete the curriculum receive a certificate to recognize their development (National Center on Education and the Economy, n.d.). Regional advisory centers assess the development and school readiness of children not enrolled in preprimary schools. Parents submit these reports to the primary schools their children are attending (Ministry of Education and Research, 2019b).

The curriculum defines the field of preprimary education and decides the subject matter, knowledge, and skills that children must acquire in preprimary schools, but the individual preschool institutions plan activities and schedules that accommodate "cultural identity and

traditions of the area” (Preschool Child Care Institutions Act, 1999). While the national curriculum provides overarching goals, local governments and preprimary schools have freedom to accommodate regional idiosyncrasies. Every preschool institution develops its own curriculum around local needs and children’s interests and abilities within the scope of the national curriculum (OECD, 2020). With the involvement of parents, preprimary teachers prepare and develop the curriculum to be used by the institution, which the director must approve (Preschool Child Care Institutions Act, 1999). Educators are left to choose their preferred instruction methods to teach the approved curriculum (UNESCO, 2006). The most popular pedagogical approach is Open Society Institute’s “Step by Step” child-centered method (Kikas & Lerkkanen, 2010). Step by Step reflects a growing trend toward democratization since Estonia’s independence (Kikas & Lerkkanen, 2010). Encouraging play and critical thinking, the program respects individual differences and promotes decision making and parental involvement (Stasz et al., 2008). These principles directly align with the national curriculum’s support for individualism and family engagement.

Local governments determine the language of instruction in preprimary schools. In schools where the language of instruction is not Estonian, Estonian language instruction is compulsory starting for children at five or six years old (UNESCO, 2006). In 2007, about one-third of children attended preprimary institutions that chose Russian as their language of instruction (Council of Europe, 2010). In the 2019-2020 school year, 10,493 at 101 preprimary schools used Russian as the language of instruction, a steady decline over the past decade (Estonian Ministry of Education and Research, 2020). The Estonian government has made progress in the past few years to merge Estonian and Russian speaking schools. In 2019, one city

council group proposed a bill to change the language of instruction to Estonian in all schools in Tallinn within six years (Whyte, 2019d). Estonia does not want two parallel school systems, but the country should consider protections for the Russian-speaking minority population. Because language learning is effective in younger people, preprimary institutions are an ideal place to address the Estonian-Russian language division.

A diverse group of stakeholders convenes to prepare the broad objectives of the national curriculum. The group includes specialists from the Ministry of Education, pedagogical experts, preschool and nursery-school teachers' unions representatives, child psychologists, and members of the Board of Pre-Primary Education (UNESCO, 2006). To update the curriculum, a third working group started drafting a replacement in 2018. The second group's draft was dismissed for being reminiscent of the Soviet Era with formal regulations that would stifle educators' academic freedom (Whyte, 2019c). Those in opposition to the second draft want to actively combat any practices or policies in education that resemble Soviet ideologies.

Educator Qualifications and Compensation. Preprimary teachers are required by the Ministry of Education to complete the first level of higher education in Estonia, which is three years for a baccalaureate degree. Primary and secondary teachers must complete two more years of higher education for their master's degrees. Preprimary educators who choose to complete their master's degree are qualified to manage a preprimary school, to counsel colleagues, and to teach students with special needs (European Commission, 2020b).

Given the required credentials, the Estonian government aims to align teachers' compensations with their qualifications. The Estonian Lifelong Learning Strategy 2020, Estonia's strategic development plan, prioritizes increasing all teacher salaries in order to "make

employment in a school a viable option for the best candidates” (Ministry of Education and Research, 2014). In 2011, teachers’ salaries were 64% of the salary for workers of the same education level. By 2020, Estonia planned to dedicate funding to reach salary parity between teaching and other careers with the same education levels (Ministry of Education and Research, 2014). Until 2017, preprimary teachers did not have a national minimum salary, so their wages were at the discretion of local authorities. Beginning September 1, 2017, municipalities were required to pay preprimary teachers at least 80% of the national minimum salary of primary teachers. A year later, the state was set to give municipalities funding specifically to raise the salaries of preprimary teachers to reach 90% of the minimum salary of general education teachers. The salaries of preprimary teachers with master’s degrees were to be brought up to par with the general education teacher minimum (The Baltic Times, 2017). From 2017 to 2020, Estonia has made strides in gaining salary parity between preprimary and primary school teachers. Prior to 2017, Estonian preprimary teachers received some of the lowest salaries in the OECD. The difference between preprimary and primary teachers’ salaries was among the highest in the OECD (OECD, 2016). Set as a national agenda item, Estonia has nearly closed the salary gap between preprimary and primary teachers—a clear signal that preprimary teachers deserve the same treatment as those teaching the same students just one year later.

Table 10

Preprimary Teachers’ Salaries Compared with Primary Teachers

Year	Preprimary Teachers’ Salary as Percent of Primary Teacher Minimum
2017	80%
2018	85%
2019	90%

Source: Early Learning and Child Well-being in Estonia (OECD, 2020)

Preprimary School Funding

Estonia spends an average of \$6,514 per student on early childhood education, totaling 1.16% of GDP in 2016 compared to the OECD average of 0.8% (OECD, 2020). Before 2017 Estonia spent less than half of the OECD average per pupil on preprimary education, resulting in low salaries for early childhood educators and creating concerns and implications for the quality of services provided (OECD, 2016). The increase in government spending has resulted in greater compensation for teachers (OECD, 2020).

Various funding streams intersect to provide preprimary services. Local authorities receive funding from the central government for teaching Estonian as a second language, based on the number of study groups, and for educators' professional development training, based on the number of students. The European Union offers infrastructure investment grants for new preschool locations based on an assessment of needs ("The Funding of School Education," 2017). Across the country, 98.4% of preprimary funding comes from the public sector (OECD, 2016). Municipally owned preschools are financed by the local government budget. If a municipality has a shortage of preschool program seats for its residents, local governments may also offer funding to private preprimary schools. Managers of private preschools and local governments both have financial autonomy with supervision at the state level (European Commission, 2018). Estonia balances central funding mechanisms with local control over decision making.

Each municipality determines the budget of individual preprimary schools (OECD, 2016). Some local governments set fees for preprimary schools. Often parents cover the cost of

food for their children and a fee for participation, although the share of costs per child cannot exceed 20% of the nationally established minimum salary. Municipalities recognize varying financial needs of families and cover some or all of the preprimary school fees for students with less financial stability (European Commission, 2018). Parental fees are in direct opposition to Estonia's treatment of preprimary school as a public good that all children are entitled to access.

Tallinn charges families with children in municipal preschools 12.2% of the minimum wage for the cost of tuition. Therefore, each increase in the minimum wage is accompanied by an increase in tuition fees. The controversial policy has endured despite some claiming it is illegal (Wright, 2019). The Social Democratic Party and the Reform Party came to an agreement that the preprimary tuition fees will not increase in Tartu next year, despite an increase in the national minimum wage. The parties did not go as far to disassociate the cost of tuition and the minimum wage, citing potential implications for quality (Wright, 2020).

Trends indicate potential moves away from parental contributions. Starting in 2020, the Tallinn mayor has abolished catering fees for parents with children in public and private preprimary schools, following suit after Tartu covered the cost of young learners' school lunches (Whyte, 2019b). Removing tuition fees has not gained the same traction. The progressive Reform Party proposed a bill that would eliminate the cost of preprimary school for parents in Tallinn, but the move was delayed. The opposition Centre Party cited the enormous cost to the city and the options already in place for low-income families to receive free or reduced tuition. An education spokesperson for the Centre Party conceded that abolishing tuition fees would eventually be inevitable (Whyte, 2019a). The Organisation for Economic Cooperation and Development's (OECD) 2016 report on school funding in Estonia echoes the move to eliminate

parental fees. The OECD recommends that the Ministry of Education and Research fully fund preprimary education and eliminate tuition fees, as it did for tertiary education in 2013. With the Ministry assuming full financial responsibility, the funding mechanism would more closely resemble the public funding of primary and secondary schools (OECD, 2016). Removing tuition fees would bring Estonia's preprimary education system much closer to operating in the larger continuum of public education.

Local governments fund preprimary schools entirely from general revenues. More than 80% of local governments' budgets come from grants and transfers from the central government. In 2013, local government revenue was composed of 49% shared income tax, 24% operating grants, and 9% investment grants. The remaining revenue is comprised of 10% local fees and charges, 6% local taxes and concessions, and 2% asset revenue and other sources (OECD, 2016). Educational grants from the national government account for about 15% of all local government revenue. Local governments also receive an "equalization grant" to cover gaps between local tax revenues and a standard level of services needed by the population. About half of all local revenue comes from the shared Personal Income Tax; local governments receive 11.6% of gross personal income declared by residents, even for residents earning below the threshold to pay any income taxes as added protection for poorer municipalities (OECD, 2016). Less than 20% of local government budgets originate from sources that the local government controls rate-setting and collection. Because of the centralized funding streams, local government revenues per capita are relatively similar between jurisdictions with various socioeconomic compositions (OECD, 2016). Centralized funding allows for a more equitable distribution of government revenues

because each local community's wealth is not directly determining the funding their schools receive.

Primary and Secondary School Funding

Education spending accounts for 35% to 38% of total local government spending. Local governments receive grants from the national government specifically for personnel salaries, professional development, food, and textbooks at a standard rate based on the number of students. Schools' other operating costs are funded by the municipal government. In 2012, national government money covered 55% of local spending on primary and secondary education. Just like preprimary education, local governments utilize revenue from the Personal Income Tax, but unlike preprimary schools, primary and secondary schools cannot charge fees. Privately managed schools can charge fees and receive public funding at the same rates as public schools (OECD, 2016).

Throughout the 1990s, a per pupil funding formula was developed and introduced in Estonia. Eight coefficients based on socioeconomic and demographic characteristics altered the per student amount. To protect small rural schools in 2008, the funding formula was overhauled to allot funding based on the number of classes. Four years later, the formula returned to a per pupil basis with a coefficient to increase funding to rural areas while also pressuring municipalities to consolidate schools, mostly at the secondary level. There are adjustments for the student to teacher ratio in each municipality, students with special needs, and students receiving instruction in Russian. The number of full-time personnel positions is determined based on the number of students at each level, multiplied by the national minimum teachers'

salary, and increased by 20% to allow for some autonomy at local levels. Municipalities typically do not contribute local revenue to supplement the earmarked grant from the national government. Staff compensation as a proportion of total education is below the OECD average for primary and secondary education, so Estonia has stated its commitment to raising teachers' salaries in the Estonian Lifelong Learning Strategy of 2020 (OECD, 2016).

Local governments appropriate money to each municipally owned school and develop their budgets. Certain large jurisdictions utilize a variation of the national formula to determine the funding level for each school. Small local governments typically carryover budgets from year to year with minor alterations. Within the constraints of the budget, school managers make decisions on staffing, salaries, and class sizes (OECD, 2016).

In addition to local appropriations, schools have a limited ability to generate revenue on their own. Parents and organizations are permitted to make donations to schools, and schools can also rent out their facilities. When students attend a school outside of their residential jurisdiction, their zoned school transfers money to the school they choose to attend at a rate of the average per pupil operating costs that the jurisdiction is accountable for. The transfer of money between schools facilitates the option of students to choose a public school outside of their zoned neighborhood institution (OECD, 2016).

Table 11

Estonian Education Funding Summary

Source	Intended Use	Amount Determination
Central government to local governments	Teaching Estonian as a second language	Based on number of study groups
	Educators' professional development training	Based on number of students
	Personnel salaries	

	Food	Per pupil basis with population coefficients	
	Textbooks		
	Transfers of tax revenue for general funds		11.6% of gross personal income tax declared by residents
			Educational grants account for about 15% of all local government revenue
Equalization grant	Based on gaps in local tax revenue and determined level of need		
European Union	Infrastructure investments	Grants based on needs assessment	
Local governments to municipal schools	Operating costs	Education spending accounts for 35% to 38% of total local government spending	
Parents to institutions	Fee for preprimary participation and food	Based on local government discretion, not above 20% of national minimum salary	
	Donations	At individual discretion	
	Facility rental fees	At school's discretion	
Residents to local governments	General local revenue	Less than 20% of local budgets originate from sources that the local government controls rate-setting and collection	
School to school	Students transferring to school outside zoned institution	Average per pupil operating costs	

With the contribution of the aforementioned funding streams, per pupil expenditures for primary and secondary education fall between 64% and 82% of the OECD average (OECD, 2016). Despite comparatively low levels of funding, Estonia is a top performer on international exams. In 2018, Estonia performed well above the OECD average in all tested subjects with small socioeconomic gaps on the Programme for International Student Assessment (PISA) exam (OECD, 2019).

Estonia operates a centralized funding system for its education system—including preprimary, primary, and secondary schools. Concurrently, they produce highly equitable results for their students. All students have the opportunity to enter primary school with a foundation of a formal preprimary education with a qualified teacher who is paid at almost the same level as their primary school colleagues. With the elimination of parental fees, preprimary schools will be a step closer to functioning within the whole public education system.

Comparisons & Policy Recommendations

South Carolina and Estonia clearly operate their public preprimary education systems in deeply different ways. This is not novel or surprising because one is a state and the other is a country, and they function in the context of their own cultures and values. Estonia treats preprimary education as more of a public good, with broad access to public programs mostly provided by the government. South Carolina targets services mostly toward low-income children whose families cannot afford to access costly private services. Entire systems cannot easily be replicated in new cultural contexts, but societies can still share knowledge and learn from one another.

Policymakers should not try to reinvent the wheel when they can adapt and borrow successful practices—particularly for education systems. Students' needs must be met efficiently and effectively before they age out of the education system. Leaders should look to education systems that produce desirable outcomes, which change based on value systems, and borrow ideas when possible. There are three areas where public preprimary systems could be improved

with policy sharing between South Carolina and Estonia: preprimary program continuity, siloed preprimary and primary schooling, and parental contributions.

Table 12

*Features Related to Availability, Accessibility, and Continuity in South Carolina and Estonia
Public Preprimary Programs*

	South Carolina	Estonia
<p>Continuity</p> <p>How is the preprimary system continuous as a whole and with the primary system?</p>	<p>Four publicly funded ECE programs across various agencies</p> <p>In past 10 year, per pupil state spending between \$1,226 and \$3,367 for preprimary programs</p> <p>Not all programs are full day</p> <p>Overlapping legislation but separate funding mechanisms with primary/secondary schools</p> <p>Constitutional guarantee of free public-school system but limited public preprimary school access</p> <p>Limited statewide data collection</p>	<p>Estonian and Russian speaking institutions lack unification</p> <p>90% municipally owned</p> <p>National Curriculum for Preschool Child Care Institutions with local adaptability</p> <p>80% of preprimary funding comes from transfers from the central government—centralized funding system</p> <p>Large databases for transparency</p>
<p>Availability</p> <p>What kind of preprimary funding and programs are available?</p>	<p>Approximately 29.2% of all four-year-olds enrolled in full-day public ECE (2018)</p> <p>660 students on waitlists (2018)</p> <p>Huge gap between true cost and reimbursement rate of CERDEP</p> <p>Various teacher qualifications, many educators not required to have higher education</p>	<p>About 89% enrollment for ages 3-6 (2019)</p> <p>Children across socioeconomic continuum have similar access to public preprimary schools</p> <p>Large gains toward salary parity with primary school teachers in past 3 years</p> <p>Average spending of \$6,514 per pupil</p> <p>All preprimary educators have at least a baccalaureate degree</p>

<p>Accessibility</p> <p>How are preprimary programs accessible to families?</p>	<p>Limited parental choice No fees for Head Start, CERDEP, EIA 4K Parental copayments for SC Vouchers Income and developmental criteria for admission, depending on program Eligibility does not guarantee enrollment</p>	<p>Parental freedom of choice for open spots in other catchment areas Parental tuition fees; cannot exceed 20% of national minimum salary No criteria for admission All students starting at 18 months are eligible for public preprimary education</p>
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Adapted from Tomaševski (2001)

Preprimary Program Continuity

All three policy areas pose barriers to availability, accessibility, and continuity. A unified approach to public preprimary education is critical for effective expansion. If there are various public preprimary programs targeting the same populations that are funded separately, then the administrative work is duplicative and inefficient. Multiple public programs offering preprimary services with different enrollment and eligibility criteria will pose an accessibility challenge because of the added complexity for parents understanding what services their children qualify for. Navigating bureaucratic systems can be intimidating, so adding the complexity of multiple programs may deter families from accessing preprimary services.

Centralized data collection is also more difficult when dealing with different programs that have their own policies and practices in place. When programs are vastly different, their data cannot be directly compared or even aggregated. Lack of comprehensive data collection creates concerns for ill-informed policy decisions. South Carolina fails to collect state-level data for EIA 4K, which will distort evaluations of accessibility across the state. Policymakers, parents, and communities need data to effectively inform decision making. Estonia understands the importance of data to drive decisions, so the government collects and publishes large banks of data about public preprimary programs. If a society operates multiple public preprimary

programs, then the programs need to be cohesive and continuous in order to provide availability and accessibility to the families they are serving. A true understanding of a society's preprimary availability and accessibility will only be possible with accurate, comprehensive data collection.

South Carolina operates four publicly funded early childhood education programs, serving less than half of all four-year-olds in 2018: Head Start, CERDEP, EIA 4K, and SC Vouchers (SC Education Oversight Committee, 2019). CERDEP is further divided into two programs based on the providers being public or private institutions. South Carolina's programs are neither cohesive nor comprehensive. Estonia runs their public preprimary institutions within the broader framework of their public education system, where 90% of all preprimary schools are owned by municipal governments, serving 89% of three to year-year-olds in 2018 (*Eesti Statistika*, 2020). Estonia does not operate multiple public programs, so the preprimary system is far more continuous and cohesive.

Funding

South Carolina funds all four programs with different mechanisms, requiring huge amounts of administrative work. In contrast, Estonia funds preprimary schools from their municipal government budgets, most of which comes from the central government. Program funding in South Carolina comes from federal, state, and local levels in different amounts and formulas, through different agencies and at various levels of stability and continuity. Head Start uses a categorical grant program from the federal government that is partially matched by the state. Head Start funding is mostly allocated at a base amount, similar from year to year, with minor adjustments (Lemberg Children's Center, 2020). Only high poverty school districts qualify for CERDEP, and they receive per pupil reimbursement for part of their operational

costs—at an amount drastically below the true operating costs of the program (Karoly & Gomez, 2019). CERDEP funding is appropriated based on the General Assembly’s budgeting procedures and is allocated to districts based on an order of priority—starting with the districts in the lawsuit that resulted in the creation of CERDEP (SC Education Oversight Committee, 2019). EIA 4K programs are allocated based on the number of kindergarteners qualifying for free or reduced-price lunch (Friedman-Krauss et al., 2019). SC Vouchers are funded mostly by grants, and each voucher’s value changes based on the program’s quality rating (Karoly & Gomez, 2019). All of these programs operate in one state with public funds.

In a more streamlined approach, Estonia’s central government provides preprimary funding to municipal governments that have autonomy in distributing funding to individual schools. 80% of local government budgets come from the central government in Estonia (OECD, 2016). The Estonian central government, Ministry of Education and Research, and municipal governments work cohesively to fund preprimary schools with a far more streamlined approach that allows local autonomy, resulting in varying costs for families.

South Carolinian and Estonian families have vastly different access to early childhood education programs, largely as a result of funding mechanisms. South Carolina’s funding streams across all four programs operate at various levels of stability and continuity. CERDEP’s insufficient funding to limited districts marks an enormous barrier to expansion. Public CERDEP providers are able to pull funding from other public sources to bridge the funding gap, but private providers are not afforded the luxury of access to general public funds. Private providers save money by paying their teachers at a far lower rate than public CERDEP programs (Karoly & Gomez, 2019). Without full funding, CERDEP will struggle to expand enrollment because

providers will have to find even more money to span the difference between the state's per pupil allocation and the true cost of providing full-time early childhood education programs. In Estonia, public preprimary programs are funded mostly by transfers from the central government to municipalities. The central government funds specific items, like teaching Estonian as a second language and professional development, with the majority going to general operating budgets for municipal leaders to distribute. The central government collects Personal Income Taxes from those earning above a threshold. The central government transfers 11.6% of the gross personal income tax declared by residents to their municipalities, even for residents earning below the threshold and not paying income taxes. Less than 20% of local budgets originate from sources that the local government controls rate-setting and collection. Additionally, the central government provides equalization grants to municipalities based on gaps in local tax revenue and determined levels of need (OECD, 2016). All of these measures mark decisions to produce a more stable distribution of education funding and access across municipalities.

Accessibility

A society's decisions for funding levels and processes have a direct impact on who and how many people gain access to public services. Estonia's public preprimary funding system allows all municipalities to provide services to children between 18-months and seven-years-old, as guaranteed by the Preschool Child Care Institutions Act (Preschool Child Care Institutions Act, 1999). Critically, children spanning the socioeconomic continuum in Estonia have similar access to public preprimary education institutions (OECD, 2020). Estonia's high preprimary enrollment rate exists because the central government provides enough funding to municipalities

so that they can adequately fund each school. High levels of funding and equitable distribution mechanisms are critical for effective expansion of public preprimary education programs.

South Carolina's low enrollment rate reflects a weak commitment to preprimary education funding. South Carolina's public programs fail to provide preprimary services for even all of the four-year-olds deemed at risk of not being ready for primary school (SC Education Oversight Committee, 2019). The public preprimary system is equitable in the sense that children from low-income families and children at risk for developmental delays are given priority enrollment, but they are still not guaranteed enrollment. In fact, in 2018 there were 660 children on waitlists across South Carolina for CERDEP (Karoly & Gomez, 2019), and Head Start explicitly states that their providers do not have enough seats for all eligible children (*South Carolina Head Start*, n.d.). School districts maintain CERDEP waitlists at a local level for each program, which are not centralized or shared between programs (Karoly & Gomez, 2019). With four different public preprimary programs, sharing waitlists would increase access because availability in one program could be filled by a child on a waitlist at another program. Data collection and sharing remains decentralized in South Carolina.

Recommendation

South Carolina's low preprimary enrollment numbers could be improved by borrowing elements of Estonia's preprimary program continuity. South Carolina's patchwork system of programs, particularly the fully state administered CERDEP and EIA 4K programs, are serving the same functions but require twice the administrative expenditure and effort. EIA 4K serves fewer students and only requires a half-day program, so South Carolinians would benefit from the slow phase out of this program and an expansion of CERDEP. Combining these two

programs would free up administrative funding for program operating expenses. With fewer programs, an increase in funding from the General Assembly would produce a more efficient expansion of preprimary education because of administrative cost saving.

In conjunction with fewer administrative costs, fewer programs would improve enrollment efficiency by centralizing waitlists. A student at risk of not being ready for primary school should have access to any open spots in public preprimary programs. When waitlists are centralized and shared, there will be more efficient enrollment because students can more easily access any open spot regardless of the program. Estonia does not face this issue because they guarantee enrollment for all students, and students are allowed to fill any open spots in different catchment areas. Greater program continuity will be better supported with a more continuous system of funding.

Program continuity in South Carolina would be better supported with state-level data collection, modeled from Estonia's careful collection and publication of programmatic data. South Carolinian policymakers cannot possibly have a true understanding of the accessibility of its public preprimary programs without better data collection and aggregation. Central data collection should be the first step in improving public preprimary education in South Carolina in order to accurately inform all further decisions.

South Carolina's preprimary funding system may benefit from being modeled off Estonia's streamlined system of centralized funding and local autonomy. Collecting revenue at the state level and not relying on local tax collection may facilitate greater preprimary enrollment in less wealthy districts throughout South Carolina. Local districts should not have the burden of raising revenue to bridge the gap in program operating costs and the state's reimbursement rate.

Estonia collects most of its tax revenue at the central government level to distribute funding equitably to municipalities that need more support. A key point in Estonia's education funding system is local autonomy. There would likely be backlash in South Carolina over the suggestion of greater centralization because of the highly valued sense of individualism and sovereignty, but an emphasis on local autonomy could provide South Carolinian communities with a new or renewed sense of control and pride in their preprimary schools.

South Carolina's funding system would also benefit from modeling Estonia's commitment to increased funding levels. In the past few years, Estonia set preprimary funding as a national priority and created a concrete plan to invest in their youngest learners. South Carolina would benefit from a longer-term approach to preprimary funding. The state could plan sustainable increases in preprimary funding levels. Programs would be more stable and efficient if they could fully anticipate a certain level of funding every year. A long-term budgeting approach is critical for preprimary expansion.

Programmatic continuity with stable funding is critical for efficient, effective preprimary expansion. South Carolina would save administrative costs by starting a phase-out of EIA 4K. Centralizing funding with local autonomy and sharing waitlists in South Carolina would support greater preprimary access across the state with increases in long-term funding. Centralized data collection in South Carolina should be key to informing all decisions. Estonia's preprimary system is a model of centralized efficiency that South Carolina could borrow ideas from.

Preprimary and Primary System Continuity

The issue of preprimary and primary education continuity has deeply cultural roots. South Carolina's General Assembly mostly operates on the notion that preprimary education falls outside of the Constitutional guarantee of a free system of public schools. Therefore, the preprimary programs in South Carolina are funded and operated separately from the primary and secondary education systems. Contrastingly, Estonian society generally acknowledges preprimary institutions as one piece of the larger public education system. Continuity and stability are important for students, families, and whole institutions. Education systems benefit from operating along a continuum, starting with the youngest learners in preprimary school.

When preprimary education is recognized as the first step in the formal learning process, preprimary teachers, students, and schools can be valued at the same level as their primary education counterparts. Preprimary teachers can earn the more respect as professionals and better compensation, which are historically higher for primary educators. Preprimary schools can also receive greater levels of resources with the stability and continuity of primary institutions.

Funding

South Carolina siloes preprimary and primary education systems despite the overlap in students, legislation, and some facilities. They have differing preprimary and primary teacher requirements, levels of funding, and levels of access. South Carolina even funds public preprimary programs in religious settings, which marks a total departure from state laws funding public education at the primary and secondary levels. South Carolina's General Assembly allocates more resources to primary education with greater predictability. While primary

education institutions in the state are mostly underfunded, preprimary programs receive even less funding and attention. Policymakers are expected to provide minimally adequate educational opportunities for all primary and secondary school students, but this expectation does not exist for the students just one year younger than primary school age. Preprimary schools would benefit from operating more continuously with primary education. Funding preprimary programs at a primary education level would greatly improve availability and access across the state. Estonian preprimary education is mostly funded in the same way as its primary schools. A few years ago, Estonia's per pupil expenditure on education was far lower than the OECD average (OECD, 2016). Estonia made public investments to increase their spending on preprimary education beyond the OECD average. Funding levels are an indicator of how much a society values a program or service, so Estonia's increase in preprimary funding is a signal of increased importance on the nation's children prior to their admission in primary education.

Salary Parity

On average, preprimary teachers in South Carolina have lower requirements to enter the profession and are compensated at a lower rate than primary teachers. CERDEP offers insight into the potential for salary parity among teachers. Educators in private CERDEP programs are compensated at significantly lower rates, on average, than public CERDEP teachers. Public CERDEP teachers are recognized as employees of the public-school systems and are paid according to public-school salary schedules (SC Education Oversight Committee, 2019). All public preprimary teachers should be paid according to public-school pay scales when they are doing the same work just in different settings.

Estonia requires all preprimary educators to have baccalaureate degrees and all primary and secondary educators to have master's degrees (European Commission, 2020b). Estonia has invested public resources over the last three years to raise salaries for preprimary teachers closer to the minimum salaries of primary educators. Just a few years ago Estonian preprimary educators did not have a national minimum salary, and now they are paid 90% of the national minimum salary of primary educators (The Baltic Times, 2017). South Carolina would benefit from increasing their preprimary educators' salaries to be continuous with the primary education system, and Estonia should continue investing in preprimary teacher salaries.

Recommendation

As the South Carolina General Assembly considers a large overhaul of the primary and secondary education funding mechanism, policymakers should include the preprimary system. By intentionally excluding preprimary education, policymakers are making the statement that preprimary education functions outside of the rest of the public education system. South Carolina would benefit from following Estonia's lead in making intentional investments in early childhood education over the next few years. All Head Start, EIA 4K, and CERDEP educators—in public and private facilities—should receive the same salary and fringe benefits in accordance with their education levels and experience as the first step in gaining salary parity for preprimary teachers.

Preprimary and primary education continuity requires a shift in perspective in South Carolina. For preprimary schools, teachers, and students to receive the same primary-level resources, society must consider preprimary school as the first step of the public-school system. Estonia actively supports this notion by funding preprimary schools in the same way,

maintaining high standards to preprimary educators' credentials, and raising preprimary educators' salaries closer to the national minimum for primary teachers. South Carolina should follow this lead and invest resources in preprimary institutions, particularly in the context of the current education finance reform efforts.

Parental Contributions

Fees for utilizing public services mark a significant accessibility barrier for low-income families. Estonia allows preprimary institutions to charge families tuition fees for enrolling their children in public education facilities. The fees are capped at 20% of the national minimum salary, and some municipalities offer support for families with demonstrated need (European Commission, 2018). In South Carolina, Head Start, CERDEP, and EIA 4K do not charge fees to eligible families. The SC Voucher program requires weekly parental copayments between \$6-20 (South Carolina Department of Social Services, n.d.). Parental fees are one of the largest barriers to accessing preprimary education and should be phased out.

Recommendation

Parental fees for public preprimary education services should be phased out in all of Estonia's municipalities and in South Carolina's voucher program. Public primary schools in both places do not charge tuition to their students, and parents should not be asked to pay for public preprimary services either. A party leader in Estonia recognized that preprimary fees will likely be eliminated in the future (Whyte, 2019a), so the parental contributions should be eliminated as soon as possible. Families want the best start for their children in life, and fees should not hinder access to the public education system.

Conclusions

Estonia has high enrollment and equitable access to preprimary education. The government generally operates under the notion of preprimary education as the first, voluntary stage of public education but still allows parental fees to be an accessibility challenge. South Carolina has highly equitable access but very low enrollment in its disjointed public preprimary education programs. The state generally treats early childhood education as an entirely separate institution from its primary and secondary education system. If South Carolina continues to silo and underfund its public preprimary education system, then its students will continue to be deprived of the opportunity to receive a minimally adequate education. Further, South Carolina students will be unable to compete with their peers at a national or global level in an increasingly globalized economy. Estonia offers a striking contrast because it has nearly universal enrollment in preprimary education, and Estonian students compete at the highest levels on a global scale. Although certain areas of Estonia's preprimary system have room for improvement, many elements have potential for policy sharing and replication.

South Carolina and Estonia can learn from one another by examining the positive elements of both preprimary education systems. South Carolina should look to Estonia as a model of preprimary funding and programmatic continuity. South Carolina can also learn from Estonia's recent progress improving the continuity of preprimary and primary education systems. Estonia should look to South Carolina as a model for minimizing barriers to access with regards to parental fees. As preprimary education research validates the importance of public preprimary

services, policymakers in South Carolina and Estonia should consider these ways to expand availability, access, and continuity of programs and funding.

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