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Tim Burgess served 10 years at Seattle City Hall as a member of the City Council and as the city’s 55th Mayor. He was first elected city-wide in 2007 and won re-election in 2011 and 2015. As a Council member, Mayor Burgess focused his work on issues related to improving the lives of Seattle’s children. Under his leadership, Seattle became the fourth major U.S. city to fully fund the Nurse Family Partnership, a home visitation program for low-income families that The New York Times calls America’s best anti-poverty program. He was the lead architect of the Seattle Preschool Program that will eventually offer high-quality preschool to all of the city’s three- and four-year olds.

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Raising Seattle: A Proposal to Expand Preschool Services

Riding a wave of enthusiastic public support and a growing body of encouraging research, more states and localities are embracing the promise of publicly supported pre-kindergarten. In 2015, Seattle joined the ranks of other U.S. cities moving toward universal public Pre-K when it launched the Seattle Preschool Program (SPP) as a four-year demonstration phase-in to provide “accessible high-quality preschool services” to all of the city’s 4-year-olds and income-eligible 3-year-olds. In 2018, Seattle voters will decide whether to continue to finance and expand the SPP, which has been closely monitored since its inception.

This paper reviews the evidence in support of publicly financed Pre-K and the experiences of other cities that have successfully implemented it. It addresses national trends and new research that examines what elements of program quality produce sought-after outcomes for children as they progress through school and life. And we look closely at the Seattle Preschool Program, its brief history, and whether—as its supporters contend—it will prove to be a powerful public investment in the well-being of Seattle’s children and families.
The Public Pre-K Trend

Advocates of publicly financed Pre-K invoke a range of benefits both in the short-term (improving school readiness) and the long-term (breaking generational cycles of poverty). During the past two decades states, municipalities, and school districts have significantly increased their spending on programs that serve children in the years before they begin kindergarten. During the 2016-17 school year, state-funded preschool across the United States served close to 1.5 million children, including nearly a third of all the 4-year-olds in the nation, at a cost of about $7.4 billion.\(^1\) Enrollment in center-based early childhood education (ECE) programs has more than doubled since 2002. During this period, Gallup and other national polls have shown majority support for policies that extend preschool to more young children.\(^2\)

As public and political support for universal Pre-K has grown, so has the number of states and communities that sponsor it. Today more than 40 states and cities—including Seattle, Boston, San Antonio, and Tulsa—support some form of publicly subsidized Pre-K and are working to build the infrastructure and workforce to sustain these services.

But most U.S. children have yet to benefit from this trend. And in Washington State, state-financed preschool now serves only about 9% of 4-year-olds.\(^3\)

Access to preschool and program quality remain uneven across the nation, and the United States ranks near the bottom among wealthy nations for both access to and investment in publicly financed early childhood programs.\(^4\)

The Seattle Preschool Program

Seattle moved to join the mix of communities offering publicly supported preschool in 2013 when the City Council unanimously approved the Preschool for All Resolution, which endorsed voluntary, high-quality preschool for all 3- and 4-year-old children in Seattle and committed the city to develop an action plan that would align what research has identified as best practices with the needs of the city’s preschool-age children—6,450 3-year-olds and 5,830 4-year-olds.

In 2014, city voters approved the $58 million Seattle Preschool Program Levy with the broad goals of improving children’s kindergarten readiness and their subsequent academic achievement, closing the opportunity gap between children from low-income and higher-income households, and facilitating development of a community infrastructure to improve the overall quality of the city’s preschool services.

\(^1\) 2016 enrollment data from the National Institute for Early Education Research (NIEER) State of Preschool Yearbook
\(^3\) NIEER
\(^4\) Cradle to Kindergarten, citing 2015 Organization for Economic Cooperation and Development data
The city estimated the average cost to each Seattle household for the four-year demonstration at less than $44 a year. A 2014 analysis prepared for the city sought to identify the share of preschool-age children accessing preschool services at the time and the types of programs that serve them. It determined that most of Seattle’s 3- and 4-year-olds were enrolled in some type of preschool, including 2,000 young children attending publicly financed programs targeting low-income children—primarily Head Start, the Early Childhood Education and Assistance Program (ECEAP), and Step Ahead, a city program supported by the 2004 Families and Education levy. But according to the analysis, anywhere from 3,300 and 4,500 of Seattle’s 3- and 4-year-olds (from 27% to 37%) were not enrolled in any formal childcare or preschool programs. A family survey revealed that about a fourth of these children were not attending programs because of the cost. The analysis showed that outside of very low-income families receiving services through Head Start and ECEAP, the share of children in center care increased with family income.\(^5\)

Only 10 months after the levy vote, the City of Seattle Department of Education and Early Learning launched the SPP at the beginning of the 2015-16 school year with 15 classrooms. The program has grown in each year of the demonstration phase-in:

<table>
<thead>
<tr>
<th>School Year</th>
<th>SPP City-Wide Ramp-Up Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># Classrooms</td>
</tr>
<tr>
<td>2015-16</td>
<td>15</td>
</tr>
<tr>
<td>2016-17</td>
<td>33</td>
</tr>
<tr>
<td>2017-18</td>
<td>54</td>
</tr>
<tr>
<td>2018-19</td>
<td>75–85</td>
</tr>
</tbody>
</table>

The SPP welcomes children from all income levels. In addition to building a structure that incorporates programs such as Head Start, ECEAP, and others that serve the lowest-income children, the city has worked to incorporate children who may not qualify for these programs but whose families cannot afford the full cost of preschool—on average, $1,200 a month. About 80% of SPP families live below 300% of the federal poverty level ($73,000 annually for a family of four) and pay no tuition. Higher-income families receive tuition subsidies on a sliding scale linked to income. The annual direct cost of the program is more than $12,000 per child, a figure that reflects Seattle’s high cost of living.

The program works with a network of providers in public schools, childcare centers, and family childcare homes that agree to meet established program standards and contract with the city to provide services.

\(^5\) Seattle Preschool for All Initiative: Analysis of Preschool Enrollment
What Research Tells Us

Until recently, academics and education policy makers debated whether preschool programs made a lasting impact on children’s academic performance, in part because of the so-called “fade-out” effect—the tendency of some types of learning gains to evaporate by 3rd and 4th grades. This issue undermines efforts to isolate the value of Pre-K because early learning trajectories depend on the quality of learning experiences both before and after the Pre-K year. Classroom experiences early in elementary school may reduce, sustain, or amplify Pre-K learning gains.

Another barrier to research is the complex delivery system for ECE programs, which in Seattle and other communities amounts to a very loosely affiliated system of public and private programs with different characteristics, funding sources, and regulatory involvement. Both within and across states and localities, the quality of Pre-K services vary widely.

Nonetheless, recent research confirms the value of—and by extension, the wisdom of investing in—high-quality ECE programs. A 2017 round-up of studies conducted by the Brookings Institution concludes that there is now “convincing evidence” that children in state and school district Pre-K programs are better prepared for school at the end of their Pre-K year than children who do not attend Pre-K.

The report points to improvements in academic areas such as literacy and numeracy and, in a smaller number of
In addition, several recent studies indicate that high-quality universal Pre-K programs close a significant share of the achievement gap at kindergarten entry in reading and math skills between children from low- and higher-income households.\footnote{PreK Consensus Task Force (2017). The Current State of Scientific Knowledge on Pre-Kindergarten Effects. Washington, DC: Brookings Institution}

Complementing research that shows the positive impact of ECE programs in improving children’s acquisition of skills in language, math, and social-emotional development are studies that address the ways ECE programs help mitigate costly educational interventions to address negative outcomes. An influential 2017 meta-analysis of 22 high-quality studies conducted from 1960 to 2016\footnote{Cradle to Kindergarten, citing Gormley et al., 2005} focused on the value of ECE programs to avert three negative educational outcomes: special education placement, grade retention, and drop-outs. The researchers concluded that participation in early learning programs leads to statistically significant reductions in the three outcome areas, a finding that supports “ECE’s utility for reducing education-related expenditures and promoting childhood well-being”—conferring both “individual and societal benefits.”

Given that negative educational outcomes such as grade retention are most common for children growing up in low-income families, the researchers conclude that “further investments in ECE programming may be one avenue for reducing educational and economic burdens and inequities.” This conviction aligns with the frequently cited work of University of Chicago economist James J. Heckman, who contends that every $1 spent on “high-quality, birth-to-five programs for disadvantaged children” delivers a 13% yearly return on investment in benefits to children, families, and their communities.

Research does not typically address the economic benefits to working families who struggle to pay for childcare for their preschool-age children. Today, in a majority of households with children younger than 6, parents work outside the home and need childcare. But in most of the country, childcare is expensive—exceeding $10,000 a year on average for each child. The U.S. Department of Health and Human Services advises that childcare should not exceed 7% of family income. Yet a 2017 study of Washington State revealed that for families with young children, the cost of housing and child care combined typically make up nearly half of the family’s budget\footnote{Pearce, D. (2017). The Self-Sufficiency Standard for Washington State 2017. Seattle, WA: University of Washington}. As an example, the study claims that for a family with two adults, one infant, and one preschooler in Yakima County, child care is 30% of the family’s budget while housing is 18%. It is even more expensive for families in Seattle. This cost burden adds stress to young families and forces many to seek care from less expensive, unlicensed, and poor-quality programs. As a consequence, a disproportionate number of children from low-income households cannot access optimal ECE environments and enter kindergarten already behind. The cost issue is driving expansion of publicly provided preschool services to young children. In New York City, for example, the successful universal Pre-K program has expanded to 3-year-olds. The first class of “3-K for All” started in September 2017.
What Practice Tells Us

With so many states and localities now providing Pre-K services, researchers have identified the program characteristics that have been shown to produce academic gains that “stick” through primary school and beyond. Several public Pre-K programs across the country are considered to be “exemplars” of effective ECE services. Among them are the following four programs.  

**New Jersey’s Abbott Preschool Program**
—Founded in 1999 in response to a landmark state supreme court decision requiring all children in economically disadvantaged districts to have access to high-quality early childhood programs, the Abbott program now reaches 43,000 children. Evaluators have found that the program significantly closed the achievement gap between low and middle-income children at kindergarten entry and benefits endure at least through 5th grade.  

**Boston’s Universal Pre-Kindergarten Program**
—With enrollment open to all 4-year-olds in the city, participants in Boston’s Pre-K have achieved gains in vocabulary, early reading, and numeracy that are the greatest in the nation for such programs operating “at scale.” Two-thirds of the 2,800 children enrolled come from low-income households, and they—along with children whose primary language is Spanish—show the most impressive gains, some of which have been shown to last at least through 3rd grade.

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10 NIEER  
### North Carolina Pre-K (formerly More at Four)
Targeted to low-income children and those with other risk factors, the program reports significantly higher levels of math and reading skills for program participants (now 28,369 contracted slots) than non-participants through 3rd grade.

### Maryland’s Extended Elementary Education Program (EEEP)
Focusing primarily on children in poverty, the success of the EEEP is one of the factors that have helped Maryland achieve across-the-board gains on all measures of academic achievement for students through 4th grade. Assessments show remarkable progress in preparing the program’s 31,740 children for kindergarten, with school readiness indicators up 33% in 10 years.

The essential elements of these programs that research\(^{12}\) has linked to lasting academic and behavioral gains include:

- **Political leadership** or a judicial mandate with enduring support from governors, state legislatures, mayors, and city council members.
- **Manageable class size** of 22 or fewer children with two adults, including a lead teacher, in each classroom.
- **Lead teachers with bachelor’s degrees.**
- **“Dosage”** that is directly related to the size of the academic achievement gap that Pre-K services are meant to address. (In exemplar programs and the SPP, dosage is usually more than 6 hours a day.)
- **Application of Pre-K early learning standards** that connect Pre-K activity to kindergarten and beyond.
- **Use of evidence-based curriculum** that is aligned with learning standards.
- **Professional development** for teachers that focuses on teacher-child interactions.
- **Teachers delivering quality instruction.**

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What Evaluators Say about the SPP

Are children who attend the SPP benefitting from early learning that sustains the gains? The SPP uses a widely applied assessment instrument, Teaching Strategies Gold, to monitor its progress and inform instruction. The program reports that, by Spring 2017—halfway through the demonstration phase—in 85% of SPP children were performing at the level of “widely held expectations” for children of the same age, class, or grade in the domains of social-emotional, physical, language, cognitive, literacy, and math. In other words, SPP children are likely to enter kindergarten with the age-specific skills they will need to succeed in school.

To measure the SPP’s impact on children’s learning in the first year of the program, the NIEER/UW evaluation team assessed students at the beginning and end of the school year and repeated this process for Year 2 while adding to the evaluation a comparison group of children who were not in SPP. Researchers also looked at classroom practices to gauge overall quality, teacher-child interactions, and engagement. They used established measures of children’s learning and classroom quality. (For a list of instruments evaluators used and outcomes they found, see pages 10-11.)

In their study of the Year 1 and Year 2 performance of the SPP, evaluators determined that the SPP had demonstrated early success in improving program quality and achieving improvements in children’s learning and development and that these gains held even as the number of classrooms in the program doubled. Evaluators found that the SPP provided “caring and nurturing environments for children” with instructional quality “that compares favorably to other well-known city programs.”

The following table shows how program quality in the SPP compares with that of other preschool programs across the country (as measured by the CLASS tool, with a scale of 1-7).

- Regular **assessments** of student progress and independent program evaluations.
- **Use of data** collected in assessments and evaluations to drive decision-making.

Though the SPP currently reaches fewer children than the four exemplar programs listed above, it incorporates all of these program characteristics. It has also met all of its core guiding principles, including affordability, an evidence-based approach, and a focus on collaboration and community partnerships.
### SPP Classroom Quality Compared with Selected U.S. Preschool Programs

<table>
<thead>
<tr>
<th>Study</th>
<th>Emotional Support</th>
<th>Classroom Organization</th>
<th>Instructional Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPP classrooms 2017 (N=33)</td>
<td>6.29 (0.47)</td>
<td>5.55 (0.76)</td>
<td>3.06 (0.88)</td>
</tr>
<tr>
<td>SPP classrooms 2016 (N=15)</td>
<td>6.14 (0.53)</td>
<td>5.67 (0.74)</td>
<td>2.65 (0.71)</td>
</tr>
<tr>
<td>Tulsa’ TPS Pre-K (N=77)</td>
<td>5.23 (0.57)</td>
<td>4.96 (0.69)</td>
<td>3.21 (0.93)</td>
</tr>
<tr>
<td>Tulsa CAP Head Start (N=28)</td>
<td>5.22 (0.78)</td>
<td>4.80 (0.84)</td>
<td>3.26 (0.94)</td>
</tr>
<tr>
<td>Boston’ (2009-2010) (N=83)</td>
<td>5.63 (0.60)</td>
<td>5.10 (0.68)</td>
<td>4.30 (0.84)</td>
</tr>
<tr>
<td>NYC (2012-13 to 2014-15) (N=555)</td>
<td>6.00</td>
<td>5.80</td>
<td>3.60</td>
</tr>
<tr>
<td>NYC (2015-16) (N=1,134)</td>
<td>6.20</td>
<td>6.10</td>
<td>3.30</td>
</tr>
<tr>
<td>National Head Start Overview 2015</td>
<td>6.03 (0.28)</td>
<td>5.80 (0.36)</td>
<td>2.88 (0.54)</td>
</tr>
<tr>
<td>National Head Start Overview 2017</td>
<td>6.07</td>
<td>5.83</td>
<td>3.00</td>
</tr>
<tr>
<td>WA Early Achievers Validation Study 2015 (N=75)</td>
<td>5.96 (0.66)</td>
<td>5.26 (0.77)</td>
<td>2.34 (0.71)</td>
</tr>
<tr>
<td>NJ Abbott 2013-14 (N=163)</td>
<td>5.97 (0.63)</td>
<td>5.32 (0.89)</td>
<td>3.15 (0.96)</td>
</tr>
<tr>
<td>San Antonio (2016) (N=89)</td>
<td>6.44 (0.51)</td>
<td>5.98 (0.81)</td>
<td>3.67 (1.23)</td>
</tr>
<tr>
<td>San Antonio (2015) (N=76)</td>
<td>6.34 (0.64)</td>
<td>5.93 (0.97)</td>
<td>3.02 (1.14)</td>
</tr>
<tr>
<td>San Antonio (2014) (N=36)</td>
<td>6.28 (0.35)</td>
<td>5.75 (0.60)</td>
<td>2.82 (0.82)</td>
</tr>
</tbody>
</table>

**NOTE:** The first number is the score on CLASS (range is from 1–7), and the number in the parentheses is the reported Standard Deviation of the scores. The Standard Deviation is a measure that is used to quantify the amount of variance or dispersion of the scores across the sample. The larger the SD the larger the range of scores.

1 Phillips et al. (2009); 2 Weiland et al. (2013); 3 NYC Department of Education (2017); 4 Office of Head Start. (2015); 5 Aikens et. al (2013); 6 COEL (Unpublished); 7 NIEER (2014); 8 EDVANCE (2016); 9 EDVANCE (2014)

Evaluators also surveyed families to collect information on student demographics, family income and education levels, and learning activities in the home. About 440 respondents—75% of those participating in the SPP during Year 2—responded to the survey, which revealed that strong majorities of families report positive changes in their children's language, physical development, and social-emotional behavior since enrolling in the SPP; that they talk to their child’s teacher every day; and that they feel welcome at school.
Measuring the Seattle Preschool Program’s Quality and Effectiveness

Seattle Preschool Program evaluators from Rutgers University and the University of Washington have used several valid and reliable tools to gauge the SPP’s impact on children’s development and program quality. They are—

**Individual child assessments** to determine children’s gains in knowledge and skills over the course of the school year, including:

- The Peabody Picture Vocabulary Test IV (PPVT IV and its Spanish counterpart, *Test de Vocabulario e imágenes Peabody*), which assess language development.
- Measures of executive function including: the Peg Tapping Task\(^ 1\), which measures cognitive inhibitory control; and the Dimensional Change Card Sort (DCCS), which measures attention-shifting.

**Classroom assessments** to measure classroom progress in implementing program standards related to classroom quality, including:

- The Classroom Assessment Scoring System (CLASS) to determine classroom practices in preschool through 3rd grade by measuring the interactions between students and adults in three domains: instructional support, social-emotional climate, and classroom management.
- The Early Childhood Environmental Rating Scale—Third Edition (ECERS-3) to measure classroom environmental quality on six subscales: space and furnishings, personal care routines, language-reasoning, learning activities, interaction, and program structure.

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\(^1\) The task requires both the ability to hold two things in mind, 1) rule to tap once when the assessor taps twice and 2) rule to tap twice when assessor taps once, and the ability to exercise inhibitory control over one’s prepotent behavior, the natural tendency to mimic what the experimenter does. Immediately after the assessor tapped once with a peg, the child was to tap twice with the peg. Immediately after the assessor tapped twice, the child was to tap once.
In their report on the second year of the SPP demonstration phase, evaluators found that even with the growth from 14 classrooms in 2015-16 to 32 classrooms in 2016-17, the SPP improved on the classroom quality measures ECERS –3 and the CLASS. All SPP classrooms had higher quality than classrooms attended by a comparison group.

The average ECERS 3 rating improved from 3.57 to 3.89 (on a 7-point scale). CLASS scores maintained already high levels on emotional support (going from 6.14 to 6.29) and classroom organization (from 5.67 to 5.55). The CLASS instructional support score improved from 2.65 to 3.06 (also on a 7-point scale).

How did the children do? Evaluators found that minority children made the largest gains compared to White non-Hispanic children. Dual language children had larger gains in vocabulary, literacy, and math. Evaluators found no differences by income, though they found a trend toward greater gains for children in poverty.

To measure program impact, the evaluators compared children’s performance in SPP with that of children in a comparison group. They found evidence suggesting SPP had a positive influence on vocabulary, literacy, math, and one measure of executive function (DCCS), although these were mostly not statistically significant. But evaluators found a statistically significant negative SPP effect for the other measure of executive function (Peg Tapping). Evaluators also studied classroom quality and noted the improvement from the first year. And evaluators compared classroom quality to the comparison group of classrooms.

We summarize these evaluation findings in the following tables.

**List of child assessments and direction of scores from fall to spring**

<table>
<thead>
<tr>
<th>Area</th>
<th>Assessment</th>
<th>All Children in SPP From Fall 2016 to Spring 2017 Compared with Non-SPP Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language</td>
<td>PPVT-IV</td>
<td>↑ &gt;</td>
</tr>
<tr>
<td>Literacy</td>
<td>WJ-LW</td>
<td>↑ &gt;</td>
</tr>
<tr>
<td>Math</td>
<td>WJ-AP</td>
<td>↑ &gt;</td>
</tr>
<tr>
<td>Executive Function</td>
<td>DCCS</td>
<td>↑ &lt;</td>
</tr>
<tr>
<td></td>
<td>Peg Tapping</td>
<td>↓ &lt;*</td>
</tr>
</tbody>
</table>

**List of classroom quality measures and scores**

<table>
<thead>
<tr>
<th>Area</th>
<th>Assessment</th>
<th>SPP 2016</th>
<th>SPP 2017</th>
<th>Comparison Classrooms 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Support</td>
<td>CLASS*</td>
<td>6.14</td>
<td>6.29</td>
<td>6.21</td>
</tr>
<tr>
<td>Classroom Organization</td>
<td>CLASS</td>
<td>5.67</td>
<td>5.55</td>
<td>5.49</td>
</tr>
<tr>
<td>Instructional Support</td>
<td>CLASS</td>
<td>2.65</td>
<td>3.06</td>
<td>2.40</td>
</tr>
<tr>
<td>Classroom Quality</td>
<td>ECERS -3*</td>
<td>3.57</td>
<td>3.89</td>
<td>3.51</td>
</tr>
</tbody>
</table>

*7-point scale
Return to the Voters

Both the Seattle Preschool Program Levy and the city’s Families and Education Levy are scheduled to sunset in 2018, and in November, city voters will consider a combined levy to replace them.

The new resources would support an expansion of the program toward scale, administrative changes that will simplify participation for families and providers, and merging of funding streams to reduce barriers to access. This investment has the potential, in the long-term, to eliminate education inequality in Seattle. In the short-term, it will move Seattle closer to preschool services that reflect the following evidence-based practices:

- **Extending preschool access**—in time, to all 3-year-olds and 4-year-olds in the city. It is clear from Seattle’s experience and that of other large cities that extending the benefits of preschool services to all children must be a government responsibility.

- **Supporting workforce development** to attract more qualified teachers through such continued efforts as paying tuition for teachers seeking degrees and advanced credentials.

- **Conducting professional development** through continued coaching and other best practices.

- **Improving physical facilities** for classrooms. Seattle is still experiencing space shortages for classrooms and the city must continue to provide assistance to providers for classroom development.

- **Continuing a strong relationship with the Seattle Public Schools** that leads to more classroom facilities, integration of Pre-K into overall K-12 strategies, and a seamless transition from preschool to kindergarten and to early elementary grades.
Moving closer to build a **complete and integrated quality service system** for Seattle’s young children and their families that draws together such elements as expansion of early care settings, an earlier common starting point (at age 3) for public education, continued improvements in paid family leave, and expanded subsidies and tax credits for childcare.