# The Pre-K to Workforce Pipeline

## Washington State Must Start Early To Build A Highly-Skilled Workforce



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# Acknowledgements

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## Washington State Must Start Early To Build A Highly-Skilled Workforce

## Summary

Washington State business leaders know that we need a highly-skilled workforce to compete in the global marketplace. What might not be quite so obvious is that we must start early—focusing on young children—to achieve the workforce we need.

Research has demonstrated that high-quality public pre-Kindergarten programs can help children arrive at school ready to learn and reduce the likelihood that they will be held back in school which is hard on kids, families, schools and taxpayers. For example, children held back are much more likely to eventually drop out of school. Reducing the number of children held back in school not only benefits children, but saves taxpayers money as well. In 2013, approximately 2,000 Washington Kindergarten students were held back. At an average cost of about $5,700 per student, **the state is spending over $11 million per year in additional costs for children repeating a year of Kindergarten.** If providing high-quality pre-K to Washington's young children could cut the number of children held back in Kindergarten by even 25 percent, t**he state could save nearly $3 million every year.**

High-quality pre-K has other short- and long-term benefits for young people and our economy, including improved math and



**Approximately 2,000 Washington Kindergarten students were held back in 2013, at an average cost of about $5,700 per student—a total cost of over $11 million.**

reading scores, reduced need for special education, and better high school graduation rates. Pre-K's outcomes can yield, on average, a net return of over $26,000 for every child served.

To obtain these beneficial results, pre-K must be high quality. Washington's publicly funded state pre-K, the Early Childhood Education and Assistance Program (ECEAP), meets nine of the 10 quality benchmarks developed by the National Institute of Early Education Research (NIEER). However, the "Essential Elements of High-Quality Early Learning" developed at the Bill and Melinda Gates Foundation, outlines other research-supported elements that Washington should meet in order to reap the full benefits pre-K can deliver. For example, programs of 6 to 6.5 hours per day have been shown to be more effective than those of 2.5 to 3.0 hours per day. Among other quality elements are a proven curriculum delivered with fidelity by lead teachers with BA degrees and early learning credentials, who are adequately compensated. Other elements include strong political leadership, and a compelling vision and strategy championed by education leaders. Finally, ongoing professional development and assessments at every level using valid data need to be part of the continuous quality improvement systems.

### Bottom Line

Washington State business leaders recognize that continually enhancing the quality of the state ECEAP pre-K program and ensuring that more children have access to this quality program are solid investments in our state's future economic success. By aspiring to be exemplary, Washington can achieve the full potential of early childhood education, reaping its benefits for our children and our state economy.

## Washington State Is Not On Track To Develop the Skilled Workforce We Need

Today's fast-paced international marketplace requires high proficiency levels in reading, writing, and math, as well as strong "executive functioning" skills (such as communication, collaboration and problem solving). But they are too often lacking, especially among those soon to enter the workforce.

- Looking at the "Nation's Report Card"—the National Assessment of Educational Progress (NAEP)—only 37 percent of Washington 8th graders are proficient in reading and only 39 percent are proficient in math.[1]
- 22 percent of Washington high school students fail to graduate within four years.[2]
- In 2015, 25 percent of all public high school juniors in Washington took the ACT college readiness test. Only 39 percent of them met the ACT benchmarks in all four subjects tested: English, reading, mathematics and science.[3] ACT research shows that students meeting these benchmarks have a strong likelihood of being successful in college.

## Children Are Falling Off Track Early in Life

Every year, thousands of American children enter kindergarten not ready to learn. **Fewer than half of children living in poverty are ready for Kindergarten and even among children from moderate or higher income families one quarter are not ready.**[4] To be successful in Kindergarten, children must have acquired pre-academic skills like recognizing letters and numbers. Children's skills lag in both pre-literacy and pre-math.[5]

**Nationwide 140,000 children are held back in Kindergarten each year, costing taxpayers $1.5 billion annually.**

We are paying a high price for this lack of preparation: **each year, nationwide, approximately 140,000 children are held back in Kindergarten.[6] These children must then repeat another year of Kindergarten**. At an average per pupil cost of about $11,000 [7], **the extra year of Kindergarten for these children is costing taxpayers $1.5 billion every year**. Other children are held back later or repeatedly, so the total cost is even higher. In 2013, about 2,000 Washington Kindergarten students were held back.[8] At a cost of about $5,700 per student,[9] Washington is spending over $11 million every year in additional costs for children repeating another year of Kindergarten.

Further, the evidence that grade retention is an effective educational policy is weak.[10] Once children arrive at Kindergarten behind their peers, it can be very difficult to catch up. Although retention is associated with short-term academic gains, often just in literacy, these gains are not sustained. Results on short-term social and behavioral outcomes are mixed and there is evidence of long-term negative effects: **children held back are significantly more likely to eventually drop out of school.**

## Starting Young To Achieve a Skilled Workforce: High-Quality Pre-K

Studies of preschool programs in several states have reported substantial reductions in the numbers of children held back in school. For example:

- Participants in Michigan's state preschool, the Great Start Readiness Program, were held back in school 51 percent less often during their K-12 years than similar non-participants.[11]
- New Jersey's preschool program found its children were held back 40 percent less often by fourth or fifth grades, compared to similar non-participants.[12]
- The Tennessee Voluntary Pre-K program, even with its inconsistent quality, cut the number of children held back in Kindergarten in half, from eight to four percent.[13]

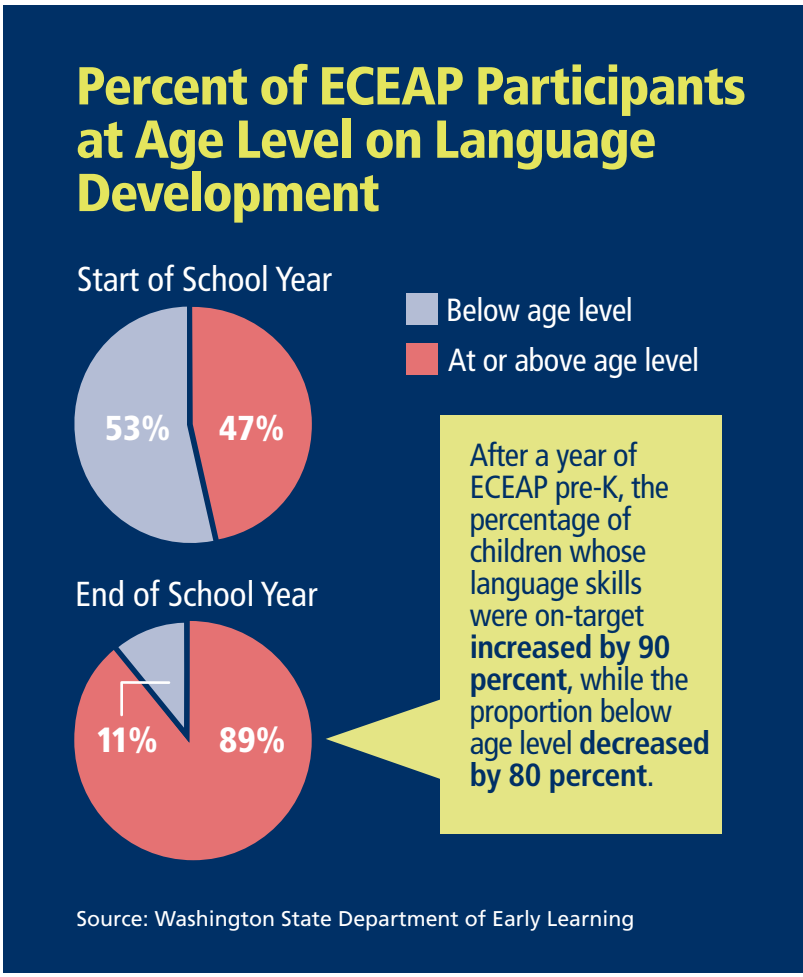
If providing high-quality pre-K to Washington's young children cut the number of children held back in Kindergarten by even 25 percent (half of the effect obtained by the Tennessee program), the children would be more likely to succeed and



**the state could save nearly $3 million every year simply from not paying for children to repeat another year of Kindergarten.**

Research has shown that high-quality pre-K generates other short- and long-term benefits for our economy and for young people, as well. For example:

- At the start of preschool, 47 percent of children in Washington's Early Childhood Education and Assistance Program (ECEAP) were at or above age level on language development; by the end of the year, 89 percent of children were at or above age level.[14]
- Children who attended ECEAP also had significantly higher math and reading test scores in third, fourth, and fifth grades, compared to similar children who did not attend the program.[15] And another study showed that children who were reading on grade level by third grade were four times more likely to graduate from high school.[16]
- Boston's universal pre-kindergarten program improved mathematics, literacy and language skills among participating children so they were seven months more advanced in these subjects compared to children who did not attend.[17] State pre-kindergarten programs are also reporting important improvements.[18]
- By fourth and fifth grades, New Jersey children who attended high-quality preschool at ages three and four were three-fourths of a year ahead in math and two-thirds of a year ahead in reading, compared to children who did not attend.[19]




- Michigan's Great Start Readiness Pre-K program reported a 35 percent increase in the number of high school graduates.[20]
- At-risk children who received high-quality early learning from infancy through age five in the Abecedarian early learning program in North Carolina were four times more likely to graduate from a four-year college and 42 percent more likely to be consistently employed as adults.[21]

Looking at the bottom line, the Washington State Institute for Public Policy examined results from more than 20 different studies of state and local pre-K programs and found that **high-quality preschool can**

**have, on average, a net return** (after subtracting program costs) **of nearly $30,000 for every child served.**[22] Savings result from reductions in costs due to grade repetition, special education and crime, as well as participants' increased earnings.

**Preschoolers' math knowledge predicts later school success, into elementary and even high school—predicting later reading achievement, even better than do early reading skills.**

## Quality is Essential for Achieving Results

Research indicates that several quality elements are important if pre-K is to yield the benefits that we want for our children and our economy.

### Full-day programs

To achieve learning outcomes, children must attend pre-K for more than a few hours a week.[23] Although the hours of operation are locally determined, most of Washington's ECEAP programs typically meet for three hours a day, three or four days per week, falling short of the full-school-day, full-school-week quality benchmark. Research suggests that high-quality early learning programs should be full-day. A randomized trial showed that children who participated in a full-day preschool program in New Jersey improved more on vocabulary and math assessments than did children in a part-day (2.5 to 3 hours) program (11 to 12 points versus 6 to 7 points, respectively).[24] A more recent study in Chicago found that children who attended preschool full-day had higher school readiness scores (language, math, socio-emotional development, physical health) and better attendance than children who attended preschool part-day.[25]

### An evidence-based curriculum, delivered with fidelity

Programs must nurture all aspects of children's development—physical, social, emotional and cognitive. Quality pre-K involves play, but play with a purpose, with developmentally appropriate standards and an evidence-based curriculum delivered with fidelity.[26] For example, the successful Boston pre-K cited above uses the Building Blocks math curriculum that has been tested and found effective. Preschoolers' math knowledge predicts later school success, into elementary and even high school—predicting later reading achievement even better than do early reading skills.[27] Unfortunately, research shows that many pre-K programs lack the instructional support children need to achieve the learning gains that they need.[28]

### Well-qualified teachers, adequately compensated

The heart of any program is the interaction between the teacher and the child. To be able to deliver an evidence-based curriculum, teachers must be well-trained. As with business, in order to attract and retain the best employees, early childhood teachers must be adequately compensated. At present, ECEAP teachers are required to

have only an Associate's degree, while quality standards call for a Bachelor's degree.[29] And ECEAP teachers' average annual salary is $32,000 compared to $54,000 for Washington Kindergarten teachers.

### Accountability

High-quality pre-K programs also include a strong focus on data and accountability: they collect data to see how they are performing, at every level-district, program, teacher and student.[30] These data are then used to improve program performance, to ensure that children are well prepared for school. ECEAP incorporates this focus on data and accountability in conducting an outcomes evaluation each year.

## Investing in Washington State's Future

Washington State business leaders recognize that continually enhancing the quality of public pre-K programs and ensuring that more children have access to them are solid investments in our state's future economic success. Washington must continue to make strides toward these essential goals to ensure that we achieve the skilled workforce we need to keep our state competitive.



# Endnotes


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