



# EARLY CHILDHOOD DEVELOPMENT

## INVESTING IN OREGON'S ECONOMIC FUTURE

This issue brief focuses on the economic, educational, and societal benefits from investing in high quality early childhood development and the costs associated with Oregon's failure to do so.

A second issue brief will focus on early childhood investments that have the greatest chance of helping every child achieve success in school and life. It will include what experts consider to be the most cost-effective early childhood programs, what other states are doing, and what Oregonians consider to be their top funding priorities.

[www.childinst.org](http://www.childinst.org)

*“Oregon is extraordinary. But the legacy we may leave is not. Too many children start behind and never catch up. If we don't change course now, I can see an Oregon where wages decline while social service and criminal justice expenditures climb. As these trends converge, the quality of life for all Oregonians declines, and we further erode our competitive edge. It's time to invest where we can make a difference: early childhood.”*

*Richard C. “Dick” Alexander – Founder, Viking Industries*

Building and sustaining a robust Oregon economy in the midst of intense global competition depends on a highly educated and skilled workforce. And yet, we are failing to invest in our future workers, parents, and citizens when we get the greatest return— in the early years of life. Instead, we continue to direct limited resources to late stage treatments such as remedial education, jails, and public assistance – we respond to crises instead of preventing them.

In the process, thousands of children have been robbed of reaching their potential to contribute to their community and the economy. We can still choose what kind of state we want to be. Now is the time to change our thinking and direct our scarce resources to those strategies that have achieved the greatest results.

### COMPARING OREGON KIDS IN TROUBLE: How BIG is the Problem?

OREGON TEEN PREGNANCY AGES 10-17 | 2004: 1,897

• JOHN DAY POPULATION 1,845

OREGON JUVENILE ARRESTS 2005: 34,140

• KEIZER POPULATION 34,735

OREGON SCHOOL DROPOUTS 2005: 7,923

• LINCOLN CITY POPULATION 7,615

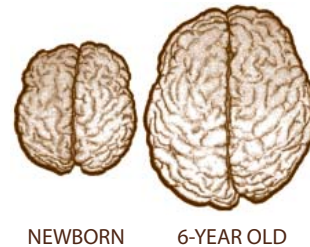
OREGON CHILDREN IN POVERTY 2004: 168,844

• COMBINED BEAVERTON AND HILLSBORO POPULATIONS 165,120

Status of Oregon's Children County Data Book 2005 | Center for Health Statistics and Vital Records 2002-2004, Oregon Department of Human Services | Report Card 2004, Children First for Oregon | 2005 Oregon Population Report, Population Research Center, Portland State University



## 90% OF BRAIN GROWTH OCCURS BY AGE SIX



NEWBORN BRAIN SIZE PROPORTIONATE TO 6-YEAR OLD BRAIN

Paul Lombroso, "Development of the cerebral cortex.VI.Growth Factors I." Journal of the American Academy of Child and Adolescent Psychiatry 37(6):674-675, 1998. Graphics: Trust for Early Education

## Early Brain Development is Critical to Success in School and Life

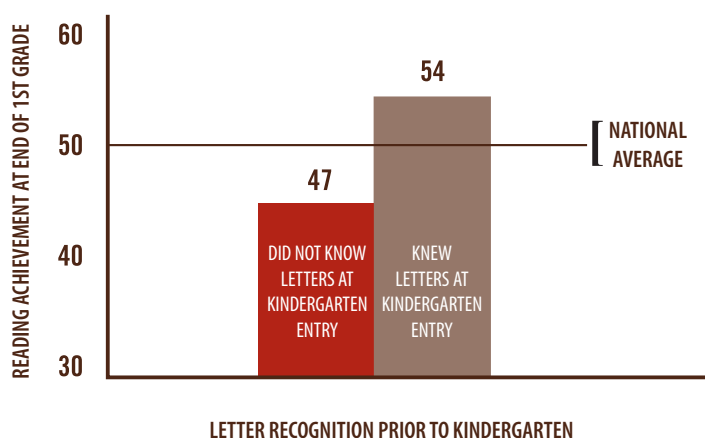
Scientists and researchers have determined that 90% of brain development takes place before age six.<sup>1</sup> This creates a window of opportunity to support and nurture a child's emotional, social, and psychological growth. Investing much earlier in a child's life will significantly help a child realize his or her potential, providing a strong rationale for cost-effective early intervention.

## Children Who Start Behind Stay Behind

- Nearly one in five Oregon kindergartners is not ready for school.<sup>2</sup>
- In the U.S., children who fall behind in first grade have a less than 13% chance of catching up to grade level.<sup>3</sup>
- Nationally, 88% of children who had poor word recognition skills in first grade were poor readers in fourth grade.<sup>4</sup>

### CHILDREN WHO START BEHIND TOO OFTEN STAY BEHIND

*Children who do not know the alphabet when they enter kindergarten are behind in reading at the end of first grade*



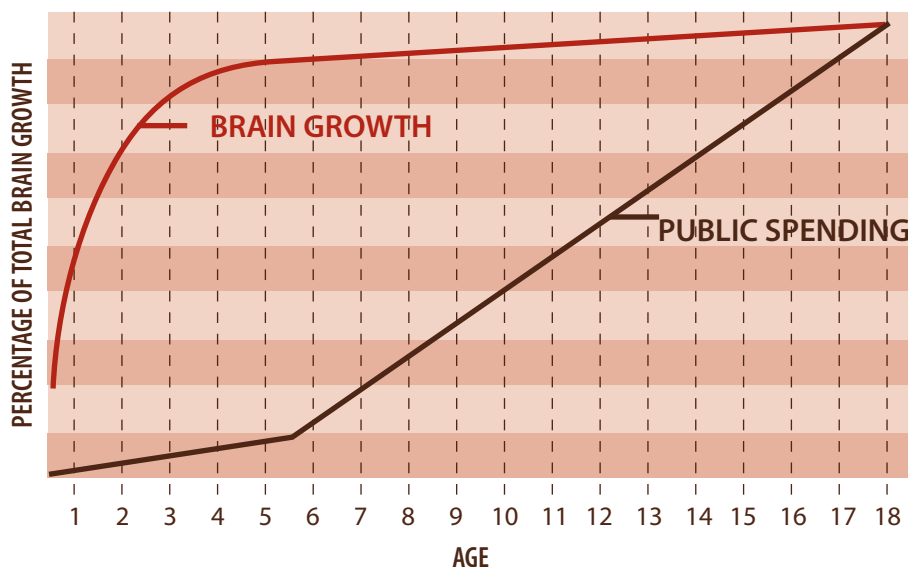
Children's Reading and Mathematics Achievement in Kindergarten and First Grade, Report by the National Center for Education Statistics NCES 2002-125. Graphics: Trust for Early Education

## Third Grade Reading Proficiency An Important Benchmark for School Success<sup>5</sup>

- In 2005, 14% of Oregon third graders were not reading at grade level.<sup>6</sup>
- A student who is not a modestly skilled reader by the end of third grade is not likely to graduate.<sup>7</sup>
- 74% of poor readers in third grade remain poor readers in ninth grade.<sup>8</sup>

## BRAIN GROWTH VERSUS PUBLIC EXPENDITURES

Children Ages 0-18



Brain development: D. Purves, "Body and Brain," Harvard University Press, 1988 adapted from D.W. Thompson, on Growth and Form, Cambridge University Press, 1961. Public spending on children: Derived from R. Haveman and B. Wolfe, "The Determinants of Children's Attainments: A Review of Methods and Findings," Journal of Economic Literature, Vol. 33, December 1995. Graphics: United Way.

### Investing Early Yields Big Returns

Ample research has demonstrated that the costs of future public expenditures on crime, welfare, and special education are directly linked to the investments we make or fail to make in today's young children well before they enter the classroom.<sup>9</sup> As the public grows more vocal in its demand for tying our public spending to results, Oregonians have an opportunity to direct our tax dollars to those investments that yield the highest return.

A landmark cost-benefit study conducted by the High/Scope Educational Research Foundation on the impact of the Perry Preschool Program (a high quality preschool program for low-income 3- and 4-year olds) found that for every \$1 invested, there was a nearly \$13 public benefit through savings on future public expenditures like special education, welfare, and especially crime.<sup>10</sup> The study followed children from age three and four through the age of forty and found that in comparison to the children who were not in the program, the children who participated:

- Had significantly higher achievement scores
- Were less likely to be placed in special education
- Were far more likely to graduate from high school
- Were more likely to be employed
- Earned more money as adults
- Were much less likely to be arrested

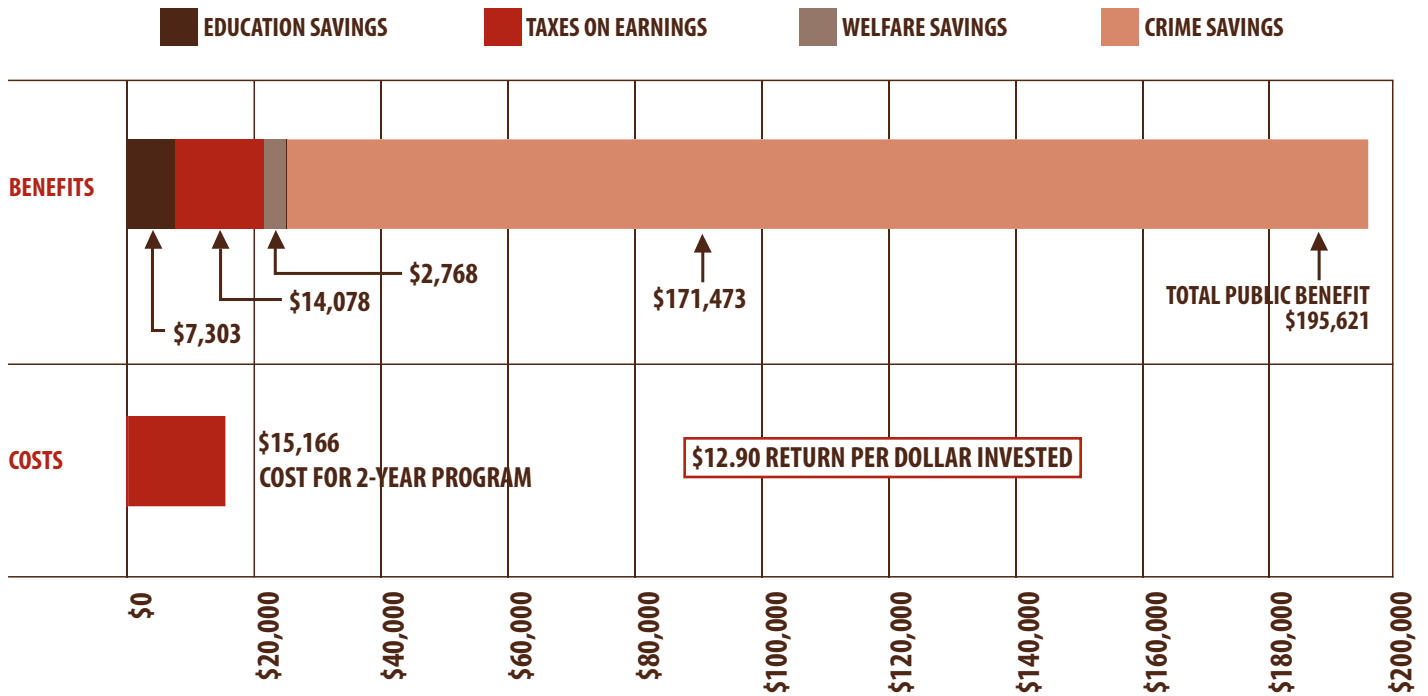


**74% OF  
POOR  
READERS  
IN THIRD  
GRADE ARE  
STILL POOR  
READERS  
IN NINTH  
GRADE**

"Facts About Childhood Literacy," Education Commission of the States, 2001

## PERRY PRESCHOOL YIELDS SIGNIFICANT PUBLIC SAVINGS

A high quality preschool program for low income 3- and 4-year olds



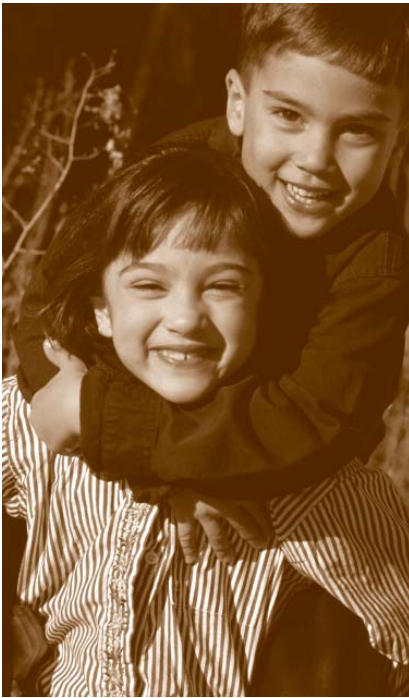
CONSTANT 2000 DOLLARS, 3% DISCOUNT RATE

Data and Graphics: High/Scope Perry Preschool Study Through Age 40

Lawrence Schweinhart and Jeanne Montie, the authors of the most recent High/Scope study, found that for an investment of \$15,166 (per student over two years) that there was an economic return to society of more than \$195,000 per participant and more than \$250,000 when both public and private benefits were taken into account.<sup>11</sup> The vast majority of the public benefit (88%) came from crime savings.

In 2003, economists Art Rolnick and Rob Grunewald at the Federal Reserve Bank in Minneapolis conducted a study on the Perry Preschool program (assessing the results of the participants at age 27) to calculate the real internal rate of return for the program.<sup>12</sup> They found that 80% of the benefits went to the general public, yielding a 12% internal rate of return for society because of savings on future costs such as disruptive classroom behavior and crime. Rolnick and Grunewald emphasize that their calculations of the benefits to society are conservative and significantly understated because they do not reflect the impact the program and early investments have on younger siblings, parents, and future generations.





“Everything comes back to financial outcomes at some point – our ability to sustain change must be cost-effective. When you face a challenge like funding education, you have to understand that the biggest bang for the buck is at the front end – in early education.”

*-Ken Thrasher, Chairman/CEO, Compli*

#### **Additional Research on the Benefits of High Quality Early Investment:**

- Robert Lynch at the Economic Policy Institute did an analysis of the economic, fiscal, and social benefits of providing high quality comprehensive early childhood development programs for 20% of the nation’s three and four year olds who live in poverty (Oregon has about 16,000 3- and 4-year olds who live in poverty).<sup>13</sup> While the program would cost billions annually to implement nationally, if the program were started in 2005, by 2030 the benefits would exceed costs by \$31 billion and by \$61 billion in 2050. These budget savings would offset one-fifth of the deficits projected for the Social Security Trust Fund for those years. Moreover, by educating the future workforce, the U.S. would increase earnings, reduce poverty and strengthen the nation’s global competitiveness. This would provide a likely boost to the gross domestic product (GDP) of almost 1% or \$107 billion. Crime savings would be approximately \$155 billion by 2050.
- The Washington State Institute for Public Policy conducted a study for the 2003 Washington Legislature to evaluate the total benefits and costs of prevention programs for children and youth over a lifetime.<sup>14</sup> The study found that two specific early childhood programs had significant benefits that far exceeded the cost: home visiting programs<sup>15</sup> that target high-risk pregnant and parenting women, and early childhood education for low-income 3- and 4-year olds.<sup>16</sup> The lifetime benefits of home visiting programs beyond the total costs per youth range from \$6,197-\$17,180. The early childhood education programs that were studied ranged from small scale pilot projects to Head Start. The average lifetime benefit beyond the total cost per youth was \$9,901.
- The National Institute for Early Education Research (NIEER) estimates the average annual cost of a high quality universal (open to all children regardless of income) pre-school program at \$8,703 per child.<sup>17</sup> The estimated average lifetime benefits from a universal pre-school program at ages 3 and 4 are at least \$25,000.<sup>18</sup>





**“Instead of helping  
some kids beat the odds,  
why don’t we just  
change the odds?”**

*Geoffrey Canada, President and CEO,  
Harlem Children’s Zone*

Paul Tough, “The Harlem Project,” New York Times Magazine, June 20, 2004.

## **Early Childhood Programs Cost Less than the Alternatives**

### ***Resource Trade Offs***

In one year, more than 20,000 Oregon youth are involved with either their county juvenile department or the Oregon Youth Authority.<sup>19</sup>

### ***Cost of Keeping Children in the Oregon Youth Authority:***

- It costs \$59,130 per year to house an Oregon youth in a juvenile correctional facility.
- It costs \$56,940-\$116,800 per year for residential treatment.<sup>20</sup>

***Four Oregon high school students could attend a public university in Oregon on a full academic scholarship, including tuition, books, room and board for the price of incarcerating one youth.***<sup>21</sup>

According to research done by Steve Barnett, a Professor of Education Economics and Public Policy and Director of the National Institute for Early Education Research at Rutgers University, the “national cost of failing to provide at least two years of quality care and education is extremely high, on the order of \$100,000 (over a lifetime) for each child born into poverty.”<sup>22</sup> The projected price tag for this failure to invest in Oregon is more than \$638 million.<sup>23</sup>

## Other States Increase Investments in Early Childhood Care and Education

Several states have significantly expanded their investments in high quality early childhood education programs as a potent economic development strategy. Early childhood programs not only prevent costly future public expenditures like remedial and special education, corrections, and welfare benefits, but they have the added benefit of building a more skilled and educated workforce with a higher earning potential. This translates into increased revenue from income taxes, a higher gross domestic product, and a stronger, more competitive economy.

Georgia and Oklahoma offer pre-kindergarten to all four year olds in participating school districts regardless of income. California voters passed a statewide proposition in 1998 to raise revenues for early childhood programs for children pre-natal to age five because they understood money invested early pays off down the road and helps create a globally competitive workforce.

- Oregon ranks 40th out of the 50 states in the percent of all 3- and 4-year olds enrolled in school with 41% enrolled.<sup>24</sup>
- In 2006, Oregon Head Start Prekindergarten (OPK) reached 60% of eligible 3- and 4-year olds from low-income families (\$20,000 a year for a family of four). In 1988, Oregon served only 5% of eligible children.<sup>25</sup>

### YOUNG CHILDREN ENROLLED IN SCHOOL

STATE RANKING	STATE NAME	THREE & FOUR YEAR OLDS IN SCHOOL
1	New Jersey	63.2%
6	Georgia	55.9%
27	California	45.8%
30	Washington	45.2%
40	Oregon	41.0%
50	North Dakota	34.4%

National Institute for Early Education Research

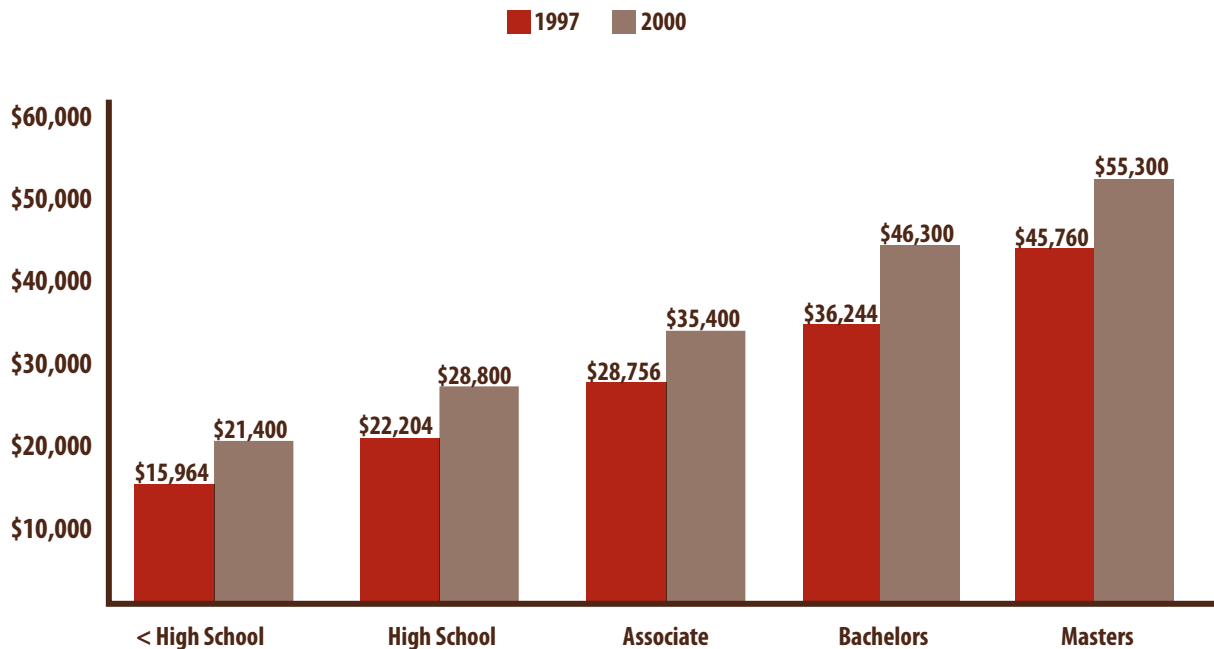


“Oregon can’t afford to fall behind. Now is the time to invest in our youngest children.”

*Gun Denhart, Board Chair,  
Hanna Andersson  
Children’s Foundation*

## BETTER EDUCATED WORKERS EARN MORE

Education vs. Earnings – US



US BUREAU OF LABOR STATISTICS  
Chart from Jeff Tryens, Executive Director, Oregon Progress Board. Presentation to the Ford Family Foundation Scholars Gathering 2004

### Oregon Needs an Educated Workforce to Compete

A highly skilled and educated workforce is essential to competing in the global marketplace. Today's jobs require education and specialized training well beyond a high school diploma. And yet, less than half of Oregon adults (age 25 or older) have a college degree.<sup>26</sup>

### Workforce Readiness

#### Oregon adults (age 25 or older) who have completed:<sup>27</sup>

- Regular high school diploma in four years: 71.6%
- Some college: 63%
- A bachelor's degree: 33%
- An advanced degree: 12%

There is a direct connection between investing in today's toddlers and the quality of tomorrow's workforce. Ensuring a ready pool of highly educated workers will require that more children come to kindergarten ready to learn, thereby increasing their chances to graduate from high school and go on to college. Increasing educational outcomes will allow Oregon workers to increase their productivity and therefore our competitive advantage.



# IT IS TIME TO CLOSE THE GAP BETWEEN WHAT WE KNOW AND WHAT WE DO

## We Can't Afford to Waste Our Human Capital

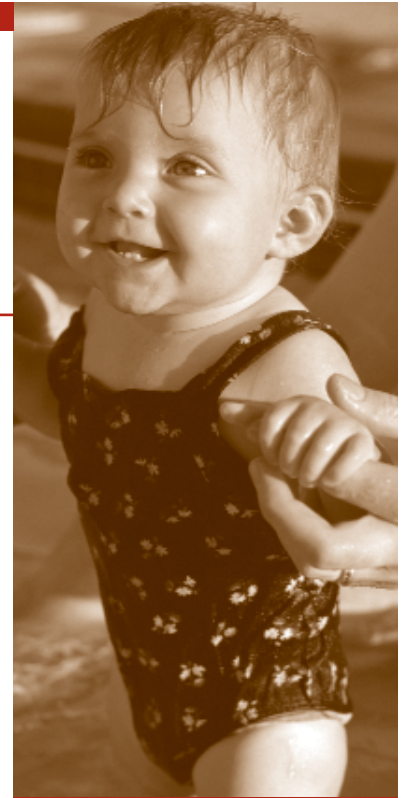
Oregon's children are not a special interest. They are our shared interest. If we are to prosper as a state and develop an educated and skilled workforce to compete in the global marketplace, we must be wiser about our public investments.

Investing in young children through high quality early care and education programs is the most cost-effective way to ensure that more children come to kindergarten ready to learn and succeed in school and later in life.

In an era of dwindling resources and a time when taxpayers want assurances that their dollars are well spent, we must align our dollars with what works. This means directing resources to prevention so that every child has a chance to succeed. Until we move in this direction, we will continue to pay the price of short-sighted public policies that invest in late stage treatment instead of prevention. It is time to close the gap between what we know and what we do.

## Let's Move Forward with the Following Proposed Points of Agreement

- The success of Oregon's economy is tied to an educated workforce.
- We recognize the need to invest early in a child's development to prepare children for academic, emotional, and economic success.
- Investing in high quality early childhood care and education saves future expenditures for special education, crime, and welfare.
- Many disadvantaged children are not getting the preventive services they need early enough in their development.
- Supporting high quality early care and education is an important step in allowing more children to reach their potential, become productive workers and contributors to a better quality of life for all Oregonians.



“Every child counts and every child deserves a fair start.”

*Duncan Campbell, Chair,  
The Campbell Group*

## ENDNOTES

- 1 Paul Lombroso, "Development of the cerebral cortex. VI. Growth Factors I." *Journal of the American Academy of Child and Adolescent Psychiatry* 37(6): 674-675, 1998.
- 2 "2004 Kindergarten Survey Report: Readiness to Learn," OR Dept. of Ed.: <http://www.ode.state.or.us/search/results/?id=41> School readiness is defined as meeting all six developmental dimensions of readiness, including: physical well being, language usage, approach to learning, cognition/general knowledge, social/emotional development, and motor development.
- 3 "Facts About Childhood Literacy," Education Commission of the States, 2001: <http://www.ecs.org/clearinghouse/29/81/2981.htm>.
- 4 Ibid.
- 5 Ibid. 3rd grade is the time when students transition from learning the skill of reading to using it to learn other content areas. Students who haven't become skilled readers have great difficulty catching up. Education Commission of the States, 2001.
- 6 "2004-2005 Oregon Report Card," Oregon Department of Education: [www.ode.state.or.us/search/results/?id=126](http://www.ode.state.or.us/search/results/?id=126).
- 7 "Facts About Childhood Literacy," Education Commission of the States, 2001.
- 8 Ibid.
- 9 Schweinhart, L. J., Montie, J., Xiang, Z., Barnett, W. S., Belfield, C.R., & Nores, M. (in press). "Lifetime effects: The High/Scope Perry Preschool study through age 40": <http://www.highscope.org>. (Monographs of the High/Scope Educational Research Foundation, 14). Ypsilanti, MI: High/Scope Press; Lawrence J. Schweinhart, "Significant Benefits: The High/Scope Perry Preschool Study Through Age 27," (Ypsilanti, Michigan: High/Scope Press, 1993), xv, 55. Barnett, W. S. (1996); "Lives in the balance: Age-27 benefit-cost analysis of the High/Scope Perry Preschool Program," (Monographs of the High/Scope Educational Research Foundation, 11). Ypsilanti, MI: High/Scope Press.
- 10 Ibid.
- 11 Ibid. Constant 2000 dollars discounted at 3%.
- 12 Art Rolnick and Rob Grunewald, Federal Reserve Bank of Minneapolis, "Early Childhood Development: Economic Development with a High Public Return," 2003: <http://woodrow.mpls.frb.fed.us/pubs/fedgaz/03-03/opinion.cfm>.
- 13 Robert G. Lynch, Economic Policy Institute, "Exceptional Returns: Economic, Fiscal, and Social Benefits of Investment in Early Childhood Development," 2004: [http://www.epinet.org/content.cfm/books\\_exceptional\\_returns](http://www.epinet.org/content.cfm/books_exceptional_returns).
- 14 Washington State Institute for Public Policy, "Benefits and Costs of Prevention and Early Intervention Programs for Youth," <http://www.wsipp.wa.gov/>. Benefits and costs are in 2003 dollars.
- 15 Oregon's home visiting program, Healthy Start is a voluntary home visitation/family support program available to all pregnant women and new families in each of Oregon's thirty-six counties. Intensive home visiting services are available for at-risk families through the early childhood years. Healthy Start is currently serving about 40% of new families, and of these, only about half of potentially eligible higher risk families are currently able to be served. Healthy Start has not yet had a rigorous evaluation completed to determine the costs and benefits of the model implemented in Oregon. Currently there is an effort to ensure that all Oregon programs adopt and achieve more uniform quality standards.
- 16 Oregon Head Start Prekindergarten (OPK) provides a comprehensive preschool education and family support services for children ages 3-5 whose families live at or below the federal poverty line. OPK is a part-day program and has an annual average cost per child of \$7,836 (FY2006).
- 17 NIEER Resources, Fast Facts: Economic benefits of quality pre-school education for American 3- and 4-year olds. The estimate averages the cost of half day, school day, and full day programs: <http://nieer.org/resources/facts/index.php?FastFactID=6>
- 18 Ibid.
- 19 Sheila Baker, Principal Legislative Analyst, Oregon Legislative Fiscal Office, Spring 2004.
- 20 Ibid.
- 21 [www.oregonstate.edu/admin/bin/aid/c04.html](http://www.oregonstate.edu/admin/bin/aid/c04.html), [www.financialaid.uoregon.edu/cost.htm](http://www.financialaid.uoregon.edu/cost.htm), Brian O'Connell, Assistant to Associate Vice Provost, Portland State University.
- 22 Steven Barnett, "Long-term effects of Early Childhood Programs on Cognitive and School Outcomes." *Child Development*, Winter 1994, 5,3:25-45. Page 45.
- 23 Ibid. Oregon Department of Education Estimated Eligible 3- and 4-Year-Olds Served and Unserved by Head Start and Oregon Prekindergarten, January 2006.
- 24 NIEER, Percent of Population Ages 3 and 4 who are Enrolled in School Census 2000. School is defined as a group or class that is organized to provide educational experiences for children: <http://nieer.org/resources/facts/index.php?FastFactID=10>
- 25 Oregon Department of Education Estimated Eligible 3- and 4-Year-Olds Served and Unserved by Head Start and Oregon Prekindergarten January 2004. "Investing in Oregon's Future," Oregon Head Start Prekindergarten Report to Oregon's 72nd Legislative Assembly, Oregon Department of Education, 2003.
- 26 "The 2003 Benchmark Performance Report," Oregon Progress Board 2003: <http://egov.oregon.gov/DAS/OPB/>.
- 27 "The 2005 Benchmark Performance Report," Oregon Progress Board 2005: <http://egov.oregon.gov/DAS/OPB/>. Four year high school graduation rate from 2004-5 Statewide Report Card, Oregon Department of Education.



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Is an independent, nonprofit, research-driven action organization.

Stimulates dialogue and collaborative action to ensure the greatest return on investment for Oregon's disadvantaged children.

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