

# the children's institute

An Interview with **David Mandell**, research director of the Children's Institute, conducted by **Jay Hutchins**

The Children's Institute was created in 2003 to move research to action by highlighting best practices that can make a measurable difference in the life of an at-risk child. The organization's goals include educating Oregonians about the importance of early childhood development, developing an Oregon Children's Budget, and spotlighting best practices that most effectively serve Oregon's children. The institute also staffs the Ready for School public awareness campaign aimed at ensuring all children enter kindergarten healthy and ready to succeed. In the following interview, David Mandell discusses the research on which the institute bases its advocacy work for Oregon Pre-K programs, also known as Oregon Head Start.

**Sockeye:** What are the significant risk factors associated with failure in school?

**DM:** Living in poverty, having a mother without a high school diploma, being an English language learner, and living in a single-parent family are the four most significant risk factors.

**Sockeye:** Isn't it important to note that these risk factors are not necessarily causes but are factors consistently associated with poor school performance?

**DM:** Yes, that is correct.

**Sockeye:** I also understand that hundreds of studies show that high-quality preschool interventions have dramatic but short-term effects on academic achievement.

**DM:** Yes, and the assumption of most intervention research is that longer-lasting effects can be achieved by extending interventions into the elementary grades.

**Sockeye:** What are some of the other assumptions?

**DM:** That early childhood intervention is likely to lead to later success. That educational enrichment can overcome the effects of problems caused by poverty. The most basic assumption is that poverty creates environments that do not promote healthy development.

**Sockeye:** Could you please introduce our readers to the research you use in the advocacy work for Oregon Head Start, which is known as Oregon Pre-K (OPK).

**DM:** The four studies that I have found helpful for OPK are the Perry Preschool Study, the Abecedarian Project, the Chicago Longitudinal Study of the Chicago Preschool Centers, and the Head Start Impact Study First Year Findings which came out in 2005.

**Sockeye:** Are these experimental studies? How scientific are these studies?

**DM:** Some are more scientific than others. An experimental study determines the effects of an intervention by comparing a control group to a treatment group. Both must be randomly selected and the remaining participants in each group at the end of the study must be adequately randomized.

**Sockeye:** I am anxious to hear about the Perry Preschool Study which inspired Head Start and the Chicago Preschool Centers because there is longitudinal data available. But first, it's important to go over the Head Start Impact Study First Year Findings. I understand that it's considered an experimental study.

**DM:** Yes, it is. The study included almost 5,000 kids and both the experimental group (those in Head Start) and those in the control group were randomly selected. A huge effort was made to make sure both groups were randomly selected. But it wasn't a straight comparison between Head Start versus no preschool of any kind. While children were randomly assigned to the control group, parents were still free to place their children in other programs.

**Sockeye:** Did anyone in the control group end up in a Head Start program?

**DM:** About 18 percent of the 4-year-olds who were assigned to the control group got into a Head Start program; other children took part in other pre-school programs. Access to preschool has greatly expanded over the last decade, and this probably affected this study more than earlier preschool studies. It likely means that this study is underestimating the true impact of Head Start. We are now using this report to support our advocacy for OPK.



Sockeye: Who participates in OPK?

DM: Oregon Head Start serves about 11,000 3 and 4-year olds living in poverty, through state and federal funding. It will reach more when an additional 1,300 kids join them over the next year.

Sockeye: Does this funding cover all the eligible kids?

DM: As OPK has expanded, so has the number of kids in Oregon living in poverty, so we still have work to do in order to get all eligible kids in the program.

Sockeye: What areas did the Head Start Impact Study test?

DM: Areas such as pre-reading, pre-writing, vocabulary, and health, and what are known as parent practice domains. There are no significant impacts for 3 and 4-year olds in areas of early mathematics, oral comprehension and things like social competencies.

When you look at the impacts on 3 and 4-year-olds separately for letter naming, vocabulary, and early math, there are positive impacts, but they do not reach the level of statistical significance. But when these results for all the learning skills assessed in 3 and 4-year-olds are pooled, giving them greater statistical power, they become statistically significant.

The study also includes assessment of how children's participation in the program affects the family: things like Head Start parents tend to use less physical discipline. It looks at how effects vary among different types of children, families, communities, and different configurations of children's early care experiences. But the study's two primary goals are to determine on a national basis how Head Start affects the school readiness of children and to determine under what conditions Head Start works best and for which children. It distinguishes between different types of Head Start programs available in an area, such as part-time compared to full-day programs.

Sockeye: What did the official initial assessment conclude?

DM: The first-year findings showed that children in Head Start reap positive benefits, on most measures, but they continue to lag behind children from more economically advantaged families.

Sockeye: This brings us to the Chicago Longitudinal Study (CLS).

DM: Yes, the CLS differs from previous evaluations. It is a large partially federally funded [Title I] early childhood intervention and the intervention program it analyzes has been initiated by a school system. The intervention is called the Chicago Child Parent Center Program (CPC). We are interested in it because the scale of the findings is more likely to apply to large-scale programs such as Head Start. It is meant to look at the long-term effects of a large intervention and includes family and adolescent outcomes.

Sockeye: So, the CLS studied the CPC?

DM: Yes, the CLS studied the Chicago Child Parent Centers to determine the long-term effectiveness of a federal center-based preschool program as well as regular school-based intervention for urban low-income children. They tracked about 1,500 kids. The CLS also studied the expansion of the CPC intervention into later grades. CPC was inspired by the Perry Preschool Project. Small class sizes, parental involvement were important components.

Sockeye: How scientific is the study? I understand that CLS is considered a quasi-experimental study but I don't really know what that means.

DM: Random assignment was not possible for the comparison group and the treatment group. The methodological consider-



ations are discussed by Arthur Reynolds in “Success in Early Intervention.” Reynolds ran the CLS study. He points out that it would have been unethical given the nature of the program. Almost 98 percent of the kids were African-American from high poverty neighborhoods in Chicago. They entered the preschool centers on a first-come, first-served basis. But the methodology of the early childhood study done on the CPC is not perceived to have a significant selection bias.

**Sockeye:** What about this thing called attrition bias?

**DM:** What is called attrition bias or nonrandom attrition is the effect of people leaving a study who might have some characteristics in common that skews a final analysis. It is not perceived to have affected the estimates of the CPC’s impact, this again is according to Reynolds.

**Sockeye:** I spent some time with Reynolds’ book, which you were kind enough to lend me. He acknowledges that even though educational outcomes were meaningful, they were not unusually large. He then admits that the magnitude of the positive educational effects declined over time. What did he really mean to say?

**DM:** He meant that the academic effects were not as lasting as they had hoped. This was due in part to the fact that two-thirds of the study sample in the 1986 CLS study [of the Child Parent Centers] never attended an elementary school in which more than one-quarter of its students met national achievement norms. Yet, the social impact of the CPC was still dramatic. These social impact findings include 29 percent higher rates of high school completion; a 33 percent lower rate of juvenile arrest, a 42 percent reduction in arrest for violent offence, a 41 percent reduction in special education placement, a 40 percent reduction in the rate of grade retention and a 51 percent reduction in child maltreatment.

**Sockeye:** James Flynn in “What is Intelligence” and in his interview with Sockeye says that current environment trumps past environment on intellectual gains. Does this statement relate to the CLS findings?

**DM:** Well, school quality was a predictor of achievement that reinforced and extended the effects of early interventions. Reynolds makes a point of saying that the post-program experiences are the key to maintaining social and scholastic development—that these experiences often interfere with learning.

**Sockeye:** I have heard about the Perry Preschool Project for years and understand it was the longest-running experimental study on preschool ever conducted.

**DM:** The Perry Preschool Project was carried out from 1962 to 1967. The idea was to provide high-quality preschool education to 3 and 4-year-old African American children living in poverty and at high risk of failure in school. High/Scope Educational Research Foundation, founded by Perry Preschool researcher David Weikart in 1970, collects follow-up data from the participants. The foundation is an independent nonprofit research organization. Its principal goal is to promote the learning and development of children from infancy through adolescence. They also train educators and parents to help in High/Scope programs.

**Sockeye:** What about the quality of the overall study, including assessment?

**DM:** It was really very good. It was a randomized controlled trial of 128 children, 64 in the intervention group that received the preschool program, and 64 in the control group. The study had very low attrition and a long-term follow-up, which means outcome data were obtained for 94 percent of the participants at the age 40 follow-up. There was also a 27-year follow up

where the data showed 44 percent higher graduation rates for the preschool group and 50 percent fewer teen pregnancies on average. The age 40 follow-up showed the preschool group was more than 45 percent less likely to have served time in jail and 33 percent less likely to have committed a violent crime. At the age 40 follow-up, those in the experimental group had earned more and were less likely to be on government assistance such as welfare or food stamps, when compared to the control group.

Sockeye: I remember that the Perry Preschool approach is similar to Reggio Emilia's.

DM: In some ways. The Perry Preschool curriculum emphasized active learning, in which the children engaged in activities that were planned, carried out, and reviewed by the children themselves, with support from adults. This is similar to Reggio Emilia's approach to pre-K. The teachers also involved mothers to help implement the preschool curriculum at home.

Sockeye: Why doesn't the Head Start program use this model?

DM: In many ways, Head Start has tried to replicate Perry Preschool. But Perry was for extremely disadvantaged kids, it was more intensive than current Head Start programs. Class sizes were very small, teachers were paid well, and there were weekly home visits. As a result, it is also very expensive compared to Head Start.

Sockeye: How much does Head Start cost?

DM: Head Start costs about half what the Perry Preschool model did, which was about \$11,300 per child per school year. That's in 2007 dollars, and also about what the Abecedarian project would cost. Both these programs were used as models for the CPC program. Perry was definitely the model that inspired Head Start.

Sockeye: I spent some time with David Kirp's book, "The Sand Box Investment," that you suggested. One of the projects he writes about is the Abecedarian Project in Chapel Hill, N. C., which you have mentioned.

DM: While Perry Preschool and Chicago CPC worked with children age 3 and 4, Abecedarian began with children at age 6 weeks and continued until school entry. It included 57 kids and a comparison group. It showed similar outcomes to Perry. The kids were last assessed at age 21.

Sockeye: I understand OPK is seen as what's being called a learning investment strategy for at-risk children from birth

to 5 years old.

DM: Yes, that's right. A lot of the idea that programs like OPK have tremendous potential for long-term socioeconomic impact on the whole community is informed by economist James Heckman whose work on childhood interventions shows that early childhood investments in the long run create higher tax revenues and lower social expenditures. His most recent book is "Inequality in America: What Role for Human Capital Policy?" He wrote it with Alan Krueger who is also an economist and has done a lot of research in human well being.

Other projections from longitudinal research show that for each child sent to OPK, the K-12 system could save more than \$2,400 in special programs and the public would save \$4,300 just from reductions in juvenile crime.

Sockeye: Was there a cost benefit analysis of Perry?

DM: The cost-benefit analysis of the Perry Preschool program has shown a lifetime payback of more than \$250,000 per participant: \$170,000 in savings from reduced crime and more than \$60,000 in increased lifetime earnings. The references for this and all these studies I mention can be found at the Children's Institute website.

Sockeye: After doing quite a bit of reading, what I understand is that most studies show what are labeled "meaningful" and "short-term" outcomes for academic achievement but not long-term effects. And longer-term studies show more lasting benefits in social adjustment.

DM: Most of these long-term studies do show long-term academic gains, although the size of those gains when compared to the control group may not be as large as when the intervention first ended. But what is often most striking about these studies is the breadth of long term social outcomes.

Sockeye: Thanks, David. 