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Preschool Programs Help to Close School Readiness Gaps for Disadvantaged Children, Says Latest Research by Greg Duncan*

Research evidence has shown that four-year olds who participate in early childhood education (ECE) programs such as state Pre-K or Head Start acquire more academic skills than children who don't attend these programs. Unfortunately, these gains eventually erode because the achievement levels of children who don't attend these programs catch up later in elementary school. However, research indicates that the long-term favorable effects of ECE programs emerge two decades later across diverse outcomes including educational attainment, earnings, criminal behavior and health. Thus, these programs appear to provide substantial benefits to the health and productivity of our society.

According to a recent policy statement endorsed by leading researchers in the field, ECE has the potential to contribute to the reduction of many costly societal problems such as crime, teen pregnancy, school dropout and chronic health conditions¹. The findings on the importance of preschool for improving children's school

readiness and their long-term well-being has come amidst recent cutbacks in ECE following the economic recession, which has reduced the number of seats in programs available for children. Despite these trends in federal funding, some states have increased their funding of state ECE programs considerably^{2,3}.

In addition to academic skills or cognitive abilities, ECE sometimes contributes to the development of social skills and may better prepare young children for the transition to elementary school. However, new research evidence from UCEC Site Director, Greg Duncan, and his colleagues suggests that not all groups of children benefit in the same way from ECE programs.

A number of factors may influence how much children benefit from preschool, including the quality of the program itself, children's skills when they enter the program and the background and parenting practices of their caregivers and families. Duncan's research, which he

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conducted with graduate students and fellow faculty at UCI and other universities, highlights some of these important social characteristics and how they might be related to various school readiness outcomes in early childhood.

In one study of an intensive ECE program offered between ages 1 and 3 to children from both low- and high-income families⁴, Duncan and his colleagues found much larger cognitive gains for the low-income children relative to their high-income peers. In this case, it appears as though the program was able to compensate for some of the differences in the quality of the home environments enjoyed by children from high-income as opposed to low-income families. The differences were large enough to close virtually the entire IQ gap between the two groups of children at age 3 and much of it at age 5, up to two years after the end of the program.

In research on the Head Start program⁵, although Duncan and his colleagues did not find any significant differences in child outcomes by race or ethnicity, their study did indicate that other characteristics distinguish groups with larger or smaller benefits. For example, one of their studies focused on whether the impact of Head Start varied

systematically with the level of academic stimulation found in the child's home⁶. The researchers found differential effects, with children from homes with low or moderate levels of academic stimulation enjoying larger boosts in math and literacy than children from homes with high levels of academic stimulation.

Some of these findings have important implications for ECE programs and boosting the achievement of young children. Gaps in the school readiness of children raised in low- and high-income families are large and, in the view of some, seemingly intractable. Although quite intensive and expensive, the ECE intervention for children aged 1-3 that Duncan and his colleagues studied showed that it was possible for a program to close cognitive gaps completely during the preschool period and close a substantial fraction of them at the point of school entry. The results from both studies suggest the importance of providing children with early academic stimulation, either in the home or in an ECE classroom. In the absence of high quality preschool, however, findings from Duncan and his colleague's research also suggest that encouraging more academic stimulation in the home might benefit the cognitive development of children.

Notes:

¹ <https://sites.google.com/site/ececonsensusletter/>

² <http://www.latimes.com/local/lanow/la-me-early-childhood-education-funding-20140829-story.html>

³ http://www.nytimes.com/2014/09/02/opinion/universal-pre-k-takes-off.html?_r=0

⁴ Greg J. Duncan and Aaron Sojourner, "Can Intensive Early Childhood Intervention Programs Eliminate Income-Based Cognitive and Achievement Gaps?" *Journal of Human Resources*, 48(4), 2013, pp. 945-968.

⁵ Keys, T. D., Farkas, G., Burchinal, M. R., Duncan, G. J., Vandell, D. L., Li, W., ... & Howes, C. (2013). Preschool center quality and school readiness: Quality effects and variation by demographic and child characteristics. *Child development*, 84(4), 1171-1190.

⁶ Miller, E. B., Farkas, G., Vandell, D. L. and Duncan, G. J. (2014), Do the Effects of Head Start Vary by Parental Preacademic Stimulation? *Child Development*, 85(4), 1385-1400.

About the UCEC Site Director:

Greg Duncan is a Distinguished Professor in the Department of Education at the University of California, Irvine. His current research projects include an examination of how children's early skills and behaviors relate to later-life outcomes, and a meta-analysis of the impacts of early childhood intervention programs. In addition, Dr. Duncan is a member of the MacArthur Network on the Family and the Economy. He was elected to the American Academy of Arts and Sciences in 2001 and the National Academy of Education in 2009. He served as past president of the Population Association of American and the Society for Research in Child Development. Dr. Duncan has published extensively on issues of income distribution, child poverty and welfare dependence. He has a Ph.D. in economics from the University of Michigan.