

# Head Start at Ages 3 and 4 Versus Head Start Followed by State Pre-K

## Which is More Effective?

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In light of evidence that high quality early learning experiences can improve low-income children's school readiness and future academic success, a number of recent proposals at the federal and state levels would expand public [early childhood education \(ECE\) programs](#). This expansion includes the federal [Head Start](#) program, a comprehensive child development program that provides children with preschool education and other services. Children can enter Head Start at age 3 or 4, and over half of all 3-year-old entrants now go on to complete two years of Head Start. Others transition from Head Start at age 3 to state-created and implemented, academically-focused pre-kindergarten (pre-k) programs at age 4. In fact, the latter combination of programs is precisely what [President Obama proposed in his 2013 early learning agenda](#)—expand Head Start to serve 3-year-olds, while helping states to increase their educational investments in 4-year-olds.

As policy-makers contemplate expanding preschool opportunities for low-income children, one possibility is to fund two, rather than one year of Head Start for children at ages 3 and 4. Another option is to offer one year of Head Start followed by one year of pre-k. We ask which of these options is more effective in our study, [recently published](#) in *Education Evaluation and Policy Analysis*.

Using data from the Oklahoma (OK) pre-k study, we examine this issue by comparing two sets of age 3 and age 4 preschool “pathways” into kindergarten: 1) age 3 Head Start and age 4 OK pre-k, and 2) age 3 Head Start and age 4 Head Start. We employed a combination of strong quasi-experimental methods, using regression discontinuity to estimate the effects of both age-4 programs, and propensity score weighting to address selection into these two pathways into kindergarten.

We found that children attending Head Start at age 3 develop stronger pre-reading skills in a high quality pre-kindergarten at age 4 compared with attending Head Start at age 4. The comparative effect of the two age 4 programs was striking, with a differential that was two times the effect size of the Head Start program itself on letter and word identification skills (ES=0.98, 0.46, OK pre-k and Head Start, respectfully). Pre-k and Head Start were not differentially linked to improvements in children's pre-writing skills or pre-math skills. This suggests that the impacts of early learning programs may be related to the sequencing to a more academic curriculum at age 4 and the extent to which the Head Start curriculum offers differential learning experiences to 4-year-olds who were, and were not, in the program at age 3.

Unclear in the Head Start literature was whether the program is designed to provide two years' worth of benefits for children, or whether Head Start is best thought of as a 1-year program that children can enter at age 3 or age 4, with minimal incremental benefits from the second year. Unlike primary education where children are separated by grade or state pre-k programs that serve only 4-year-olds, Head Start often combines 3- and 4-year-olds in classrooms—75% by one recent estimate. If children in their

second year of Head Start continue to receive more of the same activities rather than increasingly challenging and differentiated learning experiences, they may gain less from a second year in the program relative to switching to a more academic pre-k program at age 4. We found that the OK pre-k advantage was concentrated to early reading outcomes, suggesting that any instructional repetition may be related to Head Start children's exposure to new books or literacy activities in their second year; OK pre-k may have provided novel age 4-specific learning experiences and materials, avoiding redundancy.

Overall, our study suggests that these two preschool pathways *may* matter. However the specific reasons for why they may matter, and the extent to which they matter in different states with different programs must be studied in future research. There are numerous ways in which these program models differed, but our study was not able to assess which of these program characteristics caused the observed difference.

*The [full study](#) is in Jade Marcus Jenkins, George Farkas, Greg J. Duncan, Margaret Burchinal, Deborah Lowe Vandell, "Head Start at Ages 3 and 4 Versus Head Start Followed by State Pre-K: Which Is More Effective?" Educational Evaluation and Policy Analysis March 2016 vol. 38 no. 1 88-112.*

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