

## **In Oklahoma City, A Rigorous Scientific Study Shows The Positive Equity Effects of Core Knowledge**

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Gracy Taylor and George Kimball of the Oklahoma Public Schools have completed a study of the effects of Core Knowledge in Oklahoma City, in one of the very few carefully controlled, independent studies of "whole-school" reforms.

The Oklahoma City analysis studied the effects of implementing one year of Core Knowledge in grades 3, 4, and 5 using the well-validated Iowa Test of Basic Skills. The study paired some 300 Core Knowledge students with 300 students having the same characteristics on seven variables:

1. Grade level
2. Pre- score
3. Sex
4. Race/ethnicity
5. Free-lunch eligibility
6. Title-1 eligibility
7. Special-education eligibility

The computer randomly selected the control students on these variables.

Given the precise matching of these 300 pairs of students, the expectation would be that the end-of-year results of both groups would continue to be similar on the Iowa Test of Basic Skills. But, in fact, the Core Knowledge students made significantly greater one-year gains in reading comprehension, vocabulary, science, math concepts and social studies.

The greatest gains — in reading, vocabulary, and social studies — were computed to be statistically "highly significant." The vocabulary gain was especially notable, since vocabulary is the single best predictor of academic achievement, and the area where the gap between ethnic and racial groups has proved to be especially difficult to overcome.

The comparative vocabulary gain of Core Knowledge students was computed as "statistically highly significant" with a p-value of .001.

To quote from the report:

It is interesting to note that the statistically significant between-group results in Reading Comprehension, Reading Vocabulary, and Social Studies was the a-priori hypothesis as to where the significant "educational treatment effects" would occur. According to the literature and personal conversations with Dr. Hirsch prior to the analyses, the impact on student achievement related to Core Knowledge instruction should be most pronounced in vocabulary and comprehension. The implementation of the Core Knowledge scope and sequence is intended to provide and develop a broad base of background knowledge that children utilize in their reading. According to Dr. Hirsch's cultural literacy theory, the more background knowledge a child has, the greater facility in reading the child will have. The initial results of this study do appear to support that notion.

Since vocabulary gain tends to be cumulative, it is expected that the magnitudes of these gains in equity and achievement will grow larger as the Core Knowledge students move through the grades. Further analyses and longitudinal studies are to be conducted by researchers from Oklahoma City and RAND during the next months.

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