

Careful Study Finds Homeschool Advantage: A Review of Martin-Chang, Gould, and Meuse, 2011

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Multiple studies over thirty years have consistently found positive things associated with homeschooling.¹ Despite this, some critics, both of the research and of home-based education, claim that almost no research tells us anything significant about the academic achievement of the home educated.

A new study by Martin-Chang, Gould, and Meuse,² however, supports the hypothesis that at least a certain form of home-based education causes higher academic achievement than does public schooling. Their research, “The Impact of Schooling on Academic Achievement: Evidence from Homeschooled and Traditionally Schooled Students,” was made public in May 2010.

Martin-Chang and her colleagues considered some of the limitations on research to date and worked for a design with more built-in controls. For example, they chose solely home educated and solely public schooled students, and matched homeschool and public school students on variables such as geographical area in which they lived, did fresh achievement testing of both groups, and found that all but one of the mothers were “married or living in committed relationships.”

Although the sample sizes involved probably appear small to a lay audience – 37 homeschool and 37 public school students of ages 5 to 10 – it should be kept in mind that having a “large” sample size is not necessarily more important than carefully controlling for certain variables. For example, the researchers adjusted test scores for the mothers’ educational attainment and household income, although “mothers’ education and median income were slightly higher for the public school group” (p. 6). In a sense, they used a matched-pair design and were exploring for causal relationships.

Once into the study, the researchers found that “structured” and “unstructured” homeschoolers were two distinct groups. The authors focused their analysis on comparing students from structured homeschool settings with public school students.

As shown in Table 2, the children who received structured homeschooling were superior to the children enrolled in public school across all seven subtests. (p. 5)

The seven subtests were Letter–Word, Comprehension, Word Attack, Science, Social Science, Humanities, and Calculation. Further, they reported:

To gain a broad perspective of the level of standardized achievement in each group, we conducted a multivariate analysis of variance (MANOVA) that included the scores from all seven Woodcock–Johnson subtests. Thus, all seven subtests were used as dependent variables, and schooling group (public school and structured homeschool) was the independent variable. all the variables showed a medium or strong effect. In

conclusion, when comparing the test scores of the children attending public school and children receiving structured homeschooling, it becomes clear that the latter group has higher scores across a variety of academic areas. Moreover, there is no evidence that this difference is simply due to the family's income or the mother's educational attainment. (p. 5)

The researchers reported a very small sample size for the unstructured homeschool-family students. Based on this, they wrote:

... our exploratory analyses suggest that the unstructured homeschooled children generally score below their expected grade level on the standardized test, and that even with this small sample, performance differences are relatively substantial.” (pages 5-6)

One should keep in mind, however, that the sole measure of learning in this study is standardized tests and the students are rather young; the researchers wonder

whether the children receiving unstructured homeschooling would eventually catch up, or even surpass, their peers given ample time. (p. 7)

Martin-Chang and her colleagues concluded:

The evidence presented here is in line with the assumption that homeschooling offers benefits over and above those experienced in public school. (p. 6)

It will be fascinating to see whether future research, that incorporates more careful controls as did these researchers, continues to find an academic homeschool advantage.

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Endnotes:

¹ Ray, Brian D. (2010, February 3). Academic achievement and demographic traits of homeschool students: A nationwide study. *Academic Leadership Journal*, 8(1). Retrieved February 10, 2010 from http://www.academicleadership.org/emprical_research/Academic_Achievement_and_Demographic_Traits_of_Homeschool_Students_A_Nationwide_Study.shtml.

² Martin-Chang, Sandra; Gould, Odette N.; Meuse, Reanne E. (2011, May 30). The impact of schooling on academic achievement: Evidence from homeschooled and traditionally schooled students. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, pp. 1-8.