

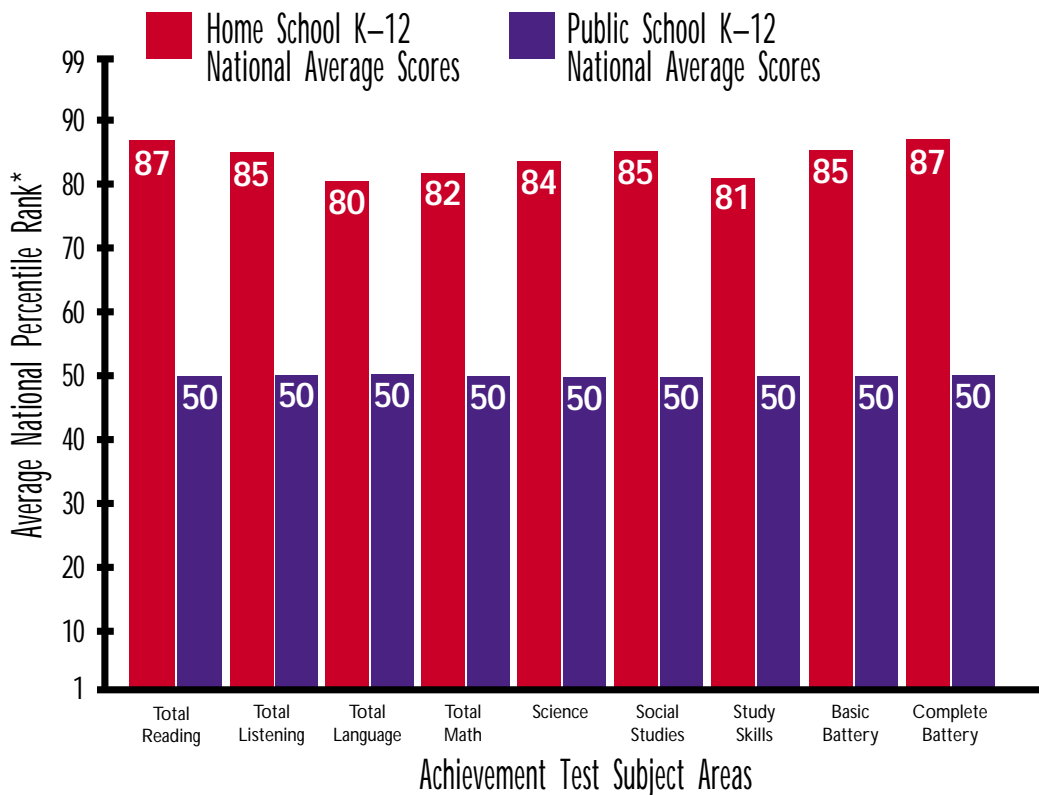
# Home Schooling Achievement

*Why are so many parents choosing to home school? Because it works.*

A 1997 study by Dr. Brian Ray of the National Home Education Research Institute (NHERI) found that home educated students excelled on nationally-normed standardized

achievement exams. On average, home schoolers outperformed their public school peers by 30 to 37 percentile points across all subjects (*Figure 1.0*).

Figure 1.0 — How Do Home School Students Score?



**Footnote:** (Ray, 1997) Data collected for standardized academic achievement tests for the 1994–95 academic year.

\*For more detail about the non-equal-interval nature of a simple percentile scale which has distortion especially near the ends of the

scale, see the complete study by Brian D. Ray, *Strengths of Their Own—Home Schoolers Across America: Academic Achievement, Family Characteristics, and Longitudinal Traits*, 1997, Salem, OR: National Home Education Research Institute, [www.nheri.org](http://www.nheri.org).

# Does Parent Education Level Predict Student Achievement?

Key for Figures 2.1–2.3: Parents' Highest Education Level Attained

- Graduated College
- Some Education after High School
- Graduated High School
- Less than High School Education

**Footnotes:** (Ray, 1997) \*For more detail about the non-equal-interval nature of a simple percentile scale which has distortion especially near the ends of the scale, see Ray 1997.

\*\*Basic battery achievement test scores not available for public school students.

\*\*\*Public school data are for 8<sup>th</sup> grade writing scores and 13-year-olds' math scores based on tables from the U.S. Department of Education, Office of Educational Research & Improvement, National Center for Education Statistics (1996, November). *National Assessment of Educational Progress (NAEP) trends in academic progress* [trends report and appendices].

Washington, DC: U.S. Department of Education.

Home school data are for grades K–12.

Figure 2.1 — Home School Achievement — Basic Battery Test

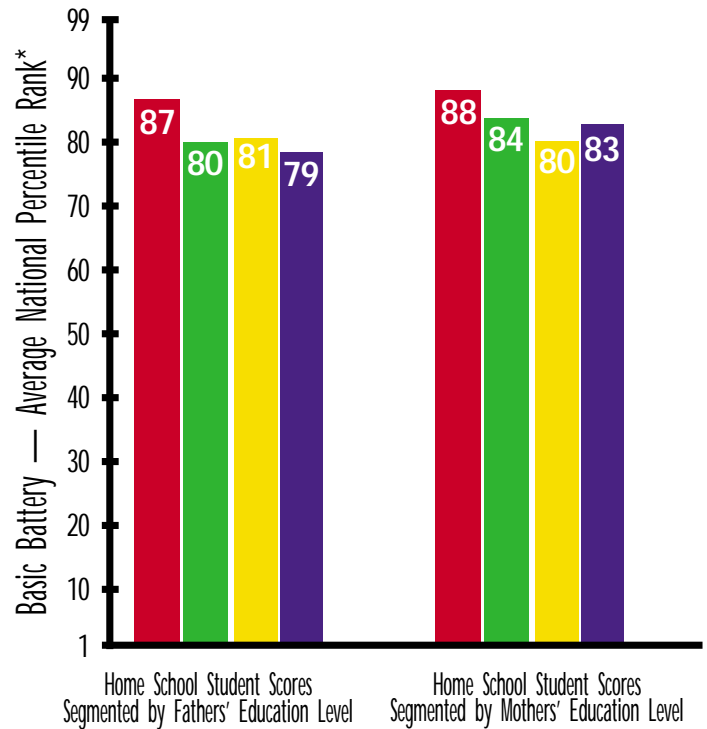


Figure 2.2 — Public School Achievement — Writing Test\*\*

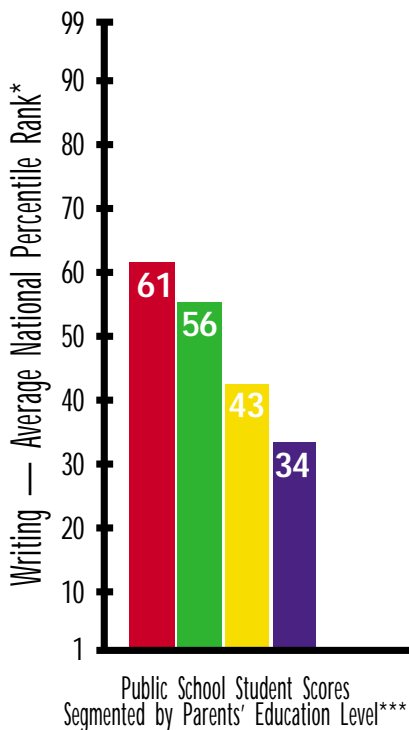


Figure 2.3 — Public School Achievement — Math Test\*\*

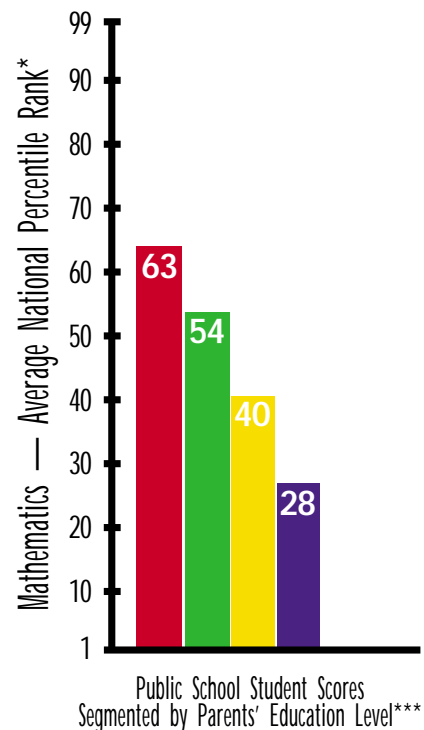
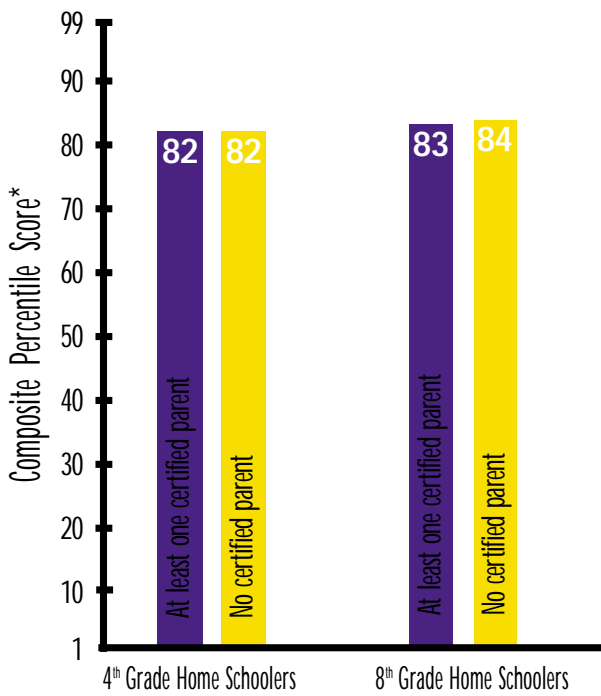
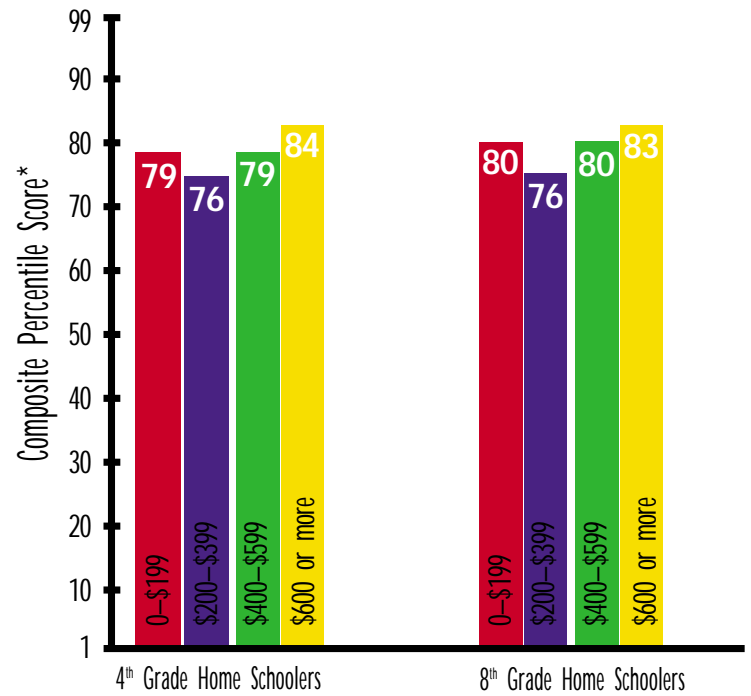


Figure 3.0 — Home School Percentile Rankings Based on Parent Certification



Footnote: (Rudner, 1999) \*Composite Percentile Score refers to the percentile corresponding to the mean composite scaled score.

Figure 4.0 — Home School Percentile Scores Based on the Money Spent on Education per Child



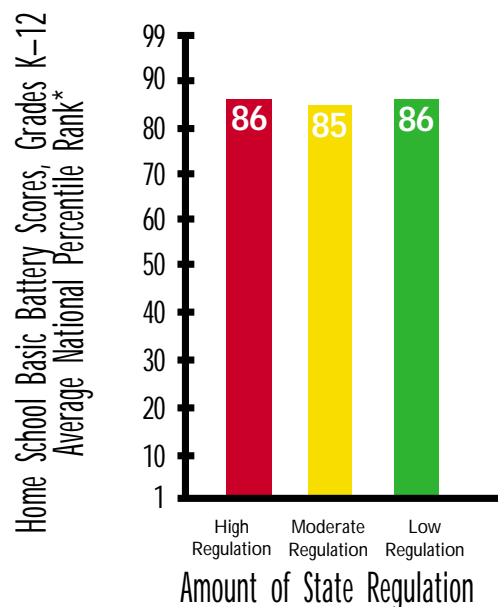
Footnote: (Rudner, 1999) \*Composite Percentile Score refers to the percentile corresponding to the mean composite scaled score.

## Is Government Regulation Necessary for High Achievement?

Key for Figures 5.1 & 5.2

- **Low Regulation**  
No state requirement for parents to initiate any contact with the state.
- **Moderate Regulation**  
State requires parents to send notification, test scores, and/or professional evaluation of student progress.
- **High Regulation**  
State requires parents to send notification or achievement test scores and/or professional evaluation, plus other requirements (e.g., curriculum approval by the state, teacher qualifications of parents, or home visits by state officials).

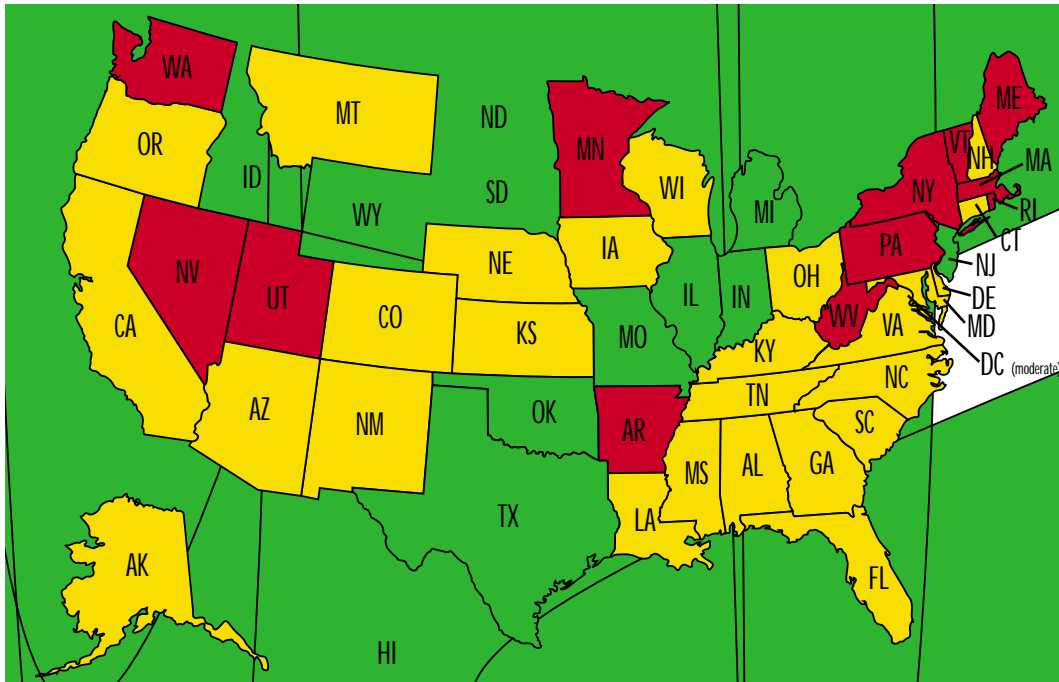
Figure 5.1 — State Regulation: No Impact on Home School Achievement



Footnote: (Ray, 1997) \*See study for more detail about the non-equal-interval nature of a simple percentile scale which has distortion especially near the ends of the scale.

Figure 5.2 — Breakdown of States by Regulatory Policy

(Ray, 1997)



Home schooling's one-on-one tutorial method seemed to equalize the influence of parents' educational background on their children's academic performance. Home educated students' test scores remained between the 80<sup>th</sup> and 90<sup>th</sup> percentiles, whether their mothers had a college degree or did not complete high school (*Figure 2.1*).

In contrast, a parent's education level did appear to affect the performance of children in traditional school settings (*Figures 2.2, 2.3*).

Students taught at home by mothers who never finished high school scored a full 55 percentile points higher than public school students from families of comparable educational backgrounds. Similarly, in his 1999 study, Dr. Lawrence M. Rudner found no difference in achievement according to whether or not a parent was certified to teach (*Figure 3.0*). For those who would argue that only certified teachers should be allowed to instruct their children at home, these findings suggest that such a requirement would not meaningfully affect student achievement.

Rudner also found that the median amount of money spent in 1997 on educational materials for home school students was \$400. Considering this relatively small expenditure in light of the high scholastic achievement of most home school students, it is reasonable to conclude that it does not require a great deal of money to home school successfully (*Figure 4.0*).

According to Ray, the degree of governmental regulation had no significant effect on the academic performance of home schoolers

(*Figure 5.1, 5.2*). Whether a state imposed a high degree of regulation, low regulation, or no regulation, home school student test score averages were nearly identical. Such regulations may be legitimately questioned since there is no apparent benefit to student learning.

Traditionally, gender and race have been consistent predictors of student performance. But home schooling is breaking down those barriers. Math and reading scores for minority home school students show no significant difference when compared to white's. A similar comparison for public schools students, however, demonstrates a substantial disparity (*Figures 6.0*).

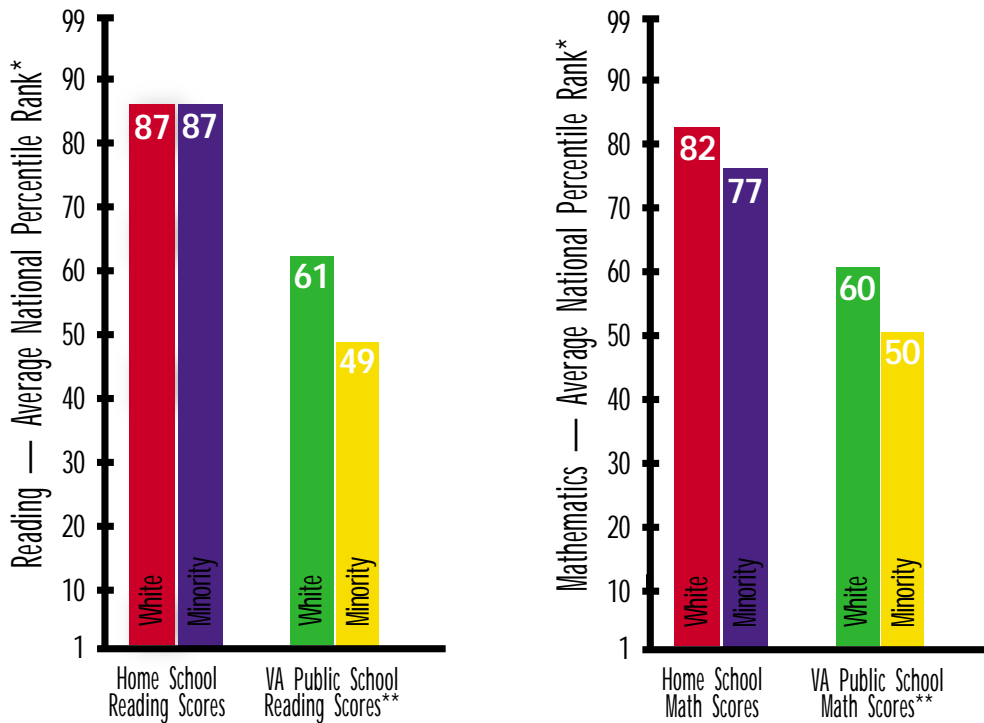
When segmented by gender, test scores for home schoolers reveal that boys are slightly better in math and girls are somewhat better in reading. Public school student performance in math follows a similar pattern, but public school boys' reading scores are markedly behind girls' (*Figure 7.0*).

The first question the general public asks whenever home schooling is mentioned is, "What about socialization?" Data on home school students' activities and community involvement reveal that, on average, these children are engaged in 5.2 activities outside the home (*Figure 8.0*).

Home schooling is an effective educational alternative chosen by dedicated and loving parents for their children. Not only is it working, it is working very well!

# How Do Minorities Fare in Home Education?

Figure 6.0 — Race Relationship to Reading and Math Test Scores



**Footnotes:** (Ray, 1997) \*See study for more detail about the non-equal-interval nature of a simple percentile scale which has distortion especially near the ends of the scale.

\*\*Public school achievement data are based on 8<sup>th</sup> grade scores from Table 4 of *The Virginia Assessment Program: Results for the 1995–1996 School Year* (1996, July). Richmond, VA: Virginia Department of Education.

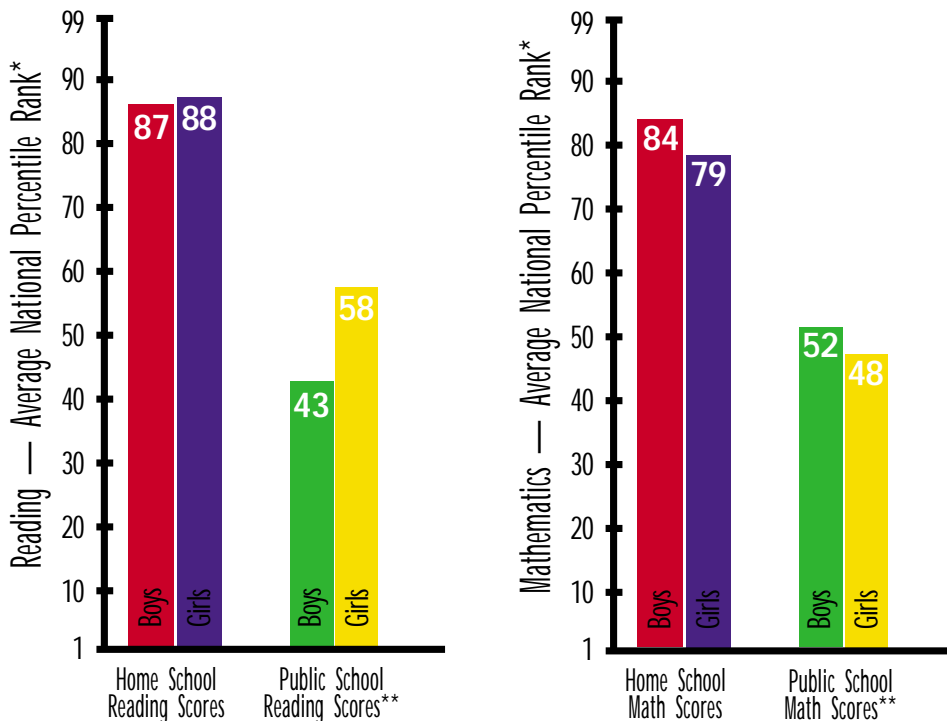
The Virginia minority scores were weighted according to the proportions of minorities in this study of home schoolers to arrive at the numbers in this figure. The minority groups were American Indian/Alaskan Native, Asian/Pacific Islander, black, and Hispanic. Of home school minority students tested in this study, about 63% were black or Hispanic.

Public school achievement data are similar for the U.S. in general but the same detail of data was not available for all public schools. See U.S. Department of Education, Office of Educational Research & Improvement, National Center for Education Statistics (1996, November). *National Assessment of Educational Progress (NAEP) trends in academic progress* [trends report and appendices]. Washington, DC: U.S. Department of Education.

Home school data are for grades K–12.

# What About the Gender Gap in Academics?

Figure 7.0 — Gender Relationship to Reading and Math Test Scores



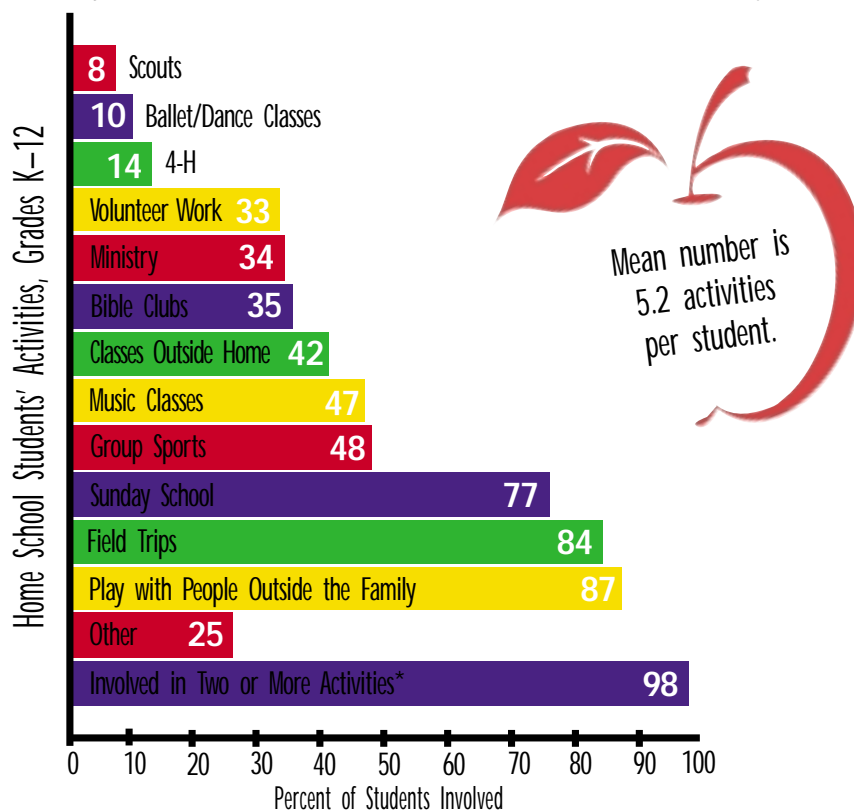
**Footnotes:** (Ray, 1997) \*See study for more detail about the non-equal-interval nature of a simple percentile scale which has distortion especially near the ends of the scale.

\*\*Public school achievement data are for eighth grade based on tables from the U.S. Department of Education, Office of Educational Research & Improvement, National Center for Education Statistics (1996, November). *National Assessment of Educational Progress (NAEP) trends in academic progress* [trends report and appendices]. Washington, DC: U.S. Department of Education.

Home school data are for grades K–12.

# What about Socialization?

Figure 8.0 — Home Schoolers' Activities and Community Involvement



Footnote: (Ray, 1997) \*Participation in two or more of the 12 activities does not include "other activities." See Table 8 in study.

## About the Research

*Strengths of Their Own—Home Schoolers Across America: Academic Achievement, Family Characteristics, and Longitudinal Traits*, Brian D. Ray, 1997 (book).

Dr. Brian D. Ray collected data on 5,402 home school students from 1,657 families for the 1994–95 and 1995–96 academic years. Nearly 6,000 surveys were sent to home school families. Some surveys were mailed directly to families (those randomly selected from numerous mailing lists and longitudinal participants from a 1990 study). Others were blindly forwarded to families through the leadership of independent home school support groups and networks in every state. This was the largest and most comprehensive study on home schooling to that point.

**Brian D. Ray, Ph.D.**, is president of the National Home Education Research Institute. He holds a Ph.D. in science education from Oregon State University, has an M.S. in zoology (1979), and has been a professor and classroom teacher. NHERI conducts basic data gathering research; serves as a clearinghouse of information for researchers, home educators, attorneys, legislators, policy makers, and the public at large; and provides speaker services. NHERI also publishes research reports and the unique, academic, refereed journal *Home School Researcher*.

The full study is available from NHERI for \$8.95, plus \$2 shipping.

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*The Scholastic Achievement and Demographic Characteristics of Home School Students in 1998*, Lawrence M. Rudner, 1999.

Conducted by Dr. Lawrence M. Rudner and commissioned by HSLDA, this study involved seven times as many families as any previous study of its kind: 20,760 students in 11,930 U.S. families.

Unlike any previous study, families chose to participate before they knew their children's test scores, minimizing the possibility of selective reporting. All participants took the same tests: the Iowa Test of Basic Skills for grades K–8 and the Tests of Achievement and Proficiency for grades 9–12, both published by the Riverside Publishing Company.

**Lawrence M. Rudner, Ph.D.**, is with the College of Library and Information Services, University of Maryland in College Park. He has been involved in quantitative analysis for over 30 years, having served as a university professor, a branch chief in the U.S. Department of Education, and a classroom teacher. For the past 14 years, he has been the director of the ERIC Clearinghouse on Assessment and Evaluation. Dr. Rudner holds a Ph.D. in Educational Psychology (1977), an MBA in Finance (1991), and lifetime teaching certificates from two states. His two children attend public school.

For a copy of the full report, see *Education Policy Analysis Archives* at <http://epaa.asu.edu/epaa/v7n8/>