

# **School Size and Student Performance: An Annotated Bibliography of Studies and Resources**

Institute for School Improvement  
Missouri State University  
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**Barker, R., & Gump, P. (1964). *Big school, small school: High school size and student behavior*. Stanford, CA: Stanford University Press.**

This is a report on the research of the benefits of large and small schools in relation to academic achievement and extracurricular activities. It was found that smaller schools have a greater participation rate in extracurricular activities than larger schools. Larger school sizes had a negative impact on academic achievement when compared to smaller schools.

**Berlin, B. M., & Cienkus, R. C. (1989). *Size: The ultimate educational issue? Education and Urban Society*, 21 (2), 228-231.**

This article is a summary of the articles found in the journal, *Education and Urban Society*. The authors found three conclusions from the articles (1) smaller appears to be better (2) smaller class size seems to benefit low SES children the greatest and (3) the instruction of students needs to fit the instructional needs.

**Bickel, R., & Howley, C. (2000). *The influence of scale on student performance: A multi-level extension of the Matthew Principle. Education Policy Analysis Archives (Online)*, 8(22). Retrieved June 12, 2002 from <http://epaa.asu.edu/epaa/v8n22>.**

Using schools in Georgia, this study looks at the relationship of school and district size on student achievement. Findings show that district size does have an influence on performance, which is contradictory to previous studies within the state. The study also finds that a greater equality of outcomes can be found within smaller schools in both small and large districts.

**Boles, R.C. (1952). *Some relationships between size of school and academic achievement of high school seniors in Florida*. Unpublished Doctoral dissertation, University of Florida.**

This study looked at achievement of seniors in Florida schools (three year, six year, and twelve year schools) and the relationship with school size. Overall, results showed that a larger proportion of students received high scores on achievement tests in schools with a population between 500 and 1000 than the proportion of students in schools with a population less than 500. However, it should be noted that these results were obtained from segregated schools so racial/ethnic diversity was not taken into account.

**Burke, A. M. (1987). *Making a big school smaller: The school-within-a-school arrangement for middle level schools.* Orting, WA: Orting Middle School (ERIC Document Reproduction Service No. ED 303890).**

This article is a review of literature on secondary and elementary school size and on school-within-a-school arrangement. Information was compared to look at the implications on middle and/or junior high school students. It was found that small middle schools and school-within-a school arrangements improved attendance, behavior, achievement, and student/staff/parent satisfaction.

**\*Caldas, S.J. (1993). Reexamination of input and process factor effects on public school achievement. *Journal of Educational Research*, 86 (4), 206-214.**

Looking at school achievement in Louisiana, this article found that socioeconomic and ethnic factors had more of an impact than any other factor. This article did not find that school size had any meaningful effect on student achievement. Results show that input factors (which schools have little control over) have more of an effect on achievement than to process factors (which schools have the power to change).

**\*Clements, W. H. (1969). *A third look at high school size: Academic success of entering freshmen for 1965, 1967, and 1968 by class size category.* Wisconsin State University, Stevens Point (ERIC Document Reproduction Service No. 033664).**

This study examined entering freshmen from high schools and their relationship between decile rank and grades in college. Three classes of entering freshmen were examined. Students from smaller high schools (class size of 1-25) had higher decile ranks than students from larger high schools (class size of 751 and over). It was concluded that students from smaller high schools have an advantage over larger high school students.

**Cotton, K. (1996). *School size, school climate, and student performance.* Portland, OR: Northwest Regional Educational Laboratory. Retrieved January 18, 2006 from <http://www.nwrel.org/scpd/sirs/10/c020.html>.**

Analysis of 103 school size related research documents and how it is related to quality of the curriculum, cost-effectiveness, academic achievement, student attitudes, social behavior, extracurricular participation, attendance, dropouts, belongingness/alienation, self-concept, interpersonal relations, college variables, teacher attitudes, and school-within-a-school plans. Findings seem to show that small schools are often equal or superior to large schools.

**Downey, R. G. (1978). Differences between entering freshmen from different size high schools. *Journal of College Student Personnel*, 19, 353-358.**

The differences between students entering their freshmen year of college from a variety of high school sizes were studied. A variety of college measures were used in the investigation. It appeared that students from smaller high schools were more involved in high school activities, but there were few academic differences among students from varying high school sizes.

**Duke, D. L., & Perry, C. (1978). Can alternative schools succeed where Benjamin Spock, Spiro Agnew, and B. F. Skinner have failed? *Adolescence*, 13 (51), 375-392.**

This article reviews student behavior in alternative high schools compared to regular high schools. After observing and conducting interviews, the authors found that discipline measures were not of high concern for alternative schools. Reasons that discipline was not an issue at these schools were: small school size, flexible schedules, frequent informal interaction between teachers and students and fewer rules.

**Eberts, R. W., Kehoe, E., & Stone, J. A. (1984). *The effects of school size on student outcomes*. Eugene, OR: Oregon University (ERIC Document Reproduction Service No. ED 245382).**

This article looks at the impact of school size on student achievement and examining the influence of size on the educational process. Data was obtained from smaller and larger schools across the nation. A negative association between larger schools and student achievement was found.

**\*Eddy, R.M. (2003). *Effects of school size on student achievement*. Unpublished doctoral dissertation, Claremont Graduate University, Claremont, California. (UMI No. 3103774)**

Dissertation looks at size and achievement in California schools. Findings show that higher achievement was occurring in smaller schools, especially with lower SES students. Also examines the effect of connectedness, accountability, communication, collaboration, and parental involvement on student achievement.

**Edington, E.D., & Gardener, C.E. (2001). The relationship of school size to scores in the affective domain from the Montana Testing Service Examination. *Education*, 105, 40-45.**

This article looks at the effect of school size on the affective domain of students in sixth and eleventh grade in Montana schools. Areas tested include communication attitude, attitude toward school, character, cooperation, and change. Findings show that small schools receive higher scores than larger schools.

**Edington, E.D., Martellaro, H. (1989). Does school size have any relationship to academic achievement? *The Rural Educator*, 11 (2), 6-11.**

This study looks at public schools in New Mexico. Using the standardized test scores of 5<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup> graders from 1978-1981, results of this study show that academic achievement is not related to school size, but that socioeconomic factors as well as cultural/ethnic factors do play a part in academic achievement.

**\*Fetler, M. (1989). School dropout rates, academic performance, size and poverty: Correlates of educational reform. *Educational Evaluation and Policy Analysis*, 11 (2), 109-166.**

The analysis of the relationship between dropout rates, achievement, school size and Aid to Families With Dependent Children (AFDC) recipients was identified using California high schools. Data was obtained over a two year period. It was concluded that there was a correlation between (1) low dropout rates and high achievement scores and (2) high dropout rates, large school size and percentage of AFDC recipients.

**Fine, M. (1998). Introduction: What's so good about small schools? In M. Fine and J.I. Somerville (Eds.) *Small Schools, Big Imaginations: A Creative Look at urban public schools*. Chicago, IL: Cross City Campaign for Urban School Reform, 2-13.**

This article includes a definition of what a small school is, what makes a small school good, and some anecdotes about schools that have broken larger schools down into smaller schools.

**Fowler, W. (1992). *What do we know about school size? What should we know?* Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.**

This is an overview of the effects of secondary-school size on student outcomes. The author also examines the effects of school size on curriculum. It was found that larger schools (with a graduating class of 750 and higher) exhibited poor student attitudes, achievement and voluntary participation.

**Fowler, W.J., Jr., & Walberg, H.J. (1991). School size, characteristics, and outcomes. *Educational Evaluation and Policy Analysis*, 13, 189-202.**

Research looks at 23 characteristics at 293 public secondary schools in New Jersey including socioeconomic status, school size, and teacher characteristics and their relationship to student outcomes. Findings suggest that smaller schools and districts may result in increased educational outcomes.

**\*Friedkin, N.E., & Neocochea, J. (1988). School system size and performance: A contingency perspective. *Educational Evaluation and Policy Analysis*, 10, 237-249.**

This article discusses the relationship between school size and performance as related to the socioeconomic status of the school system. Findings show that as the SES goes up, the relationship between size and performance goes from negative to positive. The negative relationship in low SES schools is stronger than the positive relationship in high SES schools.

**Gladden, R. (1998). The small school movement: A review of the literature. In M. Fine and J.I. Somerville (Eds.) *Small Schools, Big Imaginations: A Creative Look at urban public schools*. Chicago, IL: Cross City Campaign for Urban School Reform, 113-133**

Review of literature that includes the following findings: students at small schools are less alienated, more actively engaged, higher achieving on standardized tests, more likely to pass courses and attain a higher level of education. The environment of small schools affects achievement on standardized tests, and minority students and those from low SES perform better in small schools.

**Gregory, T. (1992). Small is too big: Achieving a critical anti-mass in the high school. In *Source Book on School and District Size, Cost, and Quality*. Minneapolis, MN: Minnesota University, Hubert H. Humphrey Institute of Public Affairs; Oak Brook, IL: North Central Regional Educational Laboratory, 1-31. (ERIC Document Reproduction Service No. ED361159)**

Advocates for small schools (about 250 students or less) using the Jefferson County (Colorado) High School as an example. Includes claims that very small schools can operate on budgets similar to large high schools within the same district and provide high quality educational opportunities while allowing students and teachers more individual freedom and control over learning experiences and the school environment.

**Haller, E. (1992). High school size and student indiscipline: Another aspect of the school consolidation issue? *Educational Evaluation and Policy Analysis*, 14 (2), 145-156.**

Using a representative sample of national high schools, this study looks at the relationship between school size and student misbehavior specifically that involved with the consolidation of small rural schools. Findings show that there is a slight increase in misbehavior and truancy when small, rural schools are consolidated.

**\*Haller, E.J., Monk, D.H., & Tien, L.T. (1993). Small schools and higher-order thinking skills. *Journal of Research in Rural Education*, 9 (2), 66-73.**

This study specifically looks at the development of higher-order thinking skills related to math and science in relation to school size and student achievement. Findings show that the development of such higher-order skills occurs equally among both small, rural schools and larger, urban education settings.

**Howley, C. (1989). What is the effect of small-scale schooling on student achievement? *ERIC Digest*, (EDO-RC-89-6).**

This article looks at recent research on the influence of smaller schools on student achievement. It includes a definition of small-scale schooling, why it is a concern for educators, lists older and more recent studies, and discusses some unanswered questions related to the topic.

**Howley, C. (1994). *The academic effectiveness of small-scale schooling (An Update)*. Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools. (ERIC Document Reproduction Service No. ED372897)**

This article is a review of literature which includes a brief look at past studies related to achievement and size, the role size plays on achievement in high school, and the effect of school/district size on the surrounding community.

**\*Howley, C.B. (1995). *The Matthew principle: A West Virginia replication? Education Policy Analysis Archives, 3 (18)*. Retrieved June 12, 2006 from <http://epaa.asu.edu/epaa/v3n18.html>.**

This study looked at school size in West Virginia to try to determine if small schools were more beneficial to students of a lower SES while larger schools benefited more affluent students. This study was an attempt to replicate an earlier study done by Friedkin and Necochea in 1988 in California. Results in West Virginia were similar to those found in the original California study. Unfortunately, West Virginia chose to close around 20% of its schools, many of them smaller schools serving a low socioeconomic area, around 1990.

**Howley, C. (1999). *The Matthew Project: State report for Montana*. Randolph, VT: Rural Challenge Policy Program. (ERIC Document Reproduction Service No. ED433173).**

Another replication of the Matthew Project looks at schools in Montana in this article. Similar to the other studies, this one found that students from a lower socioeconomic background are more successful in smaller schools. Since Montana has a large number of small schools, it supports the research showing that small schools lead to higher achievement among students.

**Howley, C., & Bickel, R. (1999). *The Matthew Report: National report*. Randolph, VT: The Rural School and Community Trust. (ERIC Document Reproduction Service No. ED 433174).**

This overview of the Matthew Project includes information about schools in Montana, Georgia, Texas, and Ohio. In all schools, there was evidence that smaller schools benefited lower socioeconomic areas and larger schools benefited more affluent areas. The study also states that an optimal school size for everyone is not a realistic concept.

**\*Huang, G. & Howley, C. (1993). *Mitigating disadvantage: Effects of small-scale schooling on student achievement in Alaska*. *Journal of Research in Rural Education, 9*, 137-149.**

Looking at schools in Alaska, this study finds that small schools are more advantageous for disadvantaged students than are large schools. Those disadvantaged students attending small schools experienced higher achievement than similarly disadvantaged students at larger schools.

**\*James, C. G. (1955). *The relationship between academic achievement and size of school.* Unpublished doctoral dissertation, University of Kansas.**

This is an overview of the relationship of school size on student achievement. An analysis of academic test scores was obtained from 1952 graduates of Kansas high schools to determine if school size impacted achievement on standardized tests. It was found that smaller high schools provide students with the tools to obtain higher scores on achievement tests.

**\*Jewell, R. S. (1989). *School and school district size relationships: Costs, results, minorities, and private school enrollments.* *Education and Urban Society*, 21 (2), 140-153.**

This is a comparison of school size, district size, and school system size to various variables. It was found that smaller schools have higher graduation rates and appear to be better overall. Smaller schools are able to control the minority population in terms of graduation rates, whereas larger schools enroll the majority of these students.

**\*Johnson, J.D., Howley, C.B., & Howley, A.A. (2002). *Size, excellence, and equity: A report on Arkansas schools and districts.* Retrieved February 13, 2006 from <http://oak.cats.ohiou.edu/~howleyc/ARfin.htm>**

Article looks at the relationship between socioeconomic status and school size and the effect on student achievement in Arkansas schools. Study finds that poverty negatively effects achievement at a higher level within large schools in large districts and the negative effect of poverty on achievement decreases at smaller schools in smaller districts.

**\*Kiesling, H. J. (1968). *High school size and cost factors: Final report.* Office of Education, Washington D.C., Bureau of Research (ERIC Document Reproduction Service No. ED 023290).**

The relationship between high school performance, expense per student and school size were examined in this article. The American Institute for Research obtained data from 775 public high schools across the United States. This data was used to evaluate twelve areas of high school performance. These areas were then measured against school expenditure and size.

**Lee, V.E. (2000). *Using hierarchical linear modeling to study social contexts: The case of school effects.* *Educational Psychologist*, 35, 125-141.**

This article describes two studies which use hierarchical linear modeling. The first study looks at the effects of school size on learning, and the second study looks at the influence of teacher attitudes and social organization on student learning. Results of the first study show that students learn more in smaller schools, and school size is more important for socially disadvantaged students. The second study indicates that students learn more when teachers collectively take personal responsibility for student learning.

**Lee, V.E., & Smith, J.B. (1997). High school size: Which works best and for whom? *Educational Evaluation and Policy Analysis, 19, 205-227.***

This study focuses on three main questions: (1) Which size high school is most effective for students' learning?, (2) In which size high school is learning most equitably distributed?, and (3) Are size effects consistent across high schools defined by their social compositions? Results find the ideal high school size to be between 600 and 900 students, more equitable learning occurs in very small schools, and the effect of school size on learning is greater in schools with high populations of minority or lower-SES students.

**Lindsay, P. (1982). The effect of high school size on student participation, satisfaction and attendance. *Educational Evaluation and Policy Analysis, 4 (1), 57-65.***

This study looks at student views as they are related to quality of required courses, feelings of belonging, and participation in school activities in different sized schools. Variables examined include school location, student SES, and academic ability. Results found that participation in extracurricular activities, student satisfaction, and attendance was higher in smaller schools with greater differences being found for women than men.

**McGuire, K. (1989). School size: The continuing controversy. *Education and Urban Society, 21, 164-174.***

This review of literature discusses the controversies associated with school size, including determining which types of schools are the most cost effective and how size effects the quality of education. Suggestions include focusing on the organization within the school/district and how instruction is delivered to best meet the needs of the students.

**McKenzie, P. (1983). *The distribution of school size: Some cost implications.* Paper presented at the Annual Meeting of the American Educational Research Association, Montreal, Quebec, Canada.**

This paper discusses the relationship between school size and cost relationship. The author believes that studies in these areas do not provide useful information. It was concluded that (1) average per pupil costs decline up to a point as enrollment increases, reaches a minimum and rises as school enrollment rises (2) average costs do not reach a minimum, but decline at a decreasing rate as enrollment increases.

**\*Melnick, S. A., Shibles, M. R., Gable, R. K., & Grzymkowski, V. A. (1986). *A comparative study of the relationships between school district size and selected indicators of educational quality.* Hartford, CT: Connecticut Association of School Administrators, Small/Rural Schools Committee (ERIC Document Reproduction Service No. ED 305215).**

This is a comparison of small and large (non-urban) schools in Connecticut in relation to identifying quality education indicators. The following were identified as indicators: costs, staffing, curriculum, achievement, attendance, dropout rate and preparation for

graduation. While no significant differences were found between the schools, larger schools did offer more advanced courses and reported more students as continuing their education after graduation. The smaller schools were found to have a higher percentage of teacher-to-student ratios.

**Miller, J. W., Ellsworth, R., & Howell, J. (1986). Public elementary schools which deviate from the traditional SES – achievement relationship. *Educational Research Quarterly*, 10 (3), 31-50.**

This study compared twelve schools in which student's reading scores were significantly higher than was expected based on their socio-economic status. A total of 67 variables were compared in this study which dealt with teachers, administrators, students, and school size. The following differences were found in these high achieving schools (1) the schools were smaller (2) rate of student mobility was smaller (3) approach to reading instruction was more structured and (4) both the principals and students had positive attitudes about reading.

**Monk, D. H. (1986). Secondary school enrollment and curricular comprehensiveness. *Economics of Education Review*, 6 (2), 137-150.**

This article examines the relationship between school size and variety of curriculum available to students. It was found that schools with a population of no greater than 400 had a larger curriculum. For schools larger than 400 students the curriculum was found to have less variety than their smaller counterparts.

**Monk, D.H. (1992). Modern conceptions of education quality and state policy regarding small schooling units. In *Source Book on School and District Size, Cost, and Quality*. Minneapolis, MN: Minnesota University, Hubert H. Humphrey Institute of Public Affairs; Oak Brook, IL: North Central Regional Educational Laboratory, 1-31. (ERIC Document Reproduction Service No. ED361160)**

This paper is a review of the literature which looks at the concept of school quality and how it can be measured, the concerns of small schools and school districts, and includes recommendations for those concerned with these issues.

**Newman, F.M., Rutter, R.A., & Smith, M.S. (1989). Organizational factors that affect school sense of efficacy, community, and expectations. *Sociology of Education*, 62 (4), 221-238.**

This study looks at background factors such as school size, urbanicity, percentage of white students, percentage of disadvantaged students, and students' ability on entering school as well as organizational factors including orderly student behavior, administrator responsiveness, teachers' influence in decision making, encouragement of innovation, teachers' knowledge of other teachers' courses, teachers helping each other improve instruction, principal leadership, in-service programs specific to staff needs, and staff development time. Results suggest that changes in organizational factors can reduce alienation of teachers.

**Pittman, R.B., & Haughwout, P. (1987). Influence of high school size on dropout rate. *Educational Evaluation and Policy Analysis*, 9, 337-343.**

The authors investigated the relationship between school size, school social climate and dropout rate from 744 public high schools. The research found indirect links among school size and dropout rates in relation to social climate. The results indicated that when schools are consolidated there is an increase in the dropout rate.

**Plecki, M. (1991, April). *The relationship between elementary school size and student achievement*. Paper presented at the meeting of the American Educational Research Association, Chicago, IL. (ERIC Document Reproduction Service No. ED396861).**

Using data from over 4,000 California K-6 elementary schools, the relationship between elementary school size and student achievement is analyzed. Areas examined include the relationship between school size and student achievement, differences in performance among different sized schools, differences when comparing urban, suburban, and non-urban schools, differences among schools which contain students of similar backgrounds, and the type of linear or non-linear function that best represents the relationship between school size and student performance.

**Rogers, R. (1987). Is bigger better? Fact or fad concerning school district organization. *ERS Spectrum*, 5 (4), 36-39.**

Illinois state high schools were surveyed to help determine if higher achievement occurs in larger high schools, or if smaller high schools are capable of providing sufficient opportunities for students to achieve at a high level. The author found that small schools are able to provide a quality education for students, and also states that schools that reach too large of a size can be as much of a problem as schools that are too small.

**Smith, D., & DeYoung, A. (1988). Big school vs. small school: Conceptual, empirical, and political perspectives on the re-emerging debate. *Journal of Rural and Small Schools*, 2 (2), 2-11.**

This article is an overview of the history of school consolidation and summarizes some of the evidence related to class and school size. It contains information on the historical, conceptual, empirical, and political issues related to consolidation and how they are all related to one another. Views both supporting and opposing school consolidation are expressed.

**Smith, G. R., & Gregory, T. B. (1987). Major contrasts in the social climates of two high schools in the same town. *Journal of Rural and Small Schools*, Winter, 2-11.**

The social climates of two high schools, with differences in curriculum, problem-solving strategies, and size, are examined in this article. Both schools, one typical and one smaller alternative, were found to meet each student's needs. The alternative school was found to be superior when rating self-esteem, understanding others, societal responsibility and appreciating human accomplishments.

**Stiefel, L., Iatarola, P., Fructer, N., & Berne, R. (1998).** *The effects of size of student body on school costs and performance in New York City high schools.* New York: New York University, Institute for Education and Social Policy and the Robert F. Wagner Graduate School of Public Service. (ERIC Document Reproduction Service No. ED420464).

This study uses data related to budget expenditures, student characteristics, and graduation/dropout rates in New York City high schools. The study finds that while smaller schools may have higher per student costs, their higher graduation rates and lower dropout rates result in the lowest cost per graduate in the New York City system.

**Summers, A. A., & Wolf, B. L. (1976).** *Which school resources help learning? Efficiency and equity in Philadelphia public schools.* *IRCD Bulletin, 11* (3), 1-17.

This study set out to find areas to supplement learning in schools. One major finding from this study found that certain school inputs do make a difference when examining achievement growth (i.e. hiring teachers from high-rated colleges). Changing school climate was also found to improve student achievement (i.e. decreasing the number of disruptive incidents, integrating ethnicities more).

**Toenjes, L. A. (1989).** *Dropout rates in Texas school districts: Influences of school size and ethnic group.* Austin, TX: Texas Center for Educational Research (ERIC Document Reproduction Service No. 324783).

The author examines the relationship between school size and dropout rates of minorities across 21 school districts in Texas. It was found that Caucasian students had the highest dropout rates rather than the hypothesized minority students. In conclusion, larger schools exhibited a greater risk in the amount of students dropping out.

**Wasley, P.A., Fine, M., Gladdan, M., Holland, N.E., King, S.P., Mosak, E., & Powell, L.C. (2000).** *Small schools: Great strides – a study of new small schools in Chicago.* New York: Bank Street College of Education. (ERIC Document Reproduction Service No. ED465474).

A 2-year study of elementary and high schools in Chicago looked at demographic data, attendance, retention, and dropout rates, and academic achievement in small schools with fewer than 350 (elementary) or 400 (high school) students. The small schools were typically composed of children of color, from poorer families, and students performing at below-average levels. Small schools were found to produce higher achievement levels, attendance, and graduation rates, as well as lower dropout rates, retention rates, and less violence than larger schools.

**\*Wendling, W. & Cohen, J. (1981).** *Education resources and student achievement: Good news for schools.* *Journal of Education Finance, 7*, 44-63.

This article looks at the amount of spending, educational resources, peer group influences and community socioeconomic status in New York state public schools. The researchers

made the following statements (1) schools do make a differences (2) rural schools are different and do things differently (3) schools need to identify home factors that may effect school (4) more studies should be conducted on minority students versus achievement levels.

**Williams, D.T. (1990). *The dimensions of education: Recent research on school size. Working Paper Series. Clemson, SC: Clemson University, Strom Thurmond Institute of Government and Public Affairs. (ERIC Document Reproduction Service No. ED347006).***

This is a review of the recent research related to school size and the optimal number at which a school can function most effectively. Research related to class and district size is also discussed. Most of the past research articles mentioned were published between the late 1970s and early 1990s.

**Wright, D. (1999). Student mobility: A negligible and confounded influence on student achievement. *The Journal of Educational Research, 92, 347-53.***

This article looks at the effects of student mobility on student achievement in elementary grades. It finds that lower scores were more highly associated with movement within a school district than with movement into or out of a school district. While mobility was found to be a predictor of student achievement, it was a lesser factor than others such as ethnicity and family income.

**Wright, S.P., Horn, S.P., & Sanders, W.L. (1997). Teacher and classroom context effects on student achievement: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education, 11 (1), 57-67.***

This study uses the Tennessee Value-Added Assessment System to look at the effects of teachers on student achievement, as well as considering the impact of intraclassroom heterogeneity, student achievement level, and class size on achievement. The results of this study show that the dominant factor in student academic gains is teacher effects and heterogeneity and class size have little influence on academic gains.

**\*Studies Coded for Meta-Analysis**

\*\*\* See Gladden - *The small school movement: A review of the literature*, Chapter 10 of Small Schools, Big Imaginations for other potential sources.