Montana's Great Success: Small and Rural Schools!

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A Quick Review of the Hard Facts!

Montana Rural Education Association

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Montana's Great Success: Small and Rural Schools!

Legal challenges to the adequacy and equity of educational funding exist in various stages of litigation and remedy in states throughout the U.S., often resulting in bitter, divisive decisions based on forced compromises and desperate solutions which, in turn, create new problems. As that debate rekindles in Montana, the Montana Rural Education Association (MREA) would like to propose that citizens, legislators, policy-makers, and educators promote ideas, devise solutions, and make decisions based on ***solid research*** *and in a spirit of joint decision-making. It is up to each of us to keep the future of* ***all*** *students first and foremost in our minds. Every Montana student, regardless of residence, ability, income, or race, is surely entitled to no less.*

As background for the discussion MREA offers the following summary of both national small schools research as well as Montana-specific data where available. There are three levels at which this research summary can be utilized: (1) For an executive summary, focus on the headline findings; (2) For greater detail, read the paragraph below each headline finding; and (3) For the original source, follow the citations and URLs to the research reports which provide the reader the opportunity to further understand and verify findings.

A definition of small and rural schools: *The federal Rural Education Achievement Program (REAP) defines small school districts as those LEAs with a combined average daily attendance of fewer than 600 students. Using the same REAP standards, districts are considered 'rural' if all schools served by the LEA are designated by the U.S. Department of Education's National Center of Educational Statistics as having a Locale Code of 7 or 8.* ***Using these definitions over 87% of Montana School Districts are small and rural!***

This report will examine the value of small and rural schools in Montana, specifically with attention to:

- *Student Achievement*
- *Curriculum*
- *School Costs*
- *Student Engagement*
- *Parent Involvement*
- *School Safety*
- *Economic Impact on the Community*

Student Achievement

1) Student achievement is higher in small schools

In some states, including Montana, research has shown that student achievement is higher in small schools regardless of all other variables.[1] An analysis of 69 studies dealing with school size concluded that achievement in small schools was as good or better than achievement in large schools.[2]

2) Student achievement is higher in small districts

Studies have shown that the size of district is as important as the size of school and that student achievement is higher in small school districts.[3] In Montana 387 out of 445 school districts (legal entities) are classified by the Federal Government as small and rural.[4]

3) Family income level is the single largest predictor of student achievement, but smaller schools narrow the achievement gap between wealthier and poorer students

In the ten states, including Montana, in which studies have been conducted, the negative effect of poverty on student achievement is decreased in smaller schools. This is especially true in critical middle grade levels, when youth are approaching the age at which they are most at risk of dropping out.[5] In some states, students in the wealthiest communities do slightly better in larger schools, but **in all states, the achievement of students from low-income communities is better in smaller schools.** Findings in the Montana study conclude that:

- Poverty has a substantial negative effect on student achievement in Montana's larger districts but very little negative effect over achievement in the state's smaller districts; and
- Across all levels of poverty and affluence, increased district size is associated with decreased levels of achievement.[6]

Beyond this series of studies, there is strong and consistent evidence showing that achievement in small schools is more equitably distributed across students, regardless of their race/ethnicity and socioeconomic status.[7] These consistent findings have led researchers to conclude that the poorer the community, the smaller the schools should be.[8]

Curriculum

4) There is no reliable relationship between school size and curriculum breadth and quality

Most research suggests that there is no reliable relationship between school size and curriculum quality.[9] As one study reports[10], "...on the average, a 100% increase in enrollment yields only a 17% increase in variety of offerings"; furthermore, the "strength of the relationship between school size and curricular offerings diminishes as schools become larger." Two studies (1987[11] and

1990[12]) found that comprehensiveness of the curriculum does increase as school size increases, but it levels off at low to medium enrollment levels, depending on the subject areas. For example, schools with 50-99 students in a graduating class are able to offer an array of courses similar to that offered in larger schools.

5) Where available, the expanded curriculum in larger schools does not always mean an expanded opportunity for student learning

What appears as a more extensive curriculum of larger schools tends to be made up, not of higher-level courses but of additional introductory courses in non-core areas.[13] Although large schools may offer greater curricular variety, only a small percentage of students take advantage of advanced and alternative courses.[14] Several studies have found that only five to twelve percent of the students in large schools avail themselves of the extra courses typically offered.[15]

6) Access to advanced courses and comprehensive curriculums can be just as high in small schools

Through the development and appropriate use of distance learning technologies, small schools have and can be expected to overcome the disadvantages they may face in providing a rich and diverse curriculum.[16]

School Costs

7) Small schools do not necessarily cost more to operate

Most people believe that bigger schools cost less to build than small schools and that bigger schools are more cost efficient to operate—the so-called "economies of scale" argument. In opposition to this commonly held belief, a review of thirty studies on school size found that large schools are not necessarily more cost-effective, nor do they necessarily provide a higher quality education.[17] New York[18] and Nebraska[19] studies compared the budget per student of small vs. large high schools, and found that while the small schools had somewhat higher budgets per student, their budgets per graduate were comparable to those of the large schools due to the lower dropout rates in small schools.

8) Montana schools have fewer administrators and lower administrative costs

A report entitled "School Administration Facts" by the Montana School Boards Association offered the following findings:[20]

- Local school districts operate "with substantially fewer management personnel than found in business and industry"
- "Administrators today have a heavier load of supervision than they did in 1995 and are operating more efficiently than ever."
- "Montana administrative pay levels trail neighboring states, the region and the national averages miserably."

Student Engagement

9) Small schools contribute to greater involvement of students

Student engagement, as measured by participation in extracurricular activities and/or attendance, tends to be higher in small schools.[21] Big school size negatively affects student participation and satisfaction independent of other effects of socioeconomic status and academic ability.[22]

10) Dropout rates are lower and graduation rates are higher in small schools

Research conducted concerning dropout rates and school size generally favors small schools over large schools.[23] More positive attitudes and greater satisfaction are reflected in improved attendance rates and lowered dropout rates.[24] Small schools have higher graduation rates, even after controlling for the proportion of minority students.[25] The same report suggests that "our data, based upon general tendencies, persist in repeating a single message – smaller seems to be better."

11) Students in small schools exhibit less disruptive behavior

Negative social behaviors, such as vandalism, class cutting, disorderly classroom conduct, and truancy are less prevalent in small schools than in large schools.[26] This results in fewer suspensions and expulsions in small schools as well.

Parental Involvement

12) Greater parental involvement generally exists in small schools

It is consistently reported that levels of parental commitment and involvement are greater in small schools[27] and that parent involvement in their children's education improves educational efficacy, no matter what its form.[28]

School Safety

13) Small schools are more likely to be safe, nurturing environments

Security improves and violence decreases in small schools, as does student alcohol and drug abuse.[29] Urban small school initiatives led most notably by the Bill and Melinda Gates Foundation[30] and others[31], cite school safety as being a major advantage of small schools. Small high schools are more likely to create safer, more personalized environments for students.[32]

Economic Impact on Community

17) Communities in which schools are located—especially small communities—have a distinct economic advantage over communities in which no school remains

The economic impact of rural schools on the community is most notably seen in three studies in Iowa, North Dakota, and New York. In the Iowa study, data analysis revealed that half the communities with a high school had significant

population gains (5% or more) over two or more decades, but within the same time frame, three-fourths of those communities having lost a high school lost population as well.[33]

A 1995 paired comparison study of eight communities in North Dakota, found that the residents in vacated communities (in which the school was closed) as compared to host communities (which gained students after consolidation) were more likely to indicate that quality of life, retail sales, and the number of businesses declined after consolidation.[34]

The New York study[35], including all 352 incorporated villages and towns with populations of under 2,500 in New York State, found that the socio-economic differences between communities with and without schools were powerful. Among the findings: 60% of the communities with schools saw population growth from 1990-2000; only 46% of those without schools grew. Average housing values in the communities with schools were 25% higher than in those without schools. Communities with schools had higher per capita incomes, less per capita income from public assistance, and less poverty.

Conclusion

In 1964 the publication of *Big School, Small School: High School Size and Student Behavior* by Barker and Gump concluded that small schools are best and that the supposed superiorities of large schools are "illusions".[36] Since 1964, and increasingly since 1985, a large and convincing body of research, as summarized above, has repeatedly found small schools to be superior to large schools on most measures and equal to them on the rest. This holds true for both elementary and secondary students of all ability levels and in all kinds of settings.[37] Students in small schools are less likely to drop out, exhibiting a more positive attitude and less disruptive behavior. Parents are more involved in the educational process in small schools. This measure has carryover effect in student involvement in extracurricular activities and higher attendance rates. Safety improves in small schools and rates of incidence of alcohol and drug abuse by students decline. As in many other states, research involving Montana public schools indicates that students in small and rural schools score higher on MAP tests in every subject area.

The myth of *economies of scale* is exposed by examining the 'cost per high school graduate' as opposed to the educational 'cost per student'. Although little attention has been given here in Montana to this measure, if schools are to truly become more accountable, as proposed by a variety of national and state initiatives, MREA would suggest that this measurement..."Cost per graduate" should be carefully examined in the context of the current discussion.

Curriculum evaluation of larger schools across the country reveals that many of the expanded offerings are in non-core areas and that often advanced courses are only taken by a small percentage of students. The breadth and scope of a high school

curriculum is not dependent on school size; distance learning technologies can substantially enhance the curricular offerings of small schools, providing access to specific courses for specific students without the costs typically associated with traditional instruction.

In education there are no absolutes. All small schools are not necessarily good, but the overwhelming amount of current research does point to the value of small schools in providing high quality, personalized and equitable education for all students. It is with the value of small schools in mind, that MREA urges all involved in the current debate on school funding to become informed on the value of small schools and to make decisions based on that informed judgment.

MREA would like to thank Dr. Ray Patrick and the Missouri Association of Rural Education for their invaluable assistance in developing this report.

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[3] **Johnson, J.** (2004) Smaller School Districts Counter the Harmful Effects of Poverty on Student Achievement. Rural School and Community Trust. Available at: http://www.ruraledu.org

[4] **Montana REAP Analysis, Office of Public Instruction. Available at** http://www.opi.state.mt.us/PDF/RuralED/PrelimAllocSRS_R04.pdf

[5] Four researchers, Craig Howley, Robert Bickel, Aimee Howley, and Jerry Johnson, working in various combinations from state to state have performed these studies in Arkansas, Georgia, Missouri, Montana, Nebraska, Ohio and Texas between 2000-2004. Three earlier studies using similar methodology and reaching similar conclusions were done in Alaska, California, and West Virginia. Citations for these studies can be found within this bibliography.

[6] **Johnson, J.** (2004) Smaller School Districts Counter The Harmful Effects of Poverty on Student Achievement. Rural School and Community Trust. Available at: http://www.ruraledu.org

[7] Some studies corroborating this conclusion include:

Freidkin, H.E., & Necochea, J. (1998, Fall) School System Size and Performance: A Contingency Perspective. *Educational Evaluation and Policy Analysis.* 10(3), 237-249; **Lee, V.E. & Bryk, A.S.,** (1989) A Multilevel Model of the Social Distribution of High School Achievement. *Sociology of Education*, 62, 172-192; **Lee, V.E., & Smith, J.B.** (1995, October). Effects of High School Restructuring and Size on Early Gains in Achievement and Engagement. *Sociology of Education,* 68(4), 241-270; **Lee, V.E. & Smith, J.B.** (1997). High School Size: Which Works Best and For Whom? *Educational Evaluation and Policy Analysis,* 19(3), 205-227.

[8] The Matthew Project was inspired by the work of Noah Friedkin and Juan Necochea (1988). Their study, carried out with California data describing school performance at four grade levels, concluded that smaller school size benefited school performance in impoverished communities, but that larger size benefited school performance in affluent communities. Howley (1996) conducted the first faithful replication of the 1988 study, using West Virginia data, with results much like those obtained by Friedkin and Necochea. The Matthew Project subsequently conducted four additional replications (Howley & Bickel, 1999). Together the seven states in which related studies have been conducted (AK, CA, GA, OH, MT, TX, WV) reflect the range of schooling conditions in the United States: ethnicity, locale, poverty, region, and school district organization. [Excerpted from http://www.ael.org/page.htm?&index=243&pd=1]

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[30] "The Bill & Melinda Gates Foundation has awarded $13.6 million to Boston for the creation and development of small, effective high schools over the next four years. Under the grant, Boston will open seven small high schools in 2003-2004 and five new small high schools in 2004-2005. At the end of four years, as a result of the Gates Foundation investment and Boston's existing innovative small schools, over 30 percent of Boston high school students will attend small, purpose-designed high schools." Excerpted from http://www.jff.org/jff/approaches/youthtrans/showcase/BostonHSRenewal.html

"The Colorado Small Schools Initiative (CSSI) supports the creation of personalized and high achieving high schools in Colorado. Directed by the Colorado Children's Campaign (CCC) and supported by the Bill and Melinda Gates Foundation, CSSI will support the transformation of low performing large comprehensive high schools into small autonomous schools over the next five years... The most successful high schools around the nation are small, personalized and focused on rigorous academics for all students. These high schools have strong leadership and high quality teaching. CSSI is designed to bring these types of high-performing small schools to Colorado." Excerpted from http://www.coloradosmallschools.org/about/about.html

"Through a $25 million multi-year grant from Meyer Memorial Trust and the Bill & Melinda Gates Foundation, the Oregon Small Schools Initiative will begin creating small, effective high schools whose primary goals are to close the achievement gap between students of color and low income students and their peers, and increase the graduation rate and the number of students ready for post-secondary education." Excerpted from http://www.e3oregon.org/small_schools/projectnews.html

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Why Small High Schools? Large comprehensive high schools are failing our kids.

"A growing number of educators and policymakers believe that large comprehensive high schools that limit our students' and teachers' potential need to be replaced by smaller schools which are better designed to support teaching and learning. Small high schools are better equipped to meet students' academic needs, to create safer, more personalized environments, and to strengthen collaboration amongst faculty, students, and families." Excerpted from http://www.coloradosmallschools.org/about/why_small.html

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