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Montana Successful Schools Analysis: Overview & Issues to Address

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Overview

- Defining Education Adequacy: What are the goals and problems?
- What can be learned from other states?
- Results from Montana Successful School Analysis
- Looking ahead, what are the next steps?
- Questions and Discussion

The Goals & Problems

- The overarching goal of a state education finance system should be the identification of *fair yet reasonable* funding levels for K-12 education.
- All can agree on the importance of a quality education system, its influence on the civic and economic wellbeing of a state, and should demand that such a system be created and funded appropriately.
- Along similar lines, since we are all taxpayers, such a system should be provided in an efficient and effective manner.
- Unfortunately, issues over education funding have become more and more polarized, with both sides guilty of overstating their position.

Goals and Problems

- For example, those saying money does not matter often cite increases in funding over the past 30 years without significant increases in student performance. But fail to mention that special education expenditures account for the majority of the increases.
- On the other hand, those that say simply adding more money will improve performance contradict research, which shows that increased funding, in and of itself, does not increase student performance.
- Overall, money can make a difference if used appropriately and efficiently.
- Again, the goal of a state education finance system should be the identification of fair yet reasonable funding levels.

Characteristics of Good Education Finance Systems

- Should be a relationship between student achievement goals and funding levels. Historically, this relationship has been lacking.
- The system should take into account differential costs associated with various student populations (i.e. at-risk, special education, English Language Learners etc.) In addition, geographic differences and population density should also be taken into account.
- The system should provide additional state resources to low-wealth districts in an equitable manner.
- The system should provide a balance between local control and accountability.

Lessons from Other States

- In any given year, over 20 states are involved in education finance litigation.
- Overall, courts are requiring legislatures to develop "rationales" for funding levels.
- States such as Wyoming and Arkansas have developed these rationales through the commissioning of studies. However, Wyoming is now back in court over funding levels.
- In North Carolina, the court wanted to first determine if existing resources could meet educational needs prior to finding that additional resources were required.
- "Costing-Out" or adequacy studies have been performed in over 30 states. However, in only a handful of states have the results been fully implemented, due to a variety of factors
  - Lack of litigation
  - Lack of resources
  - Limitations of such studies

Lessons from Other States

- Before turning to brief overviews of the different methodologies used in adequacy studies and their limitations, it must be noted that such studies have improved the field of education finance. However, they are far from an exact science and should be seen as a useful tool in determining funding levels rather than definitive answers over education funding.

- Professional Judgment Approach
- Successful Schools Approach
- Evidence Based Approach
- Advanced Statistical Analysis

Adequacy Studies

- Professional Judgment Approach
  - Brings together "expert" educators who identify the inputs required for an adequate education, which are then cost out to determine an adequate funding level.
    - Pro: Expert educators identify appropriate inputs
    - Con: Potential conflict of interest and not outcome based

- Successful Schools/School District Approach
  - Identification of expenditures for successful systems are averaged to identify adequate funding level.
    - Pro: Face validity and outcome based
    - Con: May not take into account differences in student populations

Adequacy Studies

- Evidence-Based Approach
  - Through analysis of research, identifies particular programs, practices, and even whole school reforms. Then identifies their corresponding costs which serve as the adequate funding level.
    - Pro: Research-based
    - Con: Questions over whether programs and practices that work in one setting may work in another. "Cookie Cutter approach" to education reform.

- Advanced Statistical Analysis
  - Analyzes expenditures and student performance through multiple regressions to identify adequate funding levels.
    - Pro: Compares inputs and outcomes through advanced statistics
    - Con: Not transparent, begs questions of lies, damn lies, and statistics.

Adequacy Studies

- Interestingly, both the successful schools and professional judgment approach were undertaken in Kansas. There was over a 25% difference in the two finding, begging the question of which finding was appropriate?
- Since each approach has its limitations and the field as a whole is not an exact science, the Montana legislature may want to view adequacy through multiple lenses (approaches).
- Multiple approaches can provide a range of funding levels, which not only serve as a starting point for discussions, but also set parameters that the discussion should stay within.
- In addition, it allows the legislature to make the final (and in my opinion) appropriate decision over funding levels.
- Finally, it allows for hybrid approaches to be created.

Adequacy Studies

- For example, a successful schools analysis could identify schools that are succeeding with different population (successful special education schools). Then individuals could visit these schools to "cost-out" their programs and practices (i.e. evidence-based approach).
- The advanced statistical approach could help make cost adjustments for sparcity once an adequate funding level has been identified through other approaches.
- Simply stated, given the limitations of adequacy studies, the more data the legislature has to base its final decision on the better for students, taxpayers and the court.

Montana Successful Schools Analysis

- The Montana Taxpayers Association hired me to examine adequacy through the successful schools approach in order to take the next step in determining fair yet reasonable education funding levels in Montana.
- The successful schools approach was first used in Ohio in the mid 1990's and since that time has been used in adequacy studies in over a dozen states.
- As previously mentioned, the greatest strength of the approach is its face validity. Simply stated, it shows that schools can be successful with certain funding levels. Its focus on performance outcomes as compared to inputs is also better aligned with standards-based reform.

Montana Successful Schools Analysis

- As previously discussed, one potential limitation to the successful school approach is over cost adjustments. For example, if the majority of successful schools are in areas of a state with high population densities and low numbers of at-risk students, the resulting number may be inadequate for sparsely populated schools with high proportions of free and reduced lunch students. However, as will be shown, these limitations can be overcome with thoughtful and thorough analyses.
- In addition, in states without school level finance data, a school's corresponding district per-pupil funding level is used as a proxy and may not reflect the total costs of a given school, although school level costs are usually within 5-10% of average district costs. With so many districts in Montana only having one school, this is even less of a limitation.

Results of Successful Schools Analysis

- The table below provides information on schools with various percentages of students scoring proficient or above on the reading and math sections on MontCAS. Expenditures do not include transportation or facilities.

	ALL Schools	0-59% Reading & Math	60% on Reading or Math	60% on Reading & Math	66.7% on Reading & Math	75% on Reading & Math
Number of Schools	851	177	195	196	115	39
Average School Size	174	196	254	270	239	110
Student/ Teacher Ratio	12.1	12.7	14.7	13.6	13.1	11.9
Student/ Cert. Staff Ratio	10.9	9.8	11.3	11.9	11.8	11.2
F&R%	37.1%	50.9%	35.6%	29.6%	29.3%	29.7%
Average Expenditure	$7,625	$8,567	$6,928	$7,200	$7,395	$7,365

Results of Successful Schools Analysis

- Taking into account Native American Schools.

	ALL Schools	Native American Schools	0-59% Reading & Math	0-59% Reading & Math with out Nat. Am.	60% on Reading or Math	60% on Reading & Math
Number of Schools	851	35	177	142	195	196
Average School Size	174	166	196	204	254	270
Student/ Teacher Ratio	12.1	10.4	12.7	13.3	14.7	13.6
Student/ Cert. Staff Ratio	10.9	7.7	9.8	10.0	11.3	11.9
F&R%	37.1%	85.0%	50.9%	42.5%	35.6%	29.6%
Average Expenditure	$7,625	$13,002	$8,567	$7,674	$6,928	$7,200

Results of Successful Schools Analysis

- Do percent of Free & Reduced Lunch Students Impact Expenditure Levels and Success?

	Unsuccessful Schools w/o Native Americans	Unsuccessful Schools w/o Native Americans & 40%+ F&R	Successful Schools w/o Native Americans & 40%+ F&R	Successful Schools w/o Native Americans & <15% F&R
Number of Schools	142	79	42	37
Average School Size	204	194	142	508
Student/ Teacher Ratio	13.3	14.3	13.9	16.1
Student/ Cert. Staff Ratio	10.0	10.3	10.5	12.7
F&R%	42.5%	54.0%	49.9%	10.9%
Average Expenditure	$7,674	$7,350	$7,188	$7,359

Results of Successful Schools Analysis

- Does School Size Influence Expenditures?

	<50	50-125	125-275	275-425	425-600	600+
Number of Schools	307	170	141	100	55	28
Student/ Teacher Ratio	8.3	11.7	14.2	16.0	16.9	16.5
Student/ Cert. Staff Ratio	6.8	9.1	10.7	11.7	12.5	13.0
F&R%	34.0%	36.8%	34.7 %	38.4 %	28.5 %	20.1 %
Average Expenditure	$10,641	$8,548	$7,321	$6,866	$6,707	$7,223

Results of Successful Schools Analysis

- Differences in High Schools based on size.

	Less than 50 Students	50-125 Students	125-300 Students	300 Students or More
Number of Schools	42	44	35	39
Average School Size	32.3	78.7	189	874.7
Student/ Teacher Ratio	5.9	10.0	12.5	16.4
Student/ Cert. Staff Ratio	5.2	8.4	9.7	12.7
F&R%	39.3%	33.3%	25.3 %	18.7 %
Average Expenditure	$15,679	$10,636	$9,208	$7,538

Results of Successful Schools Analysis

- Differences in Elementary Schools based on size.

	<13	13-25	25-50	50-100	100-175	175-250	250-350	350+
Number of Schools	62	47	53	60	45	48	64	56
Student/ Teacher Ratio	6.5	10.0	8.7	11.0	14.0	14.7	16.0	17.3
Student/ Cert. Staff Ratio	5.5	7.7	7.3	8.2	10.7	10.9	11.6	12.7
F&R%	22.5%	16.9 %	35.1%	42.1%	34.4%	38.9%	41.2%	32.8%
Average Exp.	$11,713	$7,579	$10,310	$8,007	$7,189	$6,738	$6,728	$6,459

Results of Successful Schools Analysis

- Can also look at expenditures for school districts based on accreditation.

	Full Accreditation	Non-Full Accreditation
Number of Districts	222	212
Average Size of District	151	540
Percent of Students	22.7%	77.3%
Student/Teacher Ratio	13.2	14.9
Student/Cert. Staff Ratio	9.7	11.1
Percent F&R	34.8	34.4
Average Expenditures	$9,101	$8,363

Successful Schools Analysis

- The previous examples give just a small taste of the types of analyses that can be performed.
- With the database that has been created, we can analyze expenditures based on school and district AYP status, performance on ITBS, graduation rates, local tax efforts, and a host of other measures.
- In addition, successful schools with high proportions of special education students can be identified, along with successful schools in sparsely populated areas.
- Overall, there are literally hundreds of different types of analyses that can be performed.
- Again, the more analyses and data, the sounder the methodology and your defense in court.

How to Translate Findings into a Funding Formula

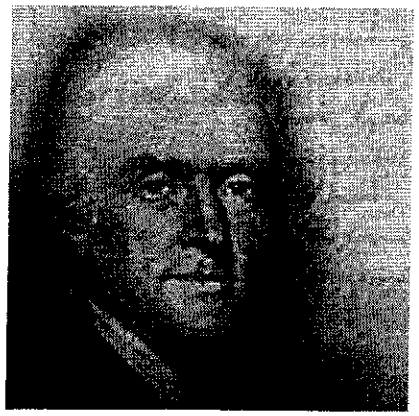
- As previously mentioned, the results of the successful schools analysis can be used to identify a number of successful schools, which can then be analyzed to perform "evidence-based" costing out studies for specific programs and practices. Results of the successful school analysis, the evidence-based analysis, the professional judgment analysis and other analyses could then provide the legislature with a range of appropriate tools for determining adequate funding levels.
- Again adequate funding formulas will identify an adequate "base funding level" and also make appropriate adjustments for student populations and geographic variations.
- If the legislature decides to fund school systems via classroom units, the successful schools analysis can not only provide useful information on total costs, but can also provide valuable information on student/teacher and student/certified staff ratios as seen in the previous charts.

Next Steps

- At this time, the Montana Taxpayers Association (MTA) is creating an on-line survey that it would like to send to approximately 50 schools (both successful and non-successful). The MTA has solicited input from a variety of education stakeholders and the survey is near completion.
- The purpose of the survey is to find out what successful schools are doing in order to identify best practices. Along similar lines, we want to know what additional needs non-successful schools have.
- The results of the survey could be provided to the interim committee by the time they convene. The identification of various successful schools could also serve as the first step in the "evidence-based" approach to determining adequacy.

Next Steps

- Issues to address when performing an adequacy study:
  - Make sure the study is Montana specific. You are a unique state with unique populations and needs. What may work in Connecticut may not work in Montana.
  - Along similar lines, involve education experts within Montana.
  - Ensure that all data collected and analyzed in the study is provided to you in an easy to use format. Overall, you want to build an infrastructure that will allow you to perform similar analysis in the future with state personnel.
  - Use multiple approaches to define adequacy. Again, the field is not an exact science and the more tools you have, the better the study will be for students, taxpayers and the courts.
  - You have the opportunity to examine adequacy in a new and innovative manner, and can serve as an example for other states. Seize the opportunity.



- "An enlightened citizenry is indispensable for the proper functioning of a republic. Self-government is not possible unless the citizens are educated sufficiently to enable them to exercise oversight. It is therefore imperative that the nation see to it that a suitable education be provided for all its citizens."

-- Thomas Jefferson

Questions and Discussion