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An Exploration of District Consolidation:

By:

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Introduction

This paper was prepared by Augenblick, Palaich and Associates (APA) for the Colorado School Finance Project. The purpose of the paper is to provide background information about the issue of school district consolidation – the reorganization of multiple school districts, typically with relatively small enrollment, into fewer, larger school districts (in some cases, reorganization can work in the opposite way, subdividing a district with relatively large enrollment into several districts). APA conducted its work by: (1) reviewing the history of school districts in the United States and the role that consolidation has played in the past; (2) organizing information about the size of school districts in the United States and how the number of districts has changed over time; (3) conducting a literature review about school district consolidation from several perspectives – cost, efficiency, academic quality, geography, community impact, and governance; and (4) conducting telephone interviews with seven people around the country who have experience dealing with the issue of school district consolidation.

Change in the ways that school districts are organized and governed goes on constantly as districts modify the services they provide, respond to constituent interests, and control expenditures. In the recent past, most of this activity has been undertaken by districts themselves within a framework of state rules, regulations, and incentives.

APA is neither for nor against school district reorganization; that is, the issue is so complex -- due to the interplay between factors such as numbers of students, student characteristics, geography, population change, technology, and politics -- that it would be nearly impossible to develop a single policy addressing the organization of all school districts that would address all factors simultaneously. One of the issues that researchers have studied over the years is the optimum size of school districts -- that is the cost point at which per student spending would be minimized while student achievement would be maximized -- but no one has ever suggested that existing districts be reorganized so that every district would be of optimum size. This reflects both concerns with the underlying research, which often does not consider student achievement, as well as the political ramifications of redrawing district boundaries.

While we present information that allows a reader to compare Colorado to other states in several ways, we have not delved into the particular situation in Colorado and make no recommendations about reorganizing districts in this state.

A Brief History of School Districts in the United States

It makes sense to begin the paper with a brief overview of the development of school districts in this country since where we are today reflects the entire history of the way public education has been governed and financed over nearly four centuries.

Although the American colonists were concerned about the education of children, the household was the most important social organization through which culture and knowledge were transmitted in the seventeenth and eighteenth centuries (Cremin, 1970). As early as 1642, towns of a certain size were mandated to provide an elementary school in some New England colonies. Although costs were paid by

families, towns later were given the right to tax in order to raise the funds needed to operate schools. Interestingly, some towns were willing to pay fines rather than comply with the requirements to provide education services (Beadie, 2000) while other towns were formed, in part, to assure the provision of education. This represents the beginning of the tension between mandating that services be provided and actually paying for them, a tension that continues today.

To a large extent, the expansion of state involvement in education was a result of state control over public lands and other public wealth. By the mid 1800s, states that had originally allowed localities to manage public lands and use revenues as they saw fit, were instead controlling the revenues centrally and developing criteria for the distribution of revenue to localities (Beadie, 2000). In the 1850s, a number of states mandated that localities levy taxes to support schools, which, combined with the provision of state funds was included in the constitutions of newly formed states (Beadie, 2000). By 1860, the basic elements of a free public education system were in place in all Northern states and in some Southern states: (1) the establishment of boards of education at the local and state levels to manage public schools; (2) taxation by towns, cities, and counties to support public schools with some provision of state support; (3) the abolition of any tuition for public schools; and (4) compulsory attendance (Beard & Beard, 1944).

Local school districts have always been “creatures” of the state, which can create them and abolish them at will (Fowler, 2000). The number of districts in a state reflects that state’s history as well as a general attitude toward local government and the concept of “local control.” A 1995 analysis of the control of education by the Organization for Economic Cooperation and Development (OECD) found that the governance structure of education in the United States is far more concentrated at an intermediate level (school district) than either a national (federal) or local (school) level in other countries (Fowler, 2000). Some would argue that the passage of No Child Left Behind and the strengthening of the Individuals with Disabilities Education Act, as well as the education portion of the American Recovery and Reinvestment Act has expanded federal control while the growth of school choice, through charter schools among other things, has expanded local control (as the term is used by OECD).

Most school districts are described as “independent,” meaning that they have elected boards and they have the authority to levy taxes. “Dependent” school districts either receive local revenue from another government (such as a city) and/or have appointed boards. In some southern states, independent school districts separated from county school districts as a way of achieving racial segregation. A majority of school districts serve students in all grades (kindergarten through grade 12, with some districts offering preschool services). Other districts serve only elementary grades or secondary grades. In the past few decades, the role of county supervisory school districts (that is, where the only role of the county district is to supervise the actual operating districts within their boundaries) has been reduced. In the meantime, intermediate districts (referred to in a variety of ways, such as boards of cooperative services or service units), which provide a limited set of services to member school districts (some of which have their own tax authority) have expanded.

One of the most significant political movements to affect school districts was known as “consolidation,” which took place primarily in the middle of the 20th century. This movement was stimulated by two factors: (1) municipal reform and (2) urbanization (Galvin, 2000). Municipal reform was a reaction against the graft and corruption attributed to cities in the late 19th and early 20th centuries that combined with a move toward government modernization. This modernization included reliance on leadership by a professional elite and the implementation of “scientific” management – which was referred to as the “cult of efficiency” by one writer (Callahan, 1962). Urbanization was also a phenomenon of the same time period, reflecting both the expansion of manufacturing and the arrival of large numbers of immigrants to America. In essence, concern about education productivity – the increasing cost of education as services expanded and the perception that despite such growth, schools were having little impact – resulted in greater centralization of authority (including the expansion of state influence over education policy), new education funding systems (designed to promote financial equity), and the consolidation of school districts that would allow the employment of superintendents and professionally trained staff.

Basic School District Data

As shown in Table 1, the number of school districts declined by 65.4 percent between 1939-40 and 1959-60 despite a 40.5 percent rise in the student population, resulting in a dramatic increase in average school district size. That trend continued between 1959-60 and 1970-71, when the number of districts decreased by 55.6 percent despite a 27.1 percent rise in enrollment. Ultimately, in the last 70 years, about 103,000 school districts consolidated and the average size of a school district increased sixteen fold. Of course, as shown in Table 1, the most dramatic change was the elimination of one-teacher schools, which have all but ceased to exist. However, the number of schools (elementary and secondary) has remained fairly constant over the same time, growing most dramatically in the last few years as the student population also increased.

Table 1: Change Over Time in Numbers of Students, School Districts and Schools in the United States

Year	Students		School Districts			One Teacher Schools		Elementary Schools		Secondary Schools	
	Number (In millions)	% Change from Prior Period	Number	% Change from Prior Period	Average Size	Number	% Change from Prior Period	Number	% Change from Prior Period	Number	% Change from Prior Period
1919-20	21.6		--			187,948		--		--	
1939-40	25.7	19.0%	117,108		190	113,600	-39.6%	--		24,542	
1959-60	36.1	40.5%	40,520	-65.4%	640	20,213	-82.2%	71,640		25,784	5.1%
1970-71	45.9	27.1%	17,995	-55.6%	2,010	1,815	-91.0%	63,985	-10.7%	25,352	-1.7%
1980-81	40.9	-10.9%	15,912	-11.6%	2,890	921	-49.3%	60,148	-6.0%	24,362	-3.9%
1990-91	41.2	0.7%	15,358	-3.5%	2,670	617	-33.0%	60,723	1.0%	23,460	-3.7%
1995-96	44.4	7.8%	14,766	-3.9%	2,800	474	-23.2%	63,487	4.6%	23,793	1.4%
2000-01	46.6	5.0%	14,859	0.6%	2,990	411	-13.3%	65,286	2.8%	27,090	13.9%
2005-06	48.0	3.0%	14,166	-4.7%	3,290	335	-18.5%	72,663	11.3%	29,507	8.9%

Source: (U.S. Department of Education, National Center for Education Statistics, 2009)

The current distribution of school districts in terms of size (enrollment level) is shown in Table 2. While only 1.9 percent of all districts serve more than 25,000 students, those districts account for 34.1 percent of all students and have an average enrollment of nearly 61,000 students. At the opposite end of the spectrum, 20.7 percent of all school districts enroll fewer than 300 students and account for only 0.8 percent of all students, with an average size of fewer than 150 students. Despite the impact of the consolidation movement, nearly half of all districts have less than 1,000 students and enroll less than six percent of all students. A variety of factors might explain the continued existence of relatively small school districts, including geographic size, geographic isolation, or a focus on elementary schools.

Table 2: Distribution of All Districts in the United States (with Reported Size) and Students by District Size Group in 2005-06

	District Enrollment Size Group							
	>25,000	10,000-24,999	5,000-9,999	2,500-4,999	1,000-2,499	600-999	300-599	<300
Number of Districts	269	594	1,066	2,015	3,335	1,768	1,895	2,857
Percentage of All Districts	1.9%	4.3%	7.7%	14.6%	24.2%	12.8%	13.7%	20.7%
Number of Students	16,376,213	9,055,547	7,349,010	7,114,942	5,442,588	1,391,314	835,430	403,887
Percentage of All Students	34.1%	18.9%	15.3%	14.8%	11.3%	2.9%	1.7%	0.8%
Average Size of Districts	60,878	15,245	6,894	3,531	1,632	787	441	141

Note: School district enrollment size was not reported in 367 school districts.

Source: (U.S. Department of Education, National Center for Education Statistics, 2009)

The figures in Table 3 show how the 50 states compare to one another in terms of school district characteristics. Figures in the left five columns indicate how many school districts are in each state and how the numbers of standard school districts are related to the numbers of other organizations that manage public schools (the figures are for 2006-07, a year later than the figures discussed previously). In some states, there is an extensive use of multi-district agencies – such as boards of cooperative services or intermediate service centers. In a few states, charter schools are authorized outside of school districts, either through a few statewide or regional agencies or through the schools themselves. While 30 states use only one to three state level agencies, the other states use more than three state agencies to administer K-12 education. The 13,860 local school districts, therefore, represent 80 percent of all the organizations that have some responsibility for governing elementary and secondary education.

Table 3: Comparison of States in Terms of Number of School Districts, Number of Other Governmental Districts, Size of School Districts and Land Area of School Districts

State	Number of School Districts, Multi-District Education Agencies, and Statewide Education Agencies					Enrollment in School Districts, Dry Land Area of State, and Number of All Local Governments in State										Factors that Could be Used to Evaluate Need for Consolidation			
	Total	School Districts (Ind and Dep)	Multi-District Agencies	State-Level Agencies	Chart. School Agencies Ind. of School Districts	Enrollment	Proportion of Districts of Various Student Enrollment Levels				Proportion of Students in Districts of Various Student Enrollment Levels				Area (Square Miles)	Total Local Govts	Proportion of Students in Small Districts	Average Square Miles per School District	School Districts as a Proportion of Local Govts
							600-1,500	300-600	100-300	Less than 100	600-1,500	300-600	100-300	Less than 100					
AL	134	133	0	1	0	741,758	12.8%	0.8%	0.0%	0.0%	2.9%	0.1%	0.0%	0.0%	50,744	1,185	3.0%	382	11.2%
AK	54	53	0	1	0	133,288	15.1%	28.3%	24.5%	9.4%	6.0%	4.9%	1.9%	0.2%	571,951	177	13.0%	10,792	29.9%
AZ	621	238	15	2	366	1,094,454	13.4%	11.8%	14.3%	12.6%	3.6%	1.3%	0.6%	0.2%	113,635	645	5.7%	477	36.9%
AR	292	254	15	3	20	474,206	43.3%	20.5%	0.0%	0.8%	22.0%	5.5%	0.0%	0.0%	52,068	1,548	27.4%	205	16.4%
CA	1,130	989	132	9	0	6,437,202	14.4%	11.4%	12.0%	10.4%	2.2%	0.8%	0.3%	0.1%	155,959	4,344	3.5%	158	22.8%
CO	201	178	21	1	1	779,826	19.1%	17.4%	25.8%	5.1%	4.1%	1.6%	1.2%	0.1%	103,718	2,416	7.0%	583	7.4%
CT	199	169	6	7	17	575,059	17.8%	11.8%	8.3%	0.6%	5.8%	1.6%	0.5%	0.0%	4,845	649	7.9%	29	26.0%
DE	35	19	1	2	13	120,937	15.8%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	1,954	338	3.0%	103	5.6%
FL	74	67	0	2	5	2,675,024	9.0%	1.5%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	53,927	1,623	30.0%	805	4.1%
GA	206	182	16	5	3	1,598,461	11.5%	1.6%	1.1%	0.0%	1.4%	0.1%	0.0%	0.0%	57,906	1,439	1.5%	318	12.6%
HA	2	1	0	1	0	182,818	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6,423	19	0.0%	6,423	5.3%
ID	126	125	0	1	0	261,982	22.4%	17.6%	17.6%	6.4%	11.7%	3.8%	1.7%	0.1%	82,747	1,240	17.3%	662	10.1%
IL	1,082	873	204	5	0	2,111,706	32.1%	18.3%	11.7%	3.2%	13.0%	3.5%	1.0%	0.1%	55,584	6,994	17.6%	64	12.5%
IN	364	294	29	4	37	1,035,074	33.0%	1.7%	3.1%	0.0%	10.4%	0.2%	0.2%	0.0%	35,867	3,231	10.8%	122	9.1%
IA	378	365	12	1	0	483,482	38.1%	28.5%	12.1%	2.5%	26.3%	9.9%	1.9%	0.1%	55,869	1,954	38.3%	153	18.7%
KS	335	323	0	12	0	467,285	24.8%	26.6%	20.4%	2.2%	15.5%	8.1%	3.0%	0.1%	81,815	3,931	26.7%	253	8.2%
KY	195	175	18	2	0	679,878	22.9%	6.3%	2.3%	0.0%	6.1%	0.7%	0.1%	0.0%	39,728	1,346	7.0%	227	13.0%

Number of School Districts, Multi-District Education Agencies, and Statewide Education Agencies						Enrollment in School Districts, Dry Land Area of State, and Number of All Local Governments in State											Factors that Could be Used to Evaluate Need for Consolidation		
State	Total	School Districts (Ind and Dep)	Multi-District Agencies	State-Level Agencies	Chart. School Agencies Ind. of School Districts	Enrollment	Proportion of Districts of Various Student Enrollment Levels				Proportion of Students in Districts of Various Student Enrollment Levels				Area (Square Miles)	Total Local Govts	Proportion of Students in Small Districts	Average Square Miles per School District	School Districts as a Proportion of Local Govts
							600-1,500	300-600	100-300	Less than 100	600-1,500	300-600	100-300	Less than 100					
LA	88	68	0	7	13	654,526	4.4%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	43,562	526	0.5%	641	12.9%
ME	331	287	39	4	1	195,498	17.8%	10.5%	21.3%	15.0%	25.6%	6.6%	5.6%	1.1%	30,862	850	39.0%	108	33.8%
MD	26	24	0	1	1	860,020	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9,774	256	0.0%	407	9.4%
MA	395	250	86	1	58	971,909	24.0%	8.8%	12.0%	1.6%	6.9%	1.1%	0.6%	0.0%	7,840	861	8.6%	31	29.0%
MO	831	552	57	4	218	1,741,845	28.8%	11.1%	9.1%	5.3%	10.5%	1.6%	0.6%	0.1%	56,804	2,893	12.8%	103	19.1%
MN	558	340	59	6	153	839,243	34.1%	20.9%	11.8%	3.8%	13.7%	3.9%	0.9%	0.1%	79,610	3,526	18.6%	234	9.6%
MS	163	152	0	11	0	494,954	23.7%	3.3%	2.0%	1.3%	8.1%	0.5%	0.1%	0.0%	46,907	1,000	8.7%	309	15.2%
MO	532	524	0	4	4	917,705	27.7%	18.9%	21.6%	7.1%	14.6%	4.6%	2.4%	0.2%	68,886	3,723	21.9%	131	14.1%
MT	504	425	77	2	0	145,416	7.5%	11.5%	28.5%	48.2%	21.0%	14.6%	15.2%	5.3%	145,552	1,273	56.1%	342	33.4%
NE	309	269	36	4	0	286,646	15.6%	29.7%	37.5%	1.5%	12.9%	11.7%	7.1%	0.1%	76,872	2,659	31.8%	286	10.1%
NV	19	17	0	1	1	412,395	29.4%	5.9%	5.9%	5.9%	1.2%	0.1%	0.1%	0.0%	109,826	198	1.4%	6,460	8.6%
NH	269	183	81	1	4	205,767	21.3%	17.5%	15.8%	14.2%	19.9%	7.2%	2.8%	0.7%	8,968	545	30.6%	49	33.6%
NJ	648	593	0	1	54	1,395,602	24.1%	13.7%	9.9%	2.7%	10.3%	2.6%	0.9%	0.1%	7,417	1,383	13.9%	13	42.9%
NM	96	95	0	1	0	326,758	13.7%	20.0%	18.9%	6.3%	4.1%	2.8%	1.0%	0.1%	121,356	863	8.1%	1,277	11.0%
NY ¹	819	697	38	5	79	2,815,581	30.0%	12.5%	5.2%	2.3%	8.1%	1.4%	0.3%	0.0%	47,214	3,403	9.8%	68	20.5%
NC	226	125	0	2	99	1,416,436	5.6%	0.0%	1.6%	0.0%	0.5%	0.0%	0.0%	0.0%	48,711	963	0.6%	390	13.0%
ND	239	198	38	3	0	98,283	5.6%	17.7%	42.9%	27.8%	9.2%	14.7%	16.9%	2.3%	68,976	2,699	43.1%	348	7.3%
OH	1,044	614	109	4	317	1,839,683	35.2%	3.9%	1.0%	0.5%	13.1%	0.7%	0.1%	0.0%	40,948	3,702	13.9%	67	16.6%
OK	600	540	0	3	57	634,739	21.1%	25.4%	31.5%	7.2%	17.2%	9.2%	5.4%	0.4%	68,667	1,880	32.2%	127	28.7%
OR	220	199	20	1	0	552,194	19.6%	9.5%	15.6%	15.1%	6.4%	1.5%	1.1%	0.2%	95,997	1,546	9.3%	482	12.9%

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							600-1,500	300-600	100-300	Less than 100	600-1,500	300-600	100-300	Less than 100					
PA	730	501	101	11	117	1,830,684	26.7%	2.6%	0.2%	0.2%	8.4%	0.3%	0.0%	0.0%	44,817	4,871	8.8%	89	10.3%
RI	50	32	4	13	1	153,422	3.1%	9.4%	3.1%	0.0%	0.5%	0.8%	0.1%	0.0%	1,045	134	1.3%	33	23.9%
SC	118	101	13	4	0	701,544	12.9%	1.0%	0.0%	0.0%	1.9%	0.0%	0.0%	0.0%	30,109	698	2.0%	298	14.5%
SD	191	171	17	3	0	122,012	15.8%	23.4%	42.7%	6.4%	20.4%	13.5%	12.1%	0.5%	75,885	1,983	46.5%	444	8.6%
TN	137	136	0	1	0	953,928	16.9%	3.7%	0.7%	0.0%	2.5%	0.2%	0.0%	0.0%	41,217	928	2.7%	303	14.7%
TX	1,266	1033	20	16	197	4,525,394	24.9%	16.2%	17.9%	3.5%	5.5%	1.7%	0.8%	0.1%	261,797	4,835	8.6%	253	21.4%
UT	82	40	4	2	36	508,430	12.5%	7.5%	5.0%	5.0%	1.2%	0.3%	0.1%	0.0%	82,144	599	1.6%	2,054	6.7%
VT	353	292	60	1	0	96,638	13.7%	14.0%	32.5%	19.5%	38.5%	18.0%	18.0%	4.0%	9,250	733	78.6%	32	39.8%
VA	226	134	69	23	0	1,214,472	13.4%	2.2%	0.0%	0.0%	1.6%	0.1%	0.0%	0.0%	39,594	511	1.7%	295	26.2%
WA	307	296	10	1	0	1,031,985	18.6%	10.8%	14.9%	13.9%	5.3%	1.4%	0.9%	0.2%	66,544	1,845	7.8%	225	16.0%
WV	59	57	0	2	0	280,866	14.0%	0.0%	0.0%	0.0%	3.3%	0.0%	0.0%	0.0%	24,078	663	3.3%	422	8.6%
WI	445	425	17	3	0	875,174	36.5%	22.6%	8.7%	0.9%	17.3%	5.0%	0.9%	0.0%	54,310	3,120	23.2%	128	13.6%
WY	67	52	14	1	0	84,409	32.7%	15.4%	9.6%	1.9%	16.7%	3.7%	1.1%	0.1%	97,100	726	21.6%	1,867	7.2%
U.S.	17,376	13,860	1,438	206	1,872	49,036,598	23.5%	13.8%	13.5%	6.4%	6.8%	1.8%	0.8%	0.1%	3,537,379	89,474	9.6%	255	15.5%

Calculated using data from the following sources: (U.S. Department of Education, National Center for Education Statistics, 2009); (U.S. Department of Education, National Center for Education Statistics, 2009); (U.S. Census Bureau, 2004).

The central group of columns in Table 3 shows the distribution of small school districts (those with fewer than 1,500 students) in terms of four size categories for each state. APA focused on these districts because they have typically been the target of consolidation efforts in the past. Nationally, 57.3 percent of all districts have fewer than 1,500 students. In 13 states, fewer than 25 percent of all school districts have less than 1,500 students while in nine states, more than 75 percent of all districts have fewer than 1,500 students.

Nationally, districts with less than 1,500 students enroll about 9.4 percent of all students. The smallest districts, those with less than 100 students, account for 6.4 percent of all school districts while enrolling 0.1 percent of all students. In 28 states, districts with fewer than 1,500 students enroll less than 10 percent of all students while in 11 states, such districts enroll more than 25 percent of all students.

In 13 states (Alaska, Colorado, Iowa, Minnesota, Missouri, Montana, Nebraska, New Hampshire, North Dakota, Oklahoma, South Dakota, Vermont, and Wisconsin) two thirds of all districts have fewer than 1,500 students. In six states (Iowa, Maine [prior to recent efforts to consolidate districts], Montana, North Dakota, South Dakota, and Vermont) more than a third of all students are enrolled in school districts with less than 1,500 students.

The three columns on the right side of Table 3 indicate three factors that could be useful for comparing states in terms of their potential for school district consolidation: (1) the proportion of students in districts with fewer than 1,500 students; (2) the average physical size of school districts (that is, average land area in square miles); and (3) the proportion of all local governments that school districts represent. By state, the proportion of students in districts with less than 1,500 students ranges from zero percent to 78.6 percent (Vermont), with a national average of 9.6 percent. Interest in the geographic size of districts is based on the assumption that the larger the geographic size of school districts, the more difficult it would be to merge them. While the national average area of school districts is 255 miles, state averages range from 13 square miles (New Jersey) to more than 10,000 square miles (Alaska). Support for local governments is based on a state's propensity for local control of government. When school districts represent a higher proportion of all local governments, education may be controlled more locally than other functions. While the national average proportion is 15.8 percent, in 15 states, school districts represent less than 10 percent of local governments. In eight states the proportion is 30 percent or more.

The State of the Research

The literature review in this study examines the research on both district size and the potential impacts of consolidation. The research on these subjects is relatively limited. Many of the studies on district size and consolidation are advocacy pieces that were commissioned by parties that support or oppose consolidation. Although some of these studies make reasonable arguments, not all of the arguments are supported with evidence. In addition, a great deal of the research consists of case studies. While potentially informative, the lessons learned from one situation may or may not apply to other situations.

This literature review attempts to sort through the research to identify the ideas that are supported by facts instead of rhetoric and that offer lessons for those considering districts consolidation.

To supplement the literature review, APA interviewed seven individuals with experience in school governance and/or consolidation. The following individuals participated:

- Tom Bilodeau, Director of Research & Bargaining at the Montana Education Association
- Jim Buckheit, Executive Director of the Pennsylvania State Board of Education
- David Conley, University of Oregon Professor and CEO of the Educational Policy Improvement Center
- Edward Eiler, Superintendent of Lafayette School Corporation in Indiana
- Russ Inbody, Administrator of School Finance and Organization Services, Nebraska Department of Education
- Michael Kirst, Emeritus Professor of Education and Business Administration at Stanford University
- Marty Strange, Policy Director at the Rural Education and Community Trust

These individuals provided their view of optimal district size, the motivations for and impacts of consolidation, as well as alternative to consolidations. Their input is included throughout this paper, although we do not attribute specific information to any one person.

What is District Consolidation?

School district consolidation is the process of combining or merging multiple school districts to form a single school district. Depending upon the goals of district consolidation, it may or may not involve *school* consolidation. School consolidation involves closing one or more schools and shifting its student population to another school or schools.

Opponents of district consolidation often express concern that it will lead to the closure of neighborhood schools. Several of the interview participants report that while school closure does not always result from district consolidation, it is true that school closure often follows district consolidation. According to the research, districts that experience declining enrollment after consolidating with other districts may be forced to cut staff, programs, and resources, and eventually to consider school closure (Jimerson, 2006). Another researcher believes that school closure after consolidation is probable because larger districts with more voters can annex the smaller schools (Driscoll, 2008). In Arkansas, proponents of the 2004 district consolidation policies contended that the purpose of consolidation was not to close schools. Within 2 years of district consolidation, 42 schools across the state had been annexed by larger districts and closed (Johnson, 2006).

The Motivations for Consolidating

There are a number of reasons why policymakers promote school district consolidation. Perhaps the most frequent motivation is to achieve economies of scale. Other reasons include improving the

academic experience for students in one or more districts, improving overall efficiency, or revitalizing a community. The 2007 district consolidation law passed in Maine aims to provide equitable and rigorous educational quality, greater tax rate equity, more effective and efficient resource use, and preservation of school choice (Summary of the Reorganization Law, 2008). The school district consolidation proposal under consideration in Pennsylvania aims to reflect on consolidation as a means to improve efficiency, educational quality and reduce the local property tax burden (Pennsylvania Office of the Governor, 2009). A 1998 study conducted in Georgia examined factors that led some districts to consolidate and led others to decide against consolidation. This study found that the following factors increased the probability of consolidation (Boex & Martinez-Vasquez, 1998):

- The size of potential economies of scale
- Similar geographic sizes of the two districts
- Tax burdens that were higher in one district than the other
- Heavier concentrations of minorities in one or both districts
- Fewer miles of road in the county

The authors also concluded that “the greater the disparity in student enrollments between the districts, the less likely consolidation was to occur” (Boex & Martinez-Vasquez, 1998). Although this paper does not examine each of the factors in the Boex & Martinez-Vasquez study, it reviews the research on costs, efficiency, academic quality, geography, community impacts, and governance.

Optimal District Size

District consolidation is often undertaken in an effort to reach an optimal district enrollment. There is an abundance of research on the ideal student enrollment of a district. Of course, what is ‘optimal’ depends on the goals of the system. A hypothetical district with 50,000 students for example may be able to realize economies of scale, but if student performance is low due to a lack of adequate governance, the district size may not be ideal. Additionally, the ideal size may differ for communities with different demographics and among rural/suburban/urban communities. Typically, what is considered optimal depends on minimizing costs and maximizing performance.

Although there is an abundance of research on district and school size, there appears to be little consensus on the ideal student enrollment to minimize cost per student or maximize student achievement. In other words, there is no single number that will guarantee districts will operate at their most efficient level, economically or educationally (Sher & Schaller, 1986). A number of studies have found U-shaped cost (per student) curves, although the minimum cost points varied considerably (Adams, 1994). For example, estimates of the optimal district size for minimizing costs per pupil range from 675 students to 51,000 students (Adams, 1994). In addition, the cost curves varied between rural and urban communities (Adams, 1994).

The Center for Rural Pennsylvania postulates that the research on school district size is limited in part because it makes no distinction between school size and district size (Yan, 2006). Other research has

found district and school size to be correlated (Driscoll, 2008). That is, smaller schools tend to be located in smaller districts than in larger districts. At the very least, school sizes are limited by the size of the district in which they are located.

Costs

According to the research, one of the most common motivations for consolidating school districts is to realize economies of scale (Louisiana Department of Education, Office of Management of Finance, Division of Planning, Analysis and Information Resources, 2003). The theory is that per student costs can be reduced by increasing the number of students served. All districts have some fixed costs that are spread over the enrolled students. Theoretically, these fixed costs are spread over more students in larger districts, thereby reducing the costs per student. For example, in large districts, the same administrators may be able to manage a range of different student enrollments at the same staffing level (Duncombe & Yinger, 2005). Larger physical plants may be able to produce heating, cooling, or electricity at a lower per student cost if a building is completely full (Duncombe & Yinger, 2005). Larger districts may also be able to access cost savings by negotiating larger purchases of supplies and equipment (Duncombe & Yinger, 2005).

In one study, non-teaching costs per student generally declined as district sizes increased, up to a district size of 25,000 students (Miley & Associates, Inc., 2003). The authors of this study concluded that smaller schools tend to have higher expenditure levels per student and savings may be possible in larger school districts, although the exact enrollment size where efficiencies can be attained is subject to debate (Miley & Associates, Inc., 2003). A study of Pennsylvania districts found that the lowest costs per student were in districts enrolling between 2,500 and 2,999 students (Standard & Poor's School Evaluation Services, 2007). An Oregon study found that districts with fewer than 500 students spent 34% more per student on support services than districts with 3,000 to 10,000 students (Oregon Secretary of State, 2002). In Iowa, districts with fewer than 750 students spent larger proportions of their funding on administrative services (Imernan & Otto, 2003).

The authors of a Kentucky study note that although, on average, small school districts cost more to operate than large districts, this is not always true (Adams, 1994). The study found that most of the variation in educational spending among Kentucky school districts was attributable to district property wealth, not district size (Adams, 1994). Another research study indicated that smaller districts appear to have more variation in expenditure levels by function than larger districts (Imernan & Otto, 2003).

The major shortcoming with the district size research is that it does not account for the longitudinal effects of district consolidation on costs. There have been a number of studies on the cost implications of district consolidation. This research on this topic is however, inconsistent.

A study comparing the financial impacts of district consolidation in 19 districts in 11 states found the impacts on districts to be highly variable (Streifel, Foldes, & Holman, 1991). Some districts experienced

savings in some expenditure categories, while other districts spent more in these categories (Streifel, Foldesy, & Holman, 1991). The authors attribute these results to district discrepancies in student enrollment, location, categorical revenue and expenditures, as well as changes in state funding patterns that favored small rural schools over large urban ones (Streifel, Foldesy, & Holman, 1991). A study of Pennsylvania districts did not find notable differences in per student costs between consolidated districts and non-consolidated districts (Yan, 2006). Although one author concludes that potential savings are available through consolidation, he also notes that these savings are much smaller than the potential savings from breaking up very large districts (Coulson, 2007).

Some of the research indicates that district consolidation can reduce costs per student in the short run (Bard, Gardener, & Wieland, 2005; Rural School and Community Trust, 2003). However, these studies suggest that the reductions are replaced by other expenditures in the long run (Bard, Gardener, & Wieland, 2005; Rural School and Community Trust, 2003). One study comparing 24 small rural districts that consolidated between 1985 and 1997 with other rural districts concluded that district consolidation, “clearly cuts operating costs for small rural school districts in New York” (Duncombe & Yinger, 2005). Savings were largest when the consolidated districts were very small (Duncombe & Yinger, 2005). However, savings in operating costs were partially offset by substantial increases in capital costs (Duncombe & Yinger, 2005).

Several of the interview participants with experience in consolidation believed that long term cost savings are possible, but that districts typically experience short term expenditure increases (Bilodeau, Buckheit, Conley, Eiler, Inbody, Kirst, & Strange, 2009). Some states even offer incentive funding that phases out over time to offset the short term costs (Bilodeau, et al., 2009).

Other research suggests that district expenditures may actually increase after consolidation. The year following the 1959 Arkansas district consolidation, only 13% of Arkansas districts spent less during this year than they did the year before (Goatcher, 1999). The reasons for this were increased transportation costs, capital outlay, more assistant district administrators, cost of enriched curriculum, expanded student services, and the fact that salaries in the lower paying districts were often adjusted to match those in the higher paying district (Goatcher, 1999).

The literature on administrative costs after consolidation is difficult to comprehend. A study of nine school systems, including the nation’s three largest ones, found that consolidation led to higher spending on administrative staff and higher ratios of administrators to students (Ouchi as cited in Deloitte Research, 2005). In contrast, data from one study of 19 school districts three years before and after consolidation indicated significant decreases in administrative costs, although these decreases were more than offset by increases in other costs (Streifel, Iatarola, Fruchter, & Berne, 1998). Another study concluded that administrative costs in consolidated districts increased at slower rates than state average administrative costs (Streifel, Foldesy, & Holman, 1991).

In terms of costs specific to transportation, one study indicated that there is an initial cost savings associated with consolidation, before the rates of cost increases return to the same rates in existence prior to consolidation (Gritter, Silvernail, & Sloan, 2007). Duncombe and Yinger conclude that when district consolidation leads to school closure(s), average transportation distances are likely to increase and consequently, transportation costs are likely to go up (Duncombe & Yinger, 2005).

Clearly, the research on potential cost savings is inconsistent at best. Although some of the research indicates that cost savings can accrue from district consolidation, other research indicates that costs savings are unlikely. Even the studies that suggest cost savings are possible note that there are some offsetting costs that are likely to minimize savings. The research that specifically addresses administrative costs and transportation costs is also unclear.

The interview subjects acknowledged that there are districts that are too small to be fiscally efficient. Although they believed that these 'inefficient' districts may benefit from consolidation, they also note that there are also geographical reasons why they have not been consolidated, that may include geographic barriers, or extreme distances between communities (Bilodeau, et al., 2009). The interview subjects thought district consolidation had the potential to save money in the long run, but should be assessed on a case-by-case basis (Bilodeau, et al., 2009). Several of the participants believed that the primary motivation for consolidating is cost savings, when it should be educational quality and opportunities (Bilodeau, et al., 2009).

Efficiency

It is important to distinguish between cost savings and efficiency. Efficiency implies that, in addition to saving money, academic quality can be maintained, if not improved. The costs of consolidation are usually calculated as cost per student, while efficiency is calculated as the cost of achieving particular outcomes, such as cost per high school graduate. Young and Green note that "few parents would want to send their children to schools where cost minimization was the most important thing" (Young & Green, 2005).

There is very little evidence on whether district consolidation can save money *and* maintain educational quality (Duncombe, Miner, & Ruggiero, 1994). Several studies that control for educational costs and student socio-economic status show greater efficiency among smaller districts (Walberg & Fowler, 1987; Monk, 1987; Turner, Camilli, Croc, & Hoover, 1986). One unique study measured efficiency by calculating a cost per graduate and found that while average per student costs were higher for smaller districts, the average per *graduate* costs were slightly lower for smaller districts (Streifel, Iatarola, Fruchter, & Berne, 1998).

Academic Quality

Academic quality is often a goal of district consolidation. Proponents of consolidation contend that it will improve academic performance for both (consolidating) districts, provide additional academic opportunities for all students, and improve instructional quality.

Academic Performance

Several studies compare the academic achievement of states with large variations in the average size of their districts (Plucker, Spradlin, Magaro, Chien, & Zapf, 2007; Sher & Schaller, 1986). A North Carolina report compared the district sizes of the five states with the best and worst SAT and ACT scores, high school graduation rates, dropout rates and retention rates. The study found that the states performing at higher levels on these performance indicators had smaller average district sizes (Sher & Schaller, 1986). While these findings are interesting, they have several notable limitations: the comparisons are between the highest performing states and the lowest performing states and exclude the other 40 states. In addition, there are many other factors that are likely to mitigate this comparison at the state level, including fiscal resources and curriculum.

A Nebraska study demonstrated that smaller school systems academically outperformed larger ones within the state (Johnson, 2004). Researchers in Maine found that their 15 smallest districts produced higher graduation and postsecondary enrollment rates than their 15 largest districts (Bowen, as cited in Driscoll, 2008). In Massachusetts, a task force found that smaller districts had lower average dropout rates, higher attendance rates, greater extra-curricular participation, and were more likely to meet Annual Yearly Progress (AYP) targets than the state average (Driscoll, 2008). A study of small rural districts in New York found that students in these small districts tended to learn the basics at average or above average levels, when compared to students in other districts (Monk & Haller, 1986). In a series of five studies, researchers found that smaller districts and schools had greater achievement equity than larger districts and schools (Howley, 1996; Bickel & Howley, 2000).

One of the interviewees reports that small rural districts often appear to be performing at higher levels when their achievement data does not reveal the whole story (Bilodeau, et al., 2009). This participant suggests that the number of low-income and minority students in these districts is often so low that these students do not appear in disaggregated student performance data (Bilodeau, et al., 2009). This is an interesting possibility for further research.

Other studies are inconclusive about the relationship between district size and academic performance (Yan, 2006 ; Roeder, 2002; Bickel & Howley, 2000). For example, in a study of the 501 school districts in Pennsylvania, researchers found no relationship between district size and either reading or math proficiency rates (Standard & Poor's School Evaluation Services, 2007). These inconclusive results are not surprising given the possible mitigating factors that include school size, class size, student demographics, and teacher quality, among many others.

Some studies suggest that the relationship between district size and academic performance is affected by community socio-economic status. In a study of California schools and districts, one study found that

“smaller district sizes tended to improve performance in impoverished communities, while larger district sizes tended to benefit students in affluent communities” (Friedkin & Necochea, 1988). Similar results were found in Nebraska (Johnson, 2004; Funk & Bailey, 1999) and South Carolina (Miley & Associates, Inc., 2003). When controlling for districts’ poverty level, a researcher found that smaller districts in Utah tended to out-perform larger districts (Cox, 2002). Another study found the academic impact of student socio-economic status to be smaller in smaller districts and schools (Howley, 1996).

In general, the research does not indicate that larger districts have higher student performance and a number of studies demonstrate that *smaller* districts tend to exhibit higher academic performance. The literature also indicates that poverty is a mitigating factor and smaller school systems may be especially beneficial for the academic performance of students in lower-income communities. The discussion of district size and academic performance is informative, but does not provide a detailed comparison of academic achievement in districts before and after consolidation. Thus, there is no evidence to suggest that districts are likely to improve performance by consolidating, but also no evidence to the contrary.

Academic Opportunities

A frequent motivation for consolidating districts is to increase the educational opportunities for students. In particular, advocates of district consolidation postulate that a greater variety of curricular opportunities are possible with larger numbers of students. For cost reasons, it may be economically difficult or impossible for small districts to offer courses such as advanced placement, vocational, or foreign languages (Berliner, 1990). There is evidence that larger districts offer certain programs that are not offered by smaller districts. For example, in Pennsylvania, 92% of districts with more than 3,000 students report Advanced Placement test results, while only 51% of smaller districts report this data (Standard & Poor's School Evaluation Services, 2007). Schools in larger districts may also be able to offer more extra-curricular opportunities due to the number of qualified/interested students.

One Ohio study suggests that consolidated districts typically provide students with a broader curriculum and more extracurricular offerings (Self, 2001). The consolidated districts in the Ohio case study were able to fill up previously-small classes, and use the remaining teachers to offer more courses (Self, 2001). Teachers in the consolidated districts believed both of these expanded opportunities were valuable to students (Self, 2001). An Illinois study also evaluated the post-consolidation opportunities in a number of consolidated districts. Those interviewed in Illinois reported expanded course offerings and extracurricular activities (Hall & Arnold, 1993).

The interview subjects in the APA study agreed that small districts may not be able to offer the same variety of high quality educational opportunities to students as larger districts (Bilodeau, et al., 2009). Several of the interviewees also reported that the increased competition among students in consolidated districts was beneficial and helped improve student preparation for college (Bilodeau, et al., 2009). In Nebraska, the number of school districts was greatly reduced when the state required all elementary districts to consolidate into K-12 districts (Bilodeau, et al., 2009). Although there was substantial opposition at the time, some of the individuals who most strongly opposed consolidation

later testified that consolidation had greatly improved the curriculum and academic opportunities for students (Bilodeau, et al., 2009).

The research and interviews suggest that district consolidation is likely to expand curriculum and extracurricular opportunities for students.

High Quality Instruction

The quality of instruction is a major factor contributing to student achievement. It is important for schools to attract, retain, and develop high quality teachers. Although the research linking district size or district consolidation with teacher quality is sparse, the literature does make a number of reasonable conclusions that should be considered.

Researchers speculate that it may be more difficult to attract and retain high quality teachers in small remote districts, particularly within specialized content areas (Berliner, 1990). The interview subjects note that teachers often do not want to move to small remote communities, which makes recruitment difficult (Bilodeau, et al., 2009). Indeed, a 1986 study of small rural school districts found a shortage of competent teachers in particular subjects and that the teachers in these districts faced heavy, non-specialized teaching loads (Monk & Haller, 1986).

Larger districts are likely to offer more opportunities for professional development and collaboration (Young & Green, 2005). While a small district may struggle to find substitutes for teachers to leave classrooms for training, a larger district is likely to have a bigger substitute pool. A larger teaching staff also means more opportunities for teachers to learn from peers. In a post-consolidation evaluation in Ohio, 10 of the 13 interviewed teachers believed that they grew more professionally after consolidation, at least in part due to the number of teachers available to learn from (Self, 2001).

A number of researchers suggest that larger districts and consolidated districts typically offer higher salaries and better benefits than smaller or non-consolidated districts (Self, 2001; Louisiana Department of Education, Office of Management of Finance, Division of Planning, Analysis and Information Resources, 2003; Young & Green, 2005). During district consolidation, districts typically offer to increase the salaries of teachers in the lower-paying school district in order to increase equity and provide an incentive for teachers to support consolidation (Self, 2001). In addition, teachers in larger districts and those that consolidate may have greater collective bargaining power, thereby increasing compensation levels – and offsetting some of the potential economies of scale (Louisiana Department of Education, Office of Management of Finance, Division of Planning, Analysis and Information Resources, 2003; Duncombe & Yinger, 2005).

The interview participants point out that both small and large districts have academic advantages and disadvantages. There may be fewer teachers in smaller districts that are well-qualified to teach. However, there are also fewer students, often allowing for more personal contact between students and staff. In contrast to common speculation, a 2008 study of Massachusetts districts found that small districts had slightly higher proportions of highly qualified teachers than the state average (Driscoll,

2008). Smaller districts may also offer teachers more collegial work environments, more opportunities for leadership, and fewer formal rules (Driscoll, 2008; Duncombe & Yinger, 2005). Because there are fewer teachers, it may also be simpler to implement new curriculum or instructional practices in small districts.

The literature on district size, consolidation, and academic achievement is mixed. The research suggests that smaller districts often produce higher academic achievement. However, course offerings and extracurricular opportunities may be much greater in larger districts. Small remote districts may also have a difficult time recruiting, retaining, and providing professional development to teachers. As a result, it is unclear whether district consolidation would be academically beneficial to students.

Geography

Although, geography clearly needs to be a consideration in district consolidation, there is very little research on the relationship between geography and consolidation, beyond the costs of transportation. When district consolidation results in school closure, the time that students spend on buses can increase, which can be disruptive to both learning and family schedules. Long commutes to and from school have been associated with decreased parent involvement, lower grades, and lower student extracurricular participation (Eyre & Finn, 2002; Lewis, 2003; Schwartzbeck, 2003). One consolidated district in Northwest Illinois addressed the longer commutes by reducing the length of the school day, which allowed younger students to arrive home earlier (Hall & Arnold, 1993).

Rivers and mountains can make it impractical to consolidate districts that are close in proximity (Ley, 1994). Districts that are geographically large may also be difficult to consolidate because of the travel time necessary for district administrators to successfully oversee all of the schools. Some researchers suggest that good candidates for consolidation have population centers that are located relatively close to each other (Duncombe, 2007).

Community Impact

One of the primary motivations for district consolidation, particularly in rural areas, is declining community population. As local populations shrink over time, districts often experience lost tax revenue. Decreasing tax bases and shrinking student enrollment make it difficult to realize economies of scale. District administrators may find it increasingly difficult to provide high quality education with limited revenues to the students who remain.

There is a large amount of empirical research on the impact of district consolidation and district size on both academic achievement and expenditures. Community economic and civic impacts are somewhat more difficult to assess and there is substantially fewer studies on these areas. Nonetheless, the potential implications of district consolidation should be considered. Considering that district consolidation often precedes school closings, it is helpful to assess the potential effects of school closure on communities. The following sections on economic impacts and civic impacts discuss the potential impact of school closure on local communities.

Economic Impacts

According to one report on small communities, communities that have schools:

- Are more likely to have experienced population growth;
- Have higher housing values, and newer houses that are more likely to be served by municipal water and sewer systems;
- Have higher per capita incomes, less poverty, and more equitable income distribution; and
- Have more professional, managerial, executive, self-employed workers, and shorter commutes (Lyson, 2002)

These differences were also found in rural communities, but the differences between communities with schools and those without schools was more extreme (Lyson, 2002). It is important to note that the differences found between districts with and without schools are not necessarily causal. That is, the existence of a school in the community may not contribute to higher incomes as much as a thriving local industry or another factor. However, it is reasonable to conclude that successful local schools are likely to draw parents to those communities in order to take advantage of the high quality education opportunities for their children.

Schools may also be a major source of employment and spending in the community. In a study of six rural Minnesota counties, one study found that “school district payrolls account for 4-9% of total county payrolls and district expenditures accounted for 1-3% of county retail sales” (Sederberg, 1987). Many parents find it more convenient to purchase goods and services in the communities where their children attend school and thus, when a local school closes, community business may suffer (Berliner, 1990). Potential job loss is also a concern for teachers and other school staff when a school closes. Some districts have mitigated this concern by guaranteeing that no education-related jobs will be eliminated during consolidation (Hall & Arnold, 1993).

Several studies comparing district property values before and after consolidation found that property value actually increased after consolidation up until consolidated districts reached a student enrollment of 1,700 (Hu & Yinger, 2008; Hall & Arnold, 1993). Most of these gains were attributed to the increase in state aid that often accompanies consolidation (Hu & Yinger, 2008).

Community residents are often concerned that district consolidation will lead to higher taxes or money flowing out of the community (Ward & Rink, 1992). In a case study of two consolidated Ohio districts 8-years post-consolidation, researchers found that the consolidation resulted in large tax savings for one of the communities and a slight increase in the other community due in part to property valuation increases (Self, 2001).

Based on this review of the literature, it appears that school closure can have negative economic impacts on communities, although the research on property values and taxes does not appear to indicate drastic consequences.

Civic Impacts

Schools, particularly those in rural communities, are often viewed by parents and other community members as key parts of the symbolic identity of a community (Post & Stambach, 1999; Ward & Rink, 1992). In some communities, the school building may literally be the focal point of community activities. Community members use school buildings for “voting, community meetings, athletics, physical fitness classes, senior citizen meal programs, community dinners, and other social gatherings” (Driscoll, 2008). In addition to the potential loss of the school as a meeting place (as the result of consolidation), critics of consolidation often contend that closure of local schools will result in decreased parent involvement and civic participation.

Several studies document the negative impact that school closure may have on civic participation. A study of North Dakota communities that lost their community school after district consolidation found that these communities experienced a decline in community involvement with local organizations (Post & Stambach, 1999). District consolidation has also contributed to a reduction in the number of school boards and the number of people serving on school boards. The number of board members decreased from 1 million to 200,000 between 1930 and 2008 (Lawrence, Bingler, Diamond, Hill, Hoffman, Howley, Mitchell, Rudolph, & Washor, 2002). It is possible that the reduction in school board participation improves government efficiency, but it certainly decreases community participation in education. One author suggests that community members believe schools to be more responsive to students’ educational needs when educational governance is located in their community (Ley, 1994).

Research indicates that parental involvement in schools is negatively affected by the difficulty of participating in schools located farther away (Duncombe & Yinger, 2001). When neighborhood schools are closed, the physical distance to schools outside the neighborhood may be a barrier toward parental participation. Civic participation in the community may also be affected.

Governance

There is very little actual research on district size, consolidation, and governance. Nonetheless, a number of authors speculate on the relationship between these variables. Authors document the increasing state bureaucracy and decline of local control over time. One author writes, “as state funds, legislation, and regulation increased, education took on classic bureaucratic features: centralization of control, formal hierarchies, specialization of function... and precedence of impersonal means over nominal ends” (Strang, 1987).

This increasing bureaucracy and loss of local control over education is viewed as problematic for several reasons. First, residents may be less inclined to participate in the local educational system because they may be less likely to have an impact (Walberg, 1992). Second, it is more difficult for residents to monitor state and federal policies and regulations that affect education (Walberg, 1992). As a result, the educational system may become less responsive to residents.

Critics of consolidation point out that reducing the number of districts may strengthen the bargaining power of teachers unions (Shughart, 2005). The central administration of large districts may not be as responsive to local interests and may also have trouble managing schools separated by large distances (Peters & Freeman, 2007). Several of the interviewees also noted that in larger school districts, each citizen's vote counts less in terms of representation.

Alternatives to Consolidation

State-Supported Educational Service Agencies

According to the Association of Education Service Agencies (AESA), education service agencies (ESA) are “public entities created by state statute to provide educational support programs and services to schools and districts within a given geographic area” (Association of Educational Service Agencies, 2009). The theory is that the ESAs can provide necessary high-quality materials, equipment, and services through district cooperation that allow districts to access economies of scale that would not be possible for one district alone. ESAs are funded primarily through three sources: local property tax levies, state allocations, and fees for services (Association of Educational Service Agencies, 2009).

The advantage of state-supported ESAs (or similar organizations) is that they remove the cost and time associated with establishing and maintaining informal sharing agreements between districts (Duncombe, 2007). However, they may not be as responsive to district needs or as cost competitive because there is more overhead associated with these formal collaborations (Duncombe, 2007). These types of organizations are especially effective as a means of providing services to specific populations of students, such as special education services (Berliner, 1990). However, some districts are not interested in utilizing these types of organizations because of equity concerns or potential loss of autonomy (Berliner, 1990).

The interview subjects generally supported the idea of ESAs (Bilodeau, et al., 2009). In particular, the interviewees believed that these types of organizations and arrangements can be useful for small districts to realize economies of scale (Bilodeau, et al., 2009). For example, in Indiana, small districts often access such organizations in order to purchase supplies and materials and technology (Bilodeau, et al., 2009). Several interviewees believe the agencies would be more beneficial if they specialized in particular services, such as special education support that could be offered to districts that need these services (Bilodeau, et al., 2009).

Alternatively, the state could use these organizations to implement policies (Bilodeau, et al., 2009). For instance, the county offices of education in California are the primary state vehicle between the state and the districts. One of their primary functions is to be the conduit for professional development and one interviewee believe this professional development role is critical for small districts that could not provide as much training on their own (Bilodeau, et al., 2009).

Regional Cost/Service Sharing

Regional cost/service sharing is the informal sharing of services. According to a Deloitte Research study, the most basic forms of sharing are mutual aid agreements between districts that allow (primarily rural) communities to share assets and avoid duplication (Deloitte Research, 2005). One of the motivations for sharing services is to save money. There is evidence that sharing services can save money. One school district in New Jersey saved nearly \$200,000 by partnering with other districts to transport special education students (Mendez, 2003). Neighboring rural districts in New York State realized substantial savings through joint purchasing and bidding (Darden, 2005). In California, five districts collaborated to provide professional development in literacy to elementary teachers (Jimerson, 2006). The North Dakota legislature has encouraged and financially-supported districts to participate in Joint Power Agreements (JPAs) to provide administrative functions and student support (Jimerson, 2006).

Advantages of cooperative arrangements include responsiveness and flexibility to districts' needs and cost competitiveness with the private sector (Duncombe, 2007). However, these arrangements require coordination and can be difficult for small districts with little administrative staff to establish and maintain (Duncombe, 2007). The evidence indicates that sharing resources can be successful, but is more challenging when it requires extensive coordination or surrender of autonomy (such as sharing staff or combining sports teams) (Berliner, 1990). Long distances between districts also make inter-district relationships difficult to maintain (Berliner, 1990).

The Office of Performance Evaluations within the Idaho Legislature commissioned a feasibility study to assess the potential of school districts in the state to share services. The study identified large geographic differences, differences in district sizes, and differences in student needs as barriers to cooperation (Idaho Legislature Office of Performance Evaluations, 2009). Districts that had attempted to share services and failed reported that community conflicts and differences in educational philosophies made cooperation difficult (Idaho Legislature Office of Performance Evaluations, 2009). Motivations for sharing services included saving money, leveraging resources, providing better services to staff and students, and offering services that they could not offer on their own (Idaho Legislature Office of Performance Evaluations, 2009). The feasibility study identified three areas which could benefit from inter-district cooperation and these included joint purchasing of supplies and materials, professional development, and student transportation (Idaho Legislature Office of Performance Evaluations, 2009).

One of the interview subjects cited the Joint Powers Agreements (JPAs) in North Dakota as an example of successful cooperative agreements. A JPA is essentially a voluntary contract between districts. Each district participating in a JPA has representation on the JPA governing board and each board decides what services are necessary to address participating districts' goals and needs (North Dakota Department of Public Instruction, 2007). For example, one of the JPAs offers services ranging from grant writing and staff development to counseling and dual credit courses (North Dakota Department of Public Instruction, 2007).

Distance Learning

Theoretically, distance learning offers smaller school districts the ability to supplement their courses with others that would not be otherwise available (Louisiana Department of Education, Office of Management of Finance, Division of Planning, Analysis and Information Resources, 2003). Distance learning may include two-way television, one-way television with audio-graphics, and computer networks which make live active instruction possible (Berliner, 1990).

Advocates argue that computerized instruction or interactive television allow districts to provide high quality low cost instruction to very small numbers of students. While some distance learning models have shown they can be effective academic tools, there is little evidence that they are consistently effective and they may require extensive changes in instructional strategies (Berliner, 1990). Scheduling can also be a barrier to successful implementation (Monk & Haller, 1986).

The interview subjects generally agreed that distance learning has the potential to improve educational quality and provide additional courses for students in small or rural districts that may not be able to provide the courses on-site (Bilodeau, et al., 2009). This may reduce time and money spent transporting students. Several interviewees noted that investment in distance learning is not currently adequate to ensure that all students who might need it have access to the technology (Bilodeau, et al., 2009). For example, not all schools are wired for Internet connections that would facilitate distance learning (Bilodeau, et al., 2009). Another interview subject believes that even the best distance learning experiences are not as helpful as having a teacher in the classroom (Bilodeau, et al., 2009).

There are examples of successful distance learning and cooperative arrangements that could be used to guide implementation. Distance education, along with models such as educational service centers or less formal district cooperation are promising, but would benefit from additional investment, especially if they are intended to be alternatives to consolidation.

Models for Approaching District Consolidation

One interviewee suggested that states follow a model similar to California's for considering consolidation (Bilodeau, et al., 2009). In California, when a particular set of criteria are met, counties can propose district reorganization. The criteria include community identity, educational quality, fiscal ramifications, enrollment numbers, racial/ethnic equity, and property values (California Department of Education, 2009). The California State Board of Education then reviews and considers each proposal individually (California Department of Education, 2009). Another one of the interview subjects believes that states are justified in forcing consolidation of districts that meet particular criteria (Bilodeau, et al., 2009).

The state of Pennsylvania has identified and published a report on districts in the state that may benefit from consolidation using district size and geographic proximity criteria (Pennsylvania Office of the Governor, 2009). The state funds feasibility studies, advises, and provides technical assistance to districts considering voluntary consolidation (Bilodeau, et al., 2009). The state is willing to offer short

term funding to districts that wish to consolidate, in order to offset the short term costs (Bilodeau, et al., 2009). Only two Pennsylvania districts have voluntarily consolidated within the past 40 years (Bilodeau, et al., 2009).

Although the interviewees generally believed that incentives are preferable to forced consolidation statewide, there was some disagreement about whether incentives were appropriate or sufficient to encourage districts to consolidate voluntarily (Bilodeau, et al., 2009). One of the interviewees noted that incentives may be helpful to offset the short term costs of consolidating and are likely to encourage at least a few districts to voluntarily consolidate (Bilodeau, et al., 2009). Other districts may fight consolidation to the bitter end in order to preserve community identity. Rivalries between adjacent school districts may also be a barrier to consolidating (Bilodeau, et al., 2009).

Formal collaboration, cooperative arrangements, and distance learning could be further expanded and explored as alternatives to or supplements to district consolidation. Interview participants generally believed these options have promise, but are not fully utilized or developed at this time (Bilodeau, et al., 2009).

The interviewees believed that costs were important, but emphasized that the goal should always be to provide a high quality academic experience to all students. They were skeptical of whether district consolidation or other restructuring would have this effect (Bilodeau, et al., 2009). However, the research and interview subjects both suggest that district consolidation may be appropriate in some circumstances. The interviewees agreed that the state has the authority to determine districts' size and structure. However, they also agreed that this authority should be applied on a case-by-case basis.

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