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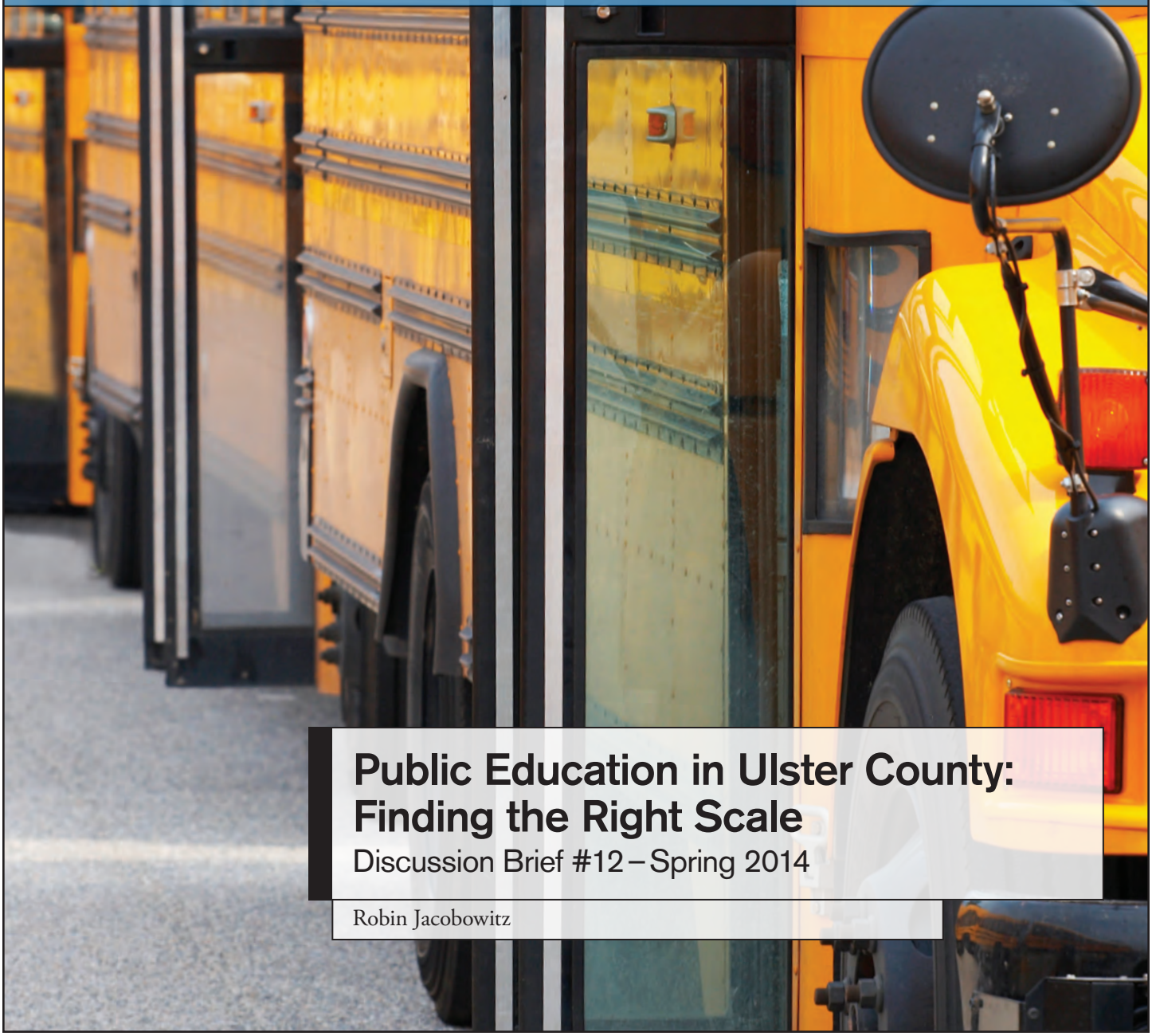


Public Education in Ulster County: Finding the Right Scale

Discussion Brief #12 – Spring 2014

Robin Jacobowitz

School district consolidation has been the preferred strategy for **"scaling up"** educational services for much of New York's modern history… however, research suggests that it may no longer be a compelling option for all, or even most, actual situations on the ground.

Since the financial crisis of 2008, we find ourselves on a familiar precipice; public funding is restricted, we must find ways to economize spending, and public education, which consumes a large proportion of public resources, is one potential area of savings. We can proceed with the usual players having predictable conversations about familiar solutions, such as school district consolidation. Or, we can consider the "scaling-up" conversation differently, in the frame of other less-considered alternatives, to determine the best way to achieve the desired scale without sacrificing quality or another key value—community. In November 2013, a group of education stakeholders from eight of the nine school districts in Ulster County gathered to consider these issues, among others, at a day-long conference, *A 2020 Vision for Public Education in Ulster County.* Participants sought to proactively shape a vision for the future of public education in Ulster County; to find ways to address our current, and likely enduring, fiscal challenges and enrollment realities, while also capitalizing on new and innovative potentialities in education, toward the end of attaining the level of quality, equity, and community involvement our communities demand and deserve.

The phenomenon of school district consolidation is not new, nor is it specific to New York State. The number of school districts has been declining across the U.S. for decades: in 1939–40, there were 117,108 school districts nationally; by 2010–11, that number had plummeted to 13,588, even as student populations have increased (NCES, 2013).

I. Background and Introduction

Multi-year constraints on public school funding, declining school enrollments, and federally-driven efforts to elevate educational quality through curricular changes and accompanying assessments have once again prompted intense conversations about effective and efficient delivery of educational services across New York State. Suggested avenues for attaining efficiency and effectiveness often involve questions of size: size of school buildings, administrative and instructional staff, classes, numbers of schools, and of school districts themselves. In this context, policymakers seek to find the perfect size for institutions that deliver education services; that is, the institutional scale at which fiscal efficiency and educational quality are balanced. In this discourse, reducing costs by capturing economies of scale without sacrificing quality of service is the ultimate, though not-easily-obtained, objective.

For school districts, economies of scale may be attained when the "addition of one more student results in a lower average cost per instructional contact hour or other unit of service" without diminishing the quality of output, as measured by student achievement (Tholkes & Sederberg, 1990, pp. 11). Two New York-based researchers, William Duncombe[1] and John Yinger (2007) of Syracuse University's Maxwell School of Citizenship and Public Affairs, identify five potential sources of scale economies that apply specifically to school districts:

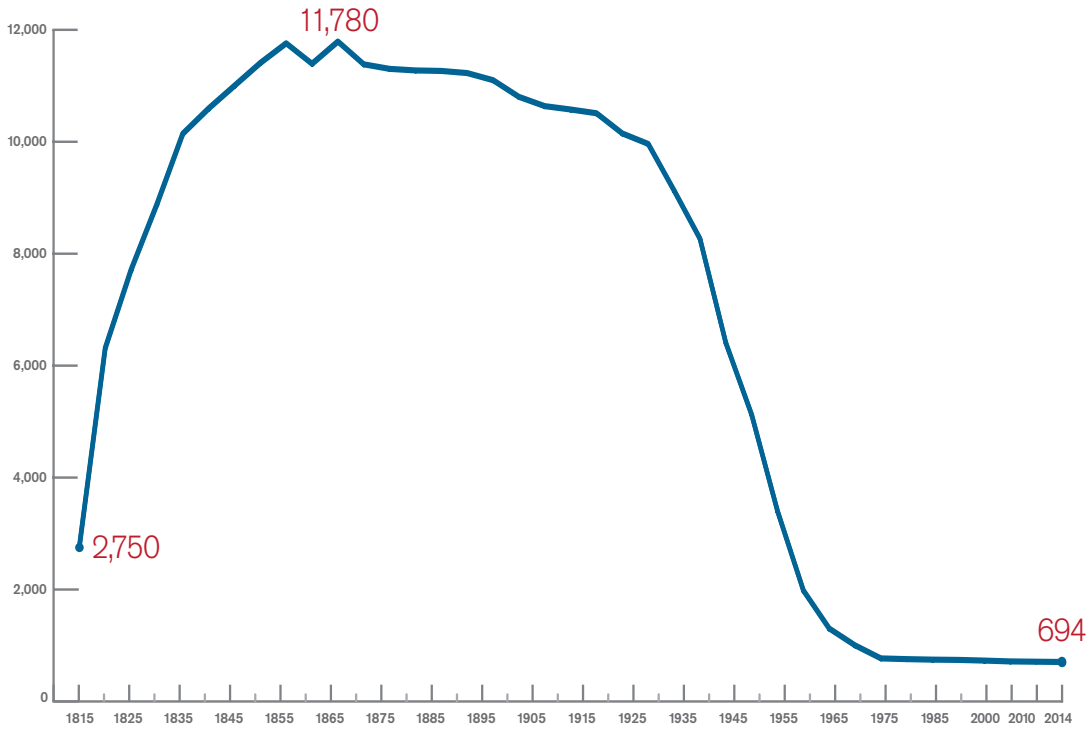
1) **indivisibilities,** in which economies of scale are derived from being able to share educational professionals across a certain number of students, at least over some range of district size, without sacrificing quality;
2) **increased dimension,** which suggests that increased unit size will deliver an output at lower average cost;
3) **specialization**, which implies that larger units can hire, and better utilize, specialized staff;
4) **price benefits of scale,** in which efficiencies are realized from the greater purchasing power of larger entities; and
5) **learning and innovation,** which implies that teachers may be more productive if they have more colleagues to learn from and as they grow more experienced in their field. Larger districts, with more staff, can achieve these professional conditions at a lower cost (pp. 343-344).

Diseconomies of scaling up are usually less attended to. Duncomb and Yinger (2007) identify these as:

1) **increased transportation costs;**
2) **labor relations effects:** the hiring, or in the case of a consolidation, the retention, of more experienced, and thus more costly, teachers;
3) **lower staff motivation and effort:** teachers may feel disengaged from a larger district with more formalized procedures;
4) **lower student motivation and effort:** students may feel alienated in a larger system where they are less likely to be "known"; and
5) **lower parent involvement:** larger school districts may also be alienating to parents (pp. 344-5).

[1] Sadly, William Duncombe passed away in May, 2013. Duncombe researched and wrote extensively about issues related to school district organization and consolidation. Researchers and policymakers interested in this topic are much in his debt. His work persists in its importance and we pause here to take note of his contributions.

Table 1: Number of public school districts, New York State, 1815 – 2014



Sources: Pugh, T. J. (1994). *Rural school consolidation in New York State, 1795-1993: A struggle for control.* Higher Education — Dissertations. Paper 31, Syracuse University. http://surface.syr.edu/he_etd/31; Suozzi, T. R.; Reid, J.C. (2008). *A Preliminary Report of Findings and Recommendations to Governor David A. Paterson.* The New York State Commission on Property Tax Relief. Albany, NY. Accessed July, 2013: http://blog.syracuse.com/indepth/2008/06/Suozzi%20report
New NY Education Reform Commission (2014). *Putting students first. Final action plan: New NY Education Reform Commission.* Accessed January, 2014: http://www.governor.ny.gov/assets/documentsNYEducationReformCommissionFinalActionPlan.pdf

School district consolidation is often promoted by educational policy makers as a viable mechanism for achieving fiscal economies[2] (New NY Education Reform Commission, 2012), and is frequently the default perceived solution to actual or alleged overspending in schools during times, like now, of fiscal stress. Perhaps this is because the idea of "scaling up" through consolidation is so well established; consolidation was a deliberate and successful policy in New York State for much of the 19th and 20th centuries. As a result of consistent focused effort, the number of school districts in the state declined from a high of nearly 12,000 in the mid-eighteenth century to about 1,000 in the mid-1960s. The current number is 694 (*see Table 1).*

And so, since the financial crisis of 2008, we find ourselves on a familiar precipice; public funding is restricted, we must find ways to economize spending, and public education, which consumes a large proportion of public resources, is one potential area of savings. We can proceed with the usual players having predictable conversations about familiar solutions, such as school district consolidation. Or, we can consider the "scaling-up" conversation anew, in the frame of other less-considered alternatives, to determine the best way to achieve the desired scale without sacrificing quality or another key value — community — in the five crucial areas of opportunity identified by Duncombe and Yinger. By thinking in broader ways about the challenges we face, and our experiences in addressing them, we may be able to reorder what we already know to find the right scale for delivering elementary and secondary education: In what ways do we already work together regionally — and thus obtain some level of scale — and how might we do it better? What kinds of services do we already share, and are there other areas in which it might make sense for us to share services? What aspects of education are essentially

[2] An entirely separate goal of consolidation is to advance educational equity, discussed elsewhere in this paper.

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and irreducibly local? What are the advantages of using the county as an organizing paradigm, if not for all school functions, then perhaps for some of them? How can we more fully exploit advances in technology so that we might "virtually scale up," administratively and educationally?

In November 2013, a group of education stakeholders in Ulster County gathered to consider these issues, among others, at a day-long conference, *A 2020 Vision for Public Education in Ulster County*. Ulster County is one of nine counties — Columbia, Dutchess, Greene, Orange, Putnam, Rockland, Sullivan, Ulster, and Westchester — that comprise the Hudson Valley. These nine counties are home to 113 school districts which, collectively, educate approximately 354,000 students and spend approximately $8.3 billion on education. *(see Tables 2 and 3)*. As in the rest of New York State, student enrollment in this region is generally on the decline. A report by Pattern for Progress (2013) projects that some Hudson Valley school districts will lose up to 40 percent of their enrollment, from their highest enrollment, by the year 2020. Yet even before this decline is fully realized, many Hudson Valley school districts are small; data from 2011–12 indicate that 56 enroll fewer than 2,000 students and of these, 36 enroll fewer than 1,500 students and 8 enroll fewer than 500 *(see Table 2)*.

In Ulster County, there are nine school districts spanning 1,161 square miles with 24,338 enrolled children. Together, Ulster County school districts spend approximately $552 million on education. On average 1.49 percent and 4.88 percent of these expenditures are dedicated to areas of central administration and operations/maintenance, respectively; areas in which, consolidation advocates claim, economies of scale can be realized *(see Table 4)*. Ulster County school districts range in size of student enrollment from a high of approximately 6600 (Kingston) to a low of approximately 1450 (Onteora) (*data are from 2011-12, see Table 5*). All districts have seen declines in enrollment in the past years, which has resulted in the closure of several school buildings throughout the county. Nearly all school districts in Ulster County are projected to see continued enrollment declines in the coming years.[3]

Within this context, participants in the *A 2020 Vision for Public Education in Ulster County* symposium sought to proactively shape a vision for the future of public education in Ulster County. School district organization featured prominently in the day's conversation. In this paper, we begin to consider some of the ideas that were raised that day; ideas that seek to address our current, and likely enduring, fiscal challenges and enrollment realities, while also capitalizing on new and innovative potentialities in education, toward the end of attaining the level of quality, equity, and community involvement our communities demand and deserve. We frame this conversation first in a brief history of school district consolidation, as New York's historical response for attaining economies of scale in education, and second in empirical research about school district consolidation and district size, potential cost savings, and student achievement. The paper closes with a discussion of the ideas presented at the *2020* symposium and thoughts about next steps.

II. New York State: A history of school district consolidation

New York State has a long history of pursuing scale through

[3] These phenomena are not unique to the Hudson Valley or Ulster County. According to the New NY State Education Reform Commission (2014), there are 694 public school districts serving 2.7 million public school students in kindergarten through twelfth grade in New York State. The "Big Five" city school districts (New York City, Buffalo, Rochester, Syracuse, and Yonkers) enroll 1.1 million students; approximately 1 million in New York City and 116,000 in the other four city districts. 1.6 million students are enrolled in the remaining 689 districts throughout the state. The average enrollment of school districts in New York is 2,268; 26% of New York public school districts enroll between 1001-2000 students, 20% enroll between 501-1000 students, and 15% enroll fewer than 500 students. Overall, student enrollment has been declining in New York's public schools. Enrollment declined in 83% of New York's districts over the past decade; 1/3 of these districts experienced declines of between 10-20% (New NY State Reform Education Commission, 2014, pp. 14-15).

Table 2: Hudson Valley Counties, Number of School Districts, Student Enrollment by County, 2011–12*

County	Number of school districts	Number of districts ≤ 2000 students	Number of districts ≤ 1500 students	Number of districts ≤ 1000 students	Number of districts ≤ 500 students	TOTAL Student Enrollment
Columbia	6	6	4	2	1	7,473
Dutchess	13	7	5	1	0	43,555
Greene	6	6	5	2	2	6,490
Orange	17	6	6	5	1	61,700
Putnam	6	3	2	2	1	15,594
Rockland	8	0	0	0	0	40,611
Sullivan	8	7	6	3	2	9,748
Ulster	9	3	1	0	0	24,338
Westchester	40	18	7	2	1	144,525
TOTAL	**113**	**56**	**36**	**17**	**8**	**354,034**

Data are from the New York State Report Cards, 2011–12. https://reportcards.nysed.gov/counties.php?year=2012
*This analysis excludes several school districts mostly Special Act School Districts, which serve special student populations, sometimes through residential programs. These districts are often quite small. For example, according to the 2011–12 New York State School Report Cards, there are seven such districts in Westchester County, each serving fewer than 400 students. These school districts are excluded from the fiscal analyses as well.

Table 3: Hudson Valley Counties, School District Expenditures for Central Administration, Operations and Maintenance, and Transportation; Total expenditures, percent of total, 2011–2012

County	Central Administration $	Central Adminis-tration %	Operations & Maintenance	Operations & Maintenance %	Transportation $	Transpor-tation %	TOTAL Expenditures
Columbia	$3,644,578	2.27%	$10,607,974	6.62%	$9,200,971	5.74%	$160,234,962
Dutchess	$12,523,509	1.47%	$48,322,393	5.67%	$48,562,984	5.69%	$852,746,256
Greene	$2,739,294	2.98%	$8,452,140	6.13%	$8,330,938	6.04%	$137,864,053
Orange	$18,111,029	1.42%	$73,867,552	5.80%	$78,773,482	6.18%	$1,274,189,011
Putnam	$6,884,823	1.84%	$21,225,731	5.68%	$21,340,000	5.71%	$373,826,042
Rockland	$14,695,120	1.46%	$57,118,210	5.68%	$63,292,115	6.29%	$1,006,144,267
Sullivan	$7,454,815	2.98%	$14,937,987	5.96%	$14,989,665	5.98%	$250,580,456
Ulster	$8,240,808	1.49%	$26,935,875	4.88%	$33,123,775	6.00%	$551,932,755
Westchester	$60,668,318	1.65%	$227,530,852	6.21%	$176,323,614	4.81%	$3,666,581,990
Hudson Valley Total	**$134,962,294**	**1.63%**	**$488,998,714**	**5.91%**	**$453,937,544**	**5.49%**	**$8,274,099,792**
Statewide TOTAL	**$900,520,345**	**1.55%**	**$2,915,335,990**	**5.03%**	**$3,517,295,240**	**6.07%**	**$57,939,736,694**

Data are from the New York State Education Department Fiscal Analysis & Research Unit, http://www.oms.nysed.gov/faru/Profiles/profiles_cover.html and http://www.oms.nysed.gov/faru/Profiles/18th/revisedAppendix.html. Documentation below is taken directly from this site.
Data in each category were aggregated from individual line items of the Annual Financial Report (ST-3), as reported by districts.
Central administrations: This item consists of expenditures for: the chief school officer; the business office; the purchasing office; the personnel office; the records management officer; public information and services; indirect costs and other unclassified expenditures and fees for fiscal agents.
Operations and maintenance: This item consists of General Fund and Special Aid Fund expenditures for the operation and maintenance of plant plus repair reserve expenditures.
Transportation: Data displayed under this item consist of General Fund and Special Aid Fund expenditures for transportation (including bus purchases from current General Fund appropriations). Transportation expenditures are for transportation services, garage building (excluding capital expenditures), contract transportation and transportation provided by BOCES.
Expenditures: This item represents the total expenditures charged by a district to the General, Debt Service, and Special Aid Funds.

Table 4: Ulster County School Districts, School District Expenditures for Central Administration, Operations and Maintenance, and Transportation, Total expenditures, 2011-12

County	Central Admin	% Central Admin	Transportation	% Trans	Operations & Maintenance	% Op+M	TOTAL Expenditures
Ellenville	$1,361,626	3.26%	$3,047,022	7.30%	$2,377,343	5.70%	$41,738,932
Highland	$710,639	1.92%	$1,504,683	4.06%	$1,894,867	5.11%	$37,088,454
Kingston	$1,318,068	0.89%	$7,392,557	4.97%	$6,790,495	4.57%	$148,698,420
Marlboro	$813,737	1.60%	$3,592,936	7.06%	$2,478,810	4.87%	$50,911,507
New Paltz	$819,323	1.62%	$3,323,740	6.57%	$2,415,016	4.77%	$50,589,790
Onteora	$732,560	1.55%	$3,465,304	7.33%	$2,579,338	5.46%	$47,253,985
Rondout	$1,197,369	2.02%	$3,215,268	5.43%	$3,205,848	5.42%	$59,198,379
Saugerties	$597,676	1.11%	$3,376,254	6.25%	$2,434,325	4.50%	$54,053,463
Wallkill	$689,810	1.11%	$4,206,011	6.74%	$2,759,833	4.42%	$62,399,825
Ulster County TOTAL	**$8,240,808**	**1.49%**	**$33,123,775**	**6.0%**	**$26,935,875**	**4.88%**	**$551,932,755**

See notes from Table 3.

Table 5: Ulster County School Districts, Demographic information, 2011-12

School District	Enrollment	Free & Reduced Price Lunch	Black	Hispanic	Asian	White	Multiracial /Native American	Average Expenditure, General Education Students*	Average Expenditure, Special Education Students*
Ellenville	1,693	54%	12%	28%	3%	57%	1%	$10,865	$37,400
Highland	1,849	39%	8%	9%	5%	76%	1%	$9,496	$35,956
Kingston	6,639	46%	18%	12%	2%	65%	3%	$10,860	$29,446
Marlboro	2,062	27%	7%	11%	1%	80%	1%	$11,097	$32,275
New Paltz	2,254	21%	6%	9%	3%	81%	0%	$11,193	$36,538
Onteora	1,452	37%	3%	6%	3%	86%	3%	$15,240	$44,420
Rondout	2,131	38%	3%	6%	1%	89%	2%	$14,939	$33,073
Saugerties	2,885	37%	2%	8%	1%	86%	2%	$8,877	$26,647
Wallkill	3,373	25%	7%	19%	1%	72%	1%	$9,611	$29,141

Data are from the New York State Report Cards, 2011-12. https://reportcards.nysed.gov/view.php?schdist=district&county=62&year=2012
*Data are from the Fiscal Accountability Supplement, 2010-11, also found at https://reportcards.nysed.gov/view.php?schdist=district&county=62&year=2012

> "The small district… is beginning to decline in every section of the country for the obvious reason that it was organized as a pioneer system at a time when it was the only feasible plan. But with the passing of pioneer conditions, and the development of the modern industrial life, a larger and more centrally controlled system of organization seems desirable. People have begun to realize that the small district has outlived its usefulness and ought to be supplanted by a more effective unit of organization." (US Bureau of Education, 1919, pp. 15)

consolidation, beginning with the Unification Act of 1904, which established the New York State Department of Education (SED) and thus centralized authority for public education at the state-level. The professionals at the nascent SED, in accord with popular progressive philosophies of the times, sought to professionalize, standardize, and centralize New York State's schools which were, most often, local endeavors run primarily by families and clergy and adhering to locally-determined school schedules and academic programs. The prevailing belief at SED was that consolidating small, parochial, locally-managed school districts into larger entities would facilitate centralization and standardization and allow for efficient and effective delivery of education services. This belief is evident in legislative action taken during this era;[4] Chapter 55 of the Laws of 1914 allowed the commissioner of education to recommend the consolidation of small school districts,[5] and the Township Law of 1917 eliminated all the states' common school districts and combined them into 900 township units. This singular effort in New York State to make the jurisdictions for the delivery of education coterminous with the boundaries for the provision of rural general purpose government failed after one year because of the resulting redistribution of property tax burdens between villages and farms. Less than a decade later, the Cole Laws of 1925 advanced consolidation goals by offering financial incentives, specifically increases in base state aid and state subsidies for capital expenditures and transportation, to districts that agreed to consolidate (Swanson, 1978; Pugh, 1995; Kachris, 1987).

With the passage of the Cole Laws in 1925, consolidation of school districts in New York State proceeded at a rapid rate; in 1925 there were 9,950 districts in NYS, by 1950 the number had been reduced to 3,390. During this 25-year period, school district consolidation was a purposeful focus of state-level education administration and the legislature. The New Educational Program, initiated in 1934 by the Board of Regents, called for the consolidation of school districts, and in 1947, the Joint Legislative Committee on the State Education System (also known as the Rapp Commission) issued a Master Plan for School District Reorganization. This plan offered specific recommendations for the consolidation of school districts statewide; these recommendations, which were not mandated, would have reduced the number of NYS school districts to 560. The 1958 revision of the Master Plan for

[4] These efforts were aimed, primarily, at New York's rural schools. Governance of New York City schools had undergone consolidation earlier; the Greater New York Charter of 1897 provided for the consolidation of the counties of New York, Kings, Richmond, Queens and the cities of Brooklyn and Long Island City into what was then called "greater New York."; in 1898, NYC's 350 school districts were consolidated (Swanson, 1978). The NYC school system was decentralized in 1969, and then recentralized under mayoral control in 2003 (Ravitch, 1974; Swanson, 1978; Kachris, 1987).

[5] The district superintendent or the commissioner of education had the power to order the consolidation of schools and school districts, subject to approval by local residents (Pugh, 1995; Swanson, 1978).

School District Reorganization also offered specific criteria for consolidation; implementing this plan would have reduced the approximately 1,500 districts then in existence to 274. In 1962, legislation granted the commissioner of education the authority to "withhold State building aid from any district which was scheduled for reorganization according to the Master Plan and had not done so" (Pugh, 1995, pp. 451). By the early 1970s, the number of school districts in New York State had decreased to approximately 750 (Pugh, 1995; Benjamin & Nathan, 2001).

The push to centralize and consolidate schools and school districts was aided by prevailing social and demographic forces and a growing urban/rural divide. Administrative progressivism—aligned with the larger social progressive movement that took hold in the late eighteenth and early nineteenth centuries and that persists today—was an influential force during this period of rapid consolidation. Relying heavily on the "new sciences" of psychology, sociology, and management, educational progressives sought to formalize and professionalize education, so as to transform it into a more efficient system of high quality schools. Where small, decentralized systems "permitted the existence of enormous differences in quality between the best and worst schools," centralized governance offered, at least theoretically, mechanisms for quality control and accountability (Kachris, 1987, pp. 342; see also Tyack & Cuban, 1995; Pugh, 1995).

In addition, Weberian concepts of bureaucracy, the "cult of efficiency," and ideas about scientific management were also influential and, in the mid-twentieth century, these premises about how to achieve financial efficiency through specialization, standardization, and economies of size, became the basis for school district consolidation movements. Of course, too, cost pressures also drove a focus on efficiency in school district operations. Increasing school district scale though consolidation was often heralded as the solution.

It is important to note that much of the consolidation effort, particularly in the early-mid twentieth century, concerned rural schools and school districts. The focus here was on the quality of education and equal educational opportunity for students in rural areas (Thompson, 1990; Pugh, 1987). With industrialization came a greater demand for an educated citizenry (Fischel, 2009, 2009b). The high school, and a faith in education's ability to facilitate individuals' participation in a rapidly-growing and changing society, became the focus for educators (Tyack & Cuban, 1995). In cities, many of which already had high schools, educators concentrated on enhancing the quality of the high school curriculum and expanding access for increased numbers of urban youth. In rural areas, where there were very few high schools, the emphasis was on improving access. Even in instances where rural students had access to high schools, they were often not easily integrated into these schools; most rural, elementary one-room school houses were "ungraded," that is, students were grouped by knowledge of specific academic material rather than age. Although this configuration was accommodating to rural and predominantly agrarian life, it meant that "high school-aged" rural children had not necessarily received the instruction needed to prepare them for entrance into urban, "graded" high schools (Fischel, 2010). Some educators argued that "grave academic and social deficiencies in rural schools," specifically the lack of age-grading, lack of academic specialization, and lack of high schools altogether, disadvantaged rural students (Thompson, 1990, pp. 196). The consolidation of small schools and school districts into larger ones was a way to curb what was, from this perspective, the academically inferior, unprofessional, and parochial administration of education in small districts (Strang, 1987; Berry & West, 2007; Thompson, 1990).[6] Adding to this phenomenon, declines in rural populations, and thus rural school enrollments, weakened the one-room schoolhouse, while the concurrent growth in urban sectors and urban school enrollments lent further legitimacy to an urban

[6]School district consolidation was, and continues to be, primarily, a rural phenomenon in New York State and on a national level (Fischel, 2010). As Fischel (2009) documents, "Between 1960 and 2000, the number of districts in Illinois declined by 657 (62 percent of its 1960 total), but during this period the number of school districts in counties closest to Chicago … was virtually unchanged … The same pattern exists in other states that experienced considerable district decline since 1960. Indiana went from 930 districts in 1960 to about a third of that number in 2000, but Marion County, whichcontains Indianapolis and its suburbs, had almost no net change. Wisconsin went from 2882 districts in 1960 to 459 in 2000, but Milwaukee County (containing the state's largest city and its close-in suburbs) had the same number of districts, 24, in both years. Consolidations in urban and suburban areas account for very little of the overall decline in the total number of districts" (pp. 5). School district consolidation proceeded differently in urban centers. For a rich and vivid history of the consolidation, and then decentralization, of NYC public schools, see Diane Ravitch, *The Great School Wars* (1974).

model of education — which, with larger, age-graded, academically-specialized primary and secondary schools was the antithesis of what was offered in rural areas (Kachris, 1987; Strang, 1987; Thompson, 1990; Kenny & Schmidt, 1994; Pugh, 1995). In New York, the Deputy Superintendent of Public Instruction, "admired the division of labor and grade specialization of urban schools" (Pugh, 1995, pp. 234) and sought its replication in rural areas. The one-room schoolhouse and small school districts were seen as unable to deliver the education and instruction required for students in a modern age (Thompson, 1990).

Together these dynamics moved the structure of rural education to the model prevalent in urban centers — age-graded, academically-specialized, larger — resulting in schools that could accommodate more students and adequately prepare them for high school (Fischel, 2006; Swanson, 1978). Rural schools and school districts consolidated to increase their size and make age-grading and academic specialization feasible (Fischel, 2010). Consolidation of schools and school districts was further facilitated by advances in transportation. The explosive growth in automobile usage demanded highway improvements, which were financed in-part out of the burgeoning registration and licensing fees drivers paid. Where geography had previously limited school enrollments to children within walking distance, improved roads and modern means of transportation allowed students to be bused to a central location to attend school.

New York State's efforts to reorganize school districts, again primarily through consolidation, persisted into the late twentieth century, although actual consolidation of school districts slowed considerably during this time. In 1986, the state legislature commissioned a study of alternative organizational and governance structures for small rural schools. In 1992, the Statewide Advisory Committee on School District Organization (Frey Commission) considered issues of organizational efficiency and educational quality recommending, among other things, the reorganization of school districts, the creation of central or regional high schools, and granting the commissioner of education authority to force the consolidation of districts (Pugh, 1995; Silky, 2009; Steele & Long, 2011). In 2008, the New York State Commission on Property Tax Relief, more commonly known as the Suozzi Report, recommended that there be mandatory reorganization of school districts serving fewer than 1,000 students, that the commissioner be granted the authority to order consolidation of districts serving fewer than 2,000 students, and that localities focus on ways to share services with other districts and through the Boards of Cooperative Education Services (BOCES) (Suozzi, 2008; Regents Report, 2009). More recently, the preliminary report of the New NY Education Reform Commission (2012) recommended that the SED "promote increased access to educational opportunities by encouraging school district restructuring through consolidation and regional high schools" (pp. 16).

Although consolidation and centralization was a clearly articulated and historically quite successful policy of New York State education officials for decades, it was often met with resistance from local citizens (Kachris, 1987; DeYoung & Theobold, 1991; Pugh, 1995). This continues to be the case. At the root of this resistance is a reluctance to cede control over educational matters: a familiar tension between local control and centralization, between the efficient delivery of services through economies of scale and the maintenance of local character, community, and voice. Fundamental to this struggle are conflicting norms: a "complex tension between the activities of those who emphasize the administrative mechanics, efficiency, and rational possibilities of the [education] system, and those who emphasize its local nature and democratic ethos" (Pugh, 1995, pp. 187). Moreover, in many areas, school buildings are the organizing paradigm for the community, and as such, are the locus of social associations, networks, and loyalties among adults as well as children. In this way, schools often form the basis of social capital in a community (Fischel, 2010). "Many suburban and rural places are literally organized around their school systems; the schools are both at the heart of their identities as communities and a vital economic presence" (Benjamin & Nathan, 2001, pp. 172; see also Strang, 1987; Kachris, 1987; Pugh, 1995). This local "push-back" has limited to some degree the consolidation of school districts.

It is important to acknowledge the role that race has played in shaping the character of school district consolidation in New York, particularly in suburban areas. In the 1960s, many whites fled newly-integrated urban centers, seeking the white picket fence of suburbia and homogeneous educational experiences for their children. "As racial differences between school-age populations grew…especially between cities and districts of the tri-state region's inner suburban ring, school consolidation came to be seen as a "forced" integration strategy—and was resisted accordingly" (Benjamin & Nathan, 2001, pp. 173). Also in opposition to consolidation, a movement in support of small schools, and small districts, has gained traction in the last few decades. This reform idea holds that reduced school size can promote better academic and social outcomes for students. At the core of this movement is the idea that small schools can offer what large schools cannot: learning environments that foster greater accountability and responsibility for student learning and behavior, as well as academic instruction shaped to students' individual needs. All this translates, advocates argue, into improved outcomes for students (Meier, 1996; Vander Ark, 2002). Along these lines, critics of large districts worry that consolidation might depersonalize education for students, as well as for teachers, while also stripping it of community voice.

Finally, the practice of delivering education separately from other local services, which left school districts in New York with boundaries asynchronous with those of general purpose governments and with a unique line of accountability to state government, also helped stem the tide of school district consolidation. As noted, education was first delivered within cities or towns through the creation of very local common school districts. When these districts were joined, the resulting entities were rarely coterminous with existing general purpose governments' boundaries (except within cities). School districts often included all or parts of multiple towns and, in some cases, were organized across county lines.

One researcher describes the result as a "jigsaw puzzle" and notes that the "pattern of consolidation was the product of consensual politics. Local voters had to agree to consolidate, and they usually rejected proposals by state-initiated commissions that would have swept them into townships or county units…consolidated districts that make up the "jigsaw" puzzle got their shapes from social and economic relations that residents had formed. The "organic communities"… were the product of locally-generated associations, not external conditions" (Fichsel, 2010, pp. 32). This phenomenon is indeed evident in New York, where efforts to mandate school district consolidation have failed; skeptics successfully resisted granting the commissioner authority to designate school district boundaries in 1914, and much later, the Frey and Suozzi Commissions' recommendations that the commissioner be allowed to mandate consolidation never came to fruition.

Collectively these dynamics have worked to slow the advance of school district consolidations across the state. And, in the pushback against consolidation, cooperative regional organizations surfaced as an intervening compromise. The groundwork for New York's Boards of Cooperative Educational Services (BOCES) was developed within this context. The BOCES were created in 1948 as a "formal cooperative arrangement among member districts," which would allow school districts to share services (Pugh, 1995, pp. 497). They had no taxing authority, but were indirectly funded through participating school districts, and were the beneficiaries of state subsidies linked to the services they delivered. The BOCES were an alternative approach to achieving the SED's broad long-term goal of reducing educational costs, enhancing educational quality and equity across the state, and facilitating more centralized control of the administration of New York State's public schools (Pugh, 1995, pp.497).

Thus, even as policymakers advocated for consolidation in the period since 1970, they simultaneously institutionalized and strengthened BOCES in its role as service provider to local districts (Kachris, 1987).[7] BOCES has become what it was intended to be: a mechanism for creating economies of scale without sacrificing local control. One predictable result was to fuel the argument that the shared services, cost savings, and increased educational opportunity BOCES afforded obviated the need for consolidation; "instead

[7] In 1972, BOCES was granted permanent legal status.

Ulster County: School Districts

of regionalization by consolidation, the BOCES model represents regionalization based primarily on cooperation—allowing districts to pool resources around programs and services that cannot be efficiently delivered by many districts on their own" (Regional Institute, University of Buffalo, 2009, pp. 5; also, Benjamin & Nathan, 2001).[8]

In the drive to capture economies of scale, school district consolidation has been a persistent objective in New York for over a century. Although its trajectory has been tempered somewhat by values of local control, community preservation, and the creation of BOCES, consolidation was largely successful until relatively recently, and it remains a prominent option in current policy conversations. But recent stalled efforts require us to ask whether this approach which, for decades was appropriate for addressing the diffuse school structures that once prevailed in New York, should continue to be given primacy in our current context.

III. Is consolidation the best way to achieve economies of scale?

In general, researchers find economies of scale from increased district size and consolidation. In a study of hypothetical consolidation of school districts in New York, Duncombe et al., (1995) found that "per pupil costs drop from $11,600 for districts with 50 students to $8,200 for an enrollment of 500" (pp. 274). In a study of actual school district consolidations, Duncombe and Yinger (2007) analyzed rural school districts in New York State that underwent consolidation between 1987–1995. Researchers found that doubling the enrollment of a 300-pupil district resulted in net savings of 31.5 percent and that doubling enrollment of a 1500-pupil district resulted in a net savings of 14.4 percent, accounting for adjustment costs that were incurred as districts consolidated (i.e., increased capital expenses).[9] A study of school districts in Oregon found that small school districts (500 pupils) spent more than districts with enrollments between 3,000–10,000 (Oregon Secretary of State, 2002). More recently, research from the Center for American Progress estimated that across the U.S., "non-remote districts might represent as much as $1 billion in lost annual capacity, by which we mean money that may not have had to be spent if the district was larger. In New York, we found that the state's small, non-remote districts potentially represent almost $100 million in lost costs," although the authors cautioned that these are not "take-to-the-bank data" (Boser, 2013, pp. 2/11).

At the same time, it is important to note that many studies have also found diminishing returns for school district size; costs do not continue to decrease as district size increases. In a national review of empirical work on district size since 1980, Andrews, Duncombe and Yinger (2002) concluded that economies of scale may be realized from increased district size to a certain point of enrollment; cost savings can be obtained by "moving from a very small district (500 or less [sic] pupils) to a district with (approximately) 2000-4000 pupils" (pp. 255). Costs continue to decrease, albeit slowly, until districts reach enrollments of 6,000, after which researchers find diminishing returns. In earlier work, Duncombe (1995) found diseconomies of scale (9%) between optimized district size (identified as 6,500 pupils) and very large districts (50,000 pupils) and conclude that "states should pay equal attention to diseconomies of scale" when thinking about cost savings from district size (pp. 279). Coulson's (2007) work in Michigan identified 2,900 as the optimum district size, with inefficiencies in districts with enrollments that are less than or that exceed this number.

[8] It is important to note that the BOCES system has grown to become a major institutional presence in the New York State educational system. In 2013 there were 37 BOCES with budgets totaling $2.5 billion dollars that provide services to school districts across New York State. BOCES' budgets are supported primarily through charges to component school districts for BOCES services they use. Only a small amount of funding comes from state and federal aid (Office of the New York State Comptroller, 2010). And while BOCES provides a valuable service to component districts, there are complications as well. For example, membership in BOCES is permanent—once a district becomes a member of BOCES, it cannot rescind that membership. Moreover, districts have to pay an annual administrative fee regardless of the services used; some find this fee excessive (Simon, 2005). Finally, an audit of non-instructional services offered through BOCES found them to be more expensive than what a district would have paid to perform the service in-house. The availability of state aid for these services incentivizes districts' use of them, but does not necessarily—the State Comptroller has said—encourage BOCES to identify more cost-effective approaches (Office of the New York State Comptroller, 2012).

[9] These numbers consider a 10-year horizon for adjustment costs, which have not completely phased out. When adjustment costs phase out, typically after 30 years, the authors estimate savings of 43.7 percent and 29.5 percent for doubled enrollment of a 300-pupil district and a 1,500-pupil district, respectively.

How are economies of scale reached and in what areas are cost savings realized? In one study, researchers found that per pupil administrative costs "drop from $1100 per pupil in tiny districts to $300 per pupil in a district with 500 pupils," per pupil transportation costs are reduced by 25 percent when moving from a district of 50 students to one with 1100, and operating and maintenance costs remain constant regardless of district size (Duncombe et al., 1995, pp. 274). Comparing the financial status of districts across the nation before and after consolidation, Streifel et al., (1991) found savings in administration, but not in any of the other expenditure categories, which included instruction, transportation, operations and maintenance, and capital costs. Hidden within these findings, however, was substantial variability in savings and expenditures linked to unique district characteristics and circumstances.

Of course, all the potential positive effects of consolidation are not financial. A small body of empirical work addresses the question of whether educational opportunity varies by district size. In a national study of school reform, superintendents in large districts were more likely to report greater progress toward "Establishing high content and performance standards for all students" than were superintendents of smaller school districts (Hannaway & Kimball, 1998). Young & Green (2005) found that larger districts are likely to offer more opportunities for professional development and collaboration among teachers. Yan (2006) found no difference in curricular offerings between large (rural county wide) and small (rural and rural/urban non-county wide) school districts.

Despite findings of cost savings and potential benefits to educational programs, however, researchers caution that we should not rush to consolidate based on enrollment and financial figures alone (Dumcombe, et al., 1995; Andrews, 2002; Boser, 2013). Contextual factors, such as geography and pupil density, impact whether consolidation will yield savings. Recall the Duncombe et al., (1995) study of cost savings from potential school district consolidation in New York State. When the researchers applied their model to actual districts in New York only 17 — out of the 90 school districts with enrollments of fewer than 500 students — surfaced as candidates for consolidation, given the fiscal, administrative, and geographic realities of those districts. Likewise, a study of school districts in Pennsylvania found that only 88 of 312 districts with student enrollment below 3,000 were realistic candidates for consolidation, given their financial and geographic contexts (Standard & Poor's, 1987). Even the study from the Center for American Progress (Boser, 2013), referenced earlier, which claims sizeable lost cost due to small district size, cautions that context matters in determining the ultimate savings from school district consolidation; "age of buildings, the size of the community, the density of the surrounding area, and the capacity of the surrounding towns and cities all play a role in whether consolidation eventually makes districts more or less productive after [consolidation]" (pp. 7). Along the same lines, although the literature suggests savings from increased district size, it also links efficiencies to specific enrollments, with diseconomies on either side of this number. Realizing this "on-paper" efficiency, one researcher argues, would require the breakup of very large districts into optimally-sized ones and the merger of adjacent districts of very specific sizes; he also acknowledges that "optimal size could not easily be maintained, even if it could be initially achieved" (Coulson, 2007, pp. 20).

Recall that roughly half (56) of the Hudson Valley's school districts enroll fewer than 2000 students — the lower range of optimal district size identified in these empirical works. The location of these smaller Hudson Valley school districts may render consolidation impractical, however, as they may not be adjacent to districts that would increase their enrollment to an optimal size (Coulson, 2007). But even if these districts could be consolidated to achieve an optimal district enrollment figure, local characteristics, such as pupil density and geography, researchers claim, will likely influence potential cost savings from consolidation. As noted, consideration of such local characteristics led Duncombe et al., (1995) to identify only 17 districts in New York State that were then good candidates for consolidation, and another 43 districts that would reap greater benefits from sharing support and administrative services with neighboring districts (because of their geographic size and low pupil density, these 43 districts were not good candidates for consolidation) (pp. 278). Accordingly then, the general conclusion among researchers is that the "financial impact of consolidation on indi-

vidual districts is variable and that districts contemplating consolidation should strongly consider the various individual factors involved" (Streifel, 1991, pp. 13; see also Dumcombe, 1995; Andrews et al. et al., 2002; Howely et al. et al.., 2011; Boser, 2013). Research indicates a need for a nuanced, context-specific understanding of the effects of altering district size before proclaiming it "the solution." Investigation into the specific characteristics, and expenditures, of districts for which consolidation might be considered would yield additional insights into the feasibility of such mergers, and the exact savings that might be obtained from them.

And then, of course, there are community-based considerations. "For those who are interested in achieving both equity and efficiency in education, consolidation is not a strategy that produces results. At the end of the day, citizens believe they are being asked to trade effectiveness (good schools) and democracy (local control) for equity (racial integration and equal spending for all children) and efficiency (lower costs)—and that is a trade they are not willing to make" (Benjamin and Nathan, 2001, pp. 175). School district consolidation has been the preferred strategy for "scaling up" educational services for much of New York's modern history. Although this strategy was appropriate in earlier eras to manage and improve a diffuse education system, it may no longer be a compelling option for all or even most actual situations on the ground. And yet, we are still debating it as a prevailing remedy for assuring quality education while reducing costs. With this in mind, and in the framework of the fiscal and educational challenges we face, we must consider other ways to achieve efficiencies in the five areas that Duncomb and Yinger identify—indivisibilities, increased dimension, specialization, price benefits of scale, and learning and innovation—while being careful not to incur the diseconomies that also may arise from scaling up in education. This was one focus of the conversation of a group of education stakeholders from Ulster County, who convened in November 2013 to discuss school district structure, among other pertinent education issues.

SCHOOL DISTRICT SIZE AND ACADEMIC ACHIEVEMENT: THE RESEARCH

In a study of California school districts, Driscoll et al., (2003) found increased district size to have a negative effect on student performance, and that this effect was most pronounced for students in middle school. Likewise, Walberg and Fowler (1987) found a negative relationship between student achievement and district size for school districts in New Jersey, as did Abbott et al., (2002) for 4th and 7th grade students in Washington State. Melnick et al. (1987) found no difference in academic achievement between students in small (fewer than 2500 students) and large school districts in Connecticut.

However, some research observed higher academic achievement for students in larger districts. In a study of resource allocation in Alabama schools, Ferguson and Ladd (1996) found increased academic achievement for elementary students in larger school districts. Chakraborty et al.. (2000) found that the proportion of students graduating from Utah public schools increased with district size. And in a national study of the effect of district and school consolidation on labor-market outcomes and educational attainment, using census data from 1980, Berry and West (2007) determined larger districts to be associated with "higher returns to education and increased educational attainment" (pp. 4). These researchers caution, however, that these district-level gains are "outweighed by the harmful effects of larger schools" which, they claim, are often found in large districts (pp. 4).

IV. A 2020 Vision for Public Education in Ulster County

Discussion of school and district structure at the *A 2020 Vision for Public Education in Ulster County* symposium addressed fiscal and educational efficiency and effectiveness in education. Participants discussed a range of ideas, from varying models of district structure to thoughts about ways to share

SCHOOL DISTRICT SIZE AND ACADEMIC ACHIEVEMENT: **THE RESEARCH, CONT.**

Another body of work explores the mediating effect of district size on the relationship between poverty and student outcomes. Friedkin and Nocochea (1988) found that the socioeconomic characteristics of students within a district influence the relationship between district size and student achievement. This research suggests that the negative association between district size and student outcomes is heightened in high poverty districts; this negative relationship lessens, and then disappears altogether, as the socioeconomic status of the district increases. Likewise, in a study of school districts in Washington, Abbott et al., (2002) found that the "negative relationship between school poverty and achievement is stronger in larger districts" (pp. 14). Researchers attribute this phenomenon to the time and energy districts must divert to address the social and academic issues of more high poverty students (see also Hannaway & Kimball, 2001).

services without altering district or school boundaries. Although many of the conversations focused first on financial efficiency, enhancing educational opportunity also factored prominently into the day's discussions. For example, one student participant talked about the limited advanced placement courses available to him in his current high school, and hoped that Ulster County could find a way to broaden the educational opportunity for all students, regardless of their home district. Participants acknowledged that potential savings need to be weighed against the potential for increased access to high quality education programs: a delicate balance. Overall, participants sought alternatives to school district consolidation; of the ideas generated, some were structural, some were programmatic. All involved intra-county and school district collaboration.

We separate ideas into two categories below, structural and programmatic, and then present empirical work and call upon professional experience to speculate about ways that these might achieve some of the economies of scale noted in the work of Duncombe and Yinger (2007).

a. Structural ideas

i. Regional high schools

Participants at the 2020 symposium suggested that Ulster County investigate a regional high school model. Current school districts would continue to deliver education at the primary and middle-school levels; only the high school level would be regionalized. This approach would allow current school districts and the communities they serve to retain local voice in educational matters while simultaneously consolidating some service delivery and promoting educational quality and equity throughout the county. In this configuration, some Ulster County high schools would likely be closed, allowing for scale to be maximized in the remaining fewer high schools, all with open enrollment, serving all the students of Ulster County.

Some participants suggested that regional high schools could be theme-based, so that students would choose a high school based on academic content and focus rather than geography. Each might develop a special academic area of excellence: natural sciences and math, the arts, the humanities; or, some type of substantive focus such as the environment, technology, or business. Given the geographic spread of Ulster County and a concern that distance would limit student choice, it was suggested that the county be divided east and west and that theme-based schools might be replicated in the eastern and western portions of the county.

There is some precedent for regional high schools in New York, although state law currently limits districts' ability to collaborate in the delivery of secondary education. There are three central high school districts in Nassau County—Sewanhaka Central High School District, Bellmore-Merrick Central High School District, and Valley Stream Central High School District—created in the 1920s to serve secondary students from multiple neighboring elementary school districts. Central high school districts in Westchester and Erie Counties were dissolved and in Suffolk County, Eastport and South Manor school districts shared a high school (through a central high school district), before merging fully in 2003. In 2007, under special legislation, the Capital Region BOCES and Questar III collaborated to establish Tech Valley High School, a regional high school

> "The county unit, to be thoroughly effective, must make provision for a *well centralized business administration without depriving the people of their local initiative in school matters.*" (US Bureau of Education, 1919, pp. 16, italics in original)

that focuses on math, science and technology. The program is a "joint venture" of the Capital Region BOCES and Questar III and is open to all high school students who reside in the districts that comprise the Questar III and Capital Region BOCES (Tech Valley Board Policy, pp. 1). Transportation is provided by local districts, and graduation diplomas are authorized through the student's home district.

ECONOMIES OF SCALE IN A REGIONAL HIGH SCHOOL MODEL

Implementing regional high schools might help Ulster County achieve levels of scale in several areas identified by Duncomb and Yinger (2007). Specifically, this model could yield savings in the domain of indivisibilities; fewer than the current nine high schools serving the students of Ulster County would produce savings in administration and facilities. Efficiencies in specialization and learning and innovation could be achieved as (potentially) larger and (potentially) more specialized schools could more efficiently use specialized high school staff, materials, and equipment, and as collaborative opportunities for teachers increase. Conversely, care would have to be taken to avoid incurring diseconomies of scale, specifically in loss of engagement and connection for teachers and families that some worry may result from increased school size or increased geographic distance.

Quantifying the exact amount of savings or even the nature of specialization and collaboration that could emerge from a regional high school model is beyond the scope of this paper. However, it is important to note that research on the regional high school model suggests that particular management decisions at the local and regional levels will impact whether there will be savings, and if so, their size. In a study of the possibility of creating a regional high school model for the nine school districts in Ontario County, New York, researchers note that "the cost of any regional high school model is dependent on the choices the policy-makers of the nine separate districts make during implementation" (Pryor & Saunders, 2012, pp. v). For example, a regional high school will likely require its own administration, including a superintendent and related administrative support. If the new K-8 school districts do not reduce their level of administration to reflect this shift in workload, then the creation of a new district with its attendant administration will increase educational costs in the county. Likewise, transportation could be an area of savings or additional expense; "all K-12 transportation could be regionalized into a countywide system (savings), or each of the now 10 districts could retain separate functions (additional costs)" (Pryor & Saunders, 2012, pp. vii). Likewise, the degree of collaboration and professional support that could derive from more, and more specialized, staff is dependent on how schedules are crafted and the ability of this new model to develop a culture of collaboration. Implementation choices will impact how, and to what degree, economies of scale are achieved in this model.

ii. Countywide school district

The creation of a countywide school district was raised by *2020* symposium participants as a possible option for Ulster County. As earlier noted, New York flirted briefly with town school district co-terminality in the early 20th century and later oversaw local schools at the county-level, but there is no precedent for the direct administration of schooling countywide in the state. However, other states administer education at the county-level. There is considerable variability even within this configuration; larger counties are sometimes divided into regions that are overseen by regional administrators while smaller counties may be more centrally administered.

For example, Union County Public Schools in North Carolina operates as a countywide school district. The district enrolls approximately 42,000 students in 53 schools. One county-level superintendent oversees the entire district, including seven central administrators who, in turn, are responsible for all matters of district operations. Student enrollment in Ulster County (24,866) is almost 60% of the enrollment of this district.

The school system in Fairfax County, VA is also structured on a countywide basis. This school system enrolls 185,000 students—many more than Ulster County. In Fairfax, one county-level superintendent oversees the entire district; a deputy superintendent supervises assistant superintendents who are each responsible for one of eight regional clusters. The smallest cluster contains 25 schools; the largest 37. Another five assistant superindendents oversee all other matters of district operations. In organizing this way, the district claims greater centralized support and reduction in middle management, greater equalization of academic and support services to students across the entire county, and greater ability to adequately support school-based leaders (cluster superintendents supervise 25-37 principals).

ECONOMIES OF SCALE IN COUNTYWIDE MODEL

Theoretically, economies of scale in a countywide model are similar to those that may be derived from the regional high school model. In this model, however, economies may be achieved from the entire K-12 school system, and not just at the high school level. These might include the ability to maximize the use of and benefits from educational professionals (increased dimension and indivisibilities), reduced administrative costs and increased purchasing power. Economies of scale may also be realized through increased specialization, and collaboration, of staff. With greater opportunity to capture economies of scale throughout the entire school system, however, comes greater chance for diseconomies of scale, particularly those associated with loss of engagement and connection for teachers and students. In addition, this model is more susceptible to diseconomies associated with labor relations costs (that school districts will have to "level-up" to the most generous labor contract).

It is important to acknowledge that research suggests that countywide districts do not inherently have lower expenditures; in a study that compared rural countywide and non-countywide school districts in Pennsylvania, Yan (2006) finds countywide districts to have higher expenditures than non-countywide districts (about $100 per student). Thus, as with the regional high school model, management and implementation matter; the degree to which economies of scale are captured depends on the structure of the countywide model.

b. Programmatic ideas

Most of the ideas that fall into this category involve using countywide structures, whether BOCES or the county itself, to aid in the delivery of education services. In some instances, participants suggested that two or more proximal districts could join to provide discrete services. As with the structural ideas mentioned above, these paradigms sought to achieve scale through labor-saving costs (e.g., reduction of back-office staff through consolidation of services) or non-labor related savings (e.g., greater purchasing power), specifically through increased dimension, price benefits of scale, and indivisibilities, as referenced by Duncombe and Yinger (2007).

i. Service sharing

Sharing services among districts, both administrative and programmatic, was a popular idea at the *A 2020 Vision for Public Education in Ulster County* symposium. Of course, this is not a new concept; many districts in Ulster County already share some services via BOCES. 2020 participants hoped to explore the feasibility of expanding this service-sharing to additional functional areas and among additional school districts. It is important to recognize, here, the role that Ulster BOCES currently serves in helping school districts to share services. Ulster BOCES provides operational support services including: records management, grant writing, technology, data management, communications, and safety, health and risk management as well as instructional services to component districts. Some of these are purchased services, while some are shared among school districts. Ulster BOCES also offers rich career and technical programming in areas such as aviation, early childhood education, fashion design and merchandising, cosmetology,

and computer design and repair as well as pre-university programs in advanced robotics and engineering, aeronautical engineering and technology, health, scientific research, and performing and visual arts, to name a few. Finally, Ulster BOCES brings districts together to engage in cooperative bidding and leverage purchasing capacity; success in this area has already yielded significant cost savings in some services.

For example, the Mid-Hudson Regional Information Center (MHRIC), a division of Ulster BOCES, has sought to leverage the purchasing power of school districts by forming a consortium for the collaborative purchase of network services. The MHRIC and local BOCES developed and released a series of RFPs to solicit bids from network providers for Wide Area Network (WAN) and internet services. The RFPs included the school districts located within the county region that includes Dutchess, Orange, Ulster and Sullivan counties. Through this consortium and the bidding process, the MHRIC and BOCES were able to reduce bandwidth costs to participating school districts from an original cost of $292 per megabit in 2003 to a current cost of $7 per megabit. The contract with the internet service provider contains provisions for a declining scale, so that the price of bandwidth decreases as the consortium purchases more.

Recently municipalities have begun to take advantage of these savings by purchasing network services through the consortium at a lower price than they could otherwise access on their own. The result is enhanced technical capacity while providing cost containment for the local taxpayer in school and municipal taxes.

Other BOCES have achieved economies of scale in their purchase of energy through the establishment of energy consortia. Through the Energy Services Program, the Onondaga-Cortland-Madison BOCES subjects gas and electric costs to a single competitive bid, driving prices down considerably and providing stability, and predictability, in energy costs over time. 170 school districts and municipalities participate in this consortium, called the New York School and Municipal Energy Consortium. Still other BOCES have coordinated the purchase of health insurance through a consortium of component districts. Following examples such as these, it is likely that there are additional ways to share services and thus promote service consolidation in certain areas for school districts in the entire county.

A 2020 Vision for Public Education in Ulster County symposium participants raised another, more systemic shared-service approach; pooling "back-office" functions, such as business and operations, to be shared among districts at a county level, while keeping instructional decisions within current school district boundaries. New Paltz and Highland merged some of their central business office operations in 2012. At a countywide level, in this model, school districts would work together to determine which services they would share, and the mechanisms through which they would share these services. Ulster BOCES, as a countywide organization with great experience in promoting shared services among school districts, is a likely candidate to coordinate and deliver such systemic service consolidation on a countywide basis.

ECONOMIES OF SCALE IN SERVICE SHARING

Most research supports sharing services as a cost-saving measure, particularly in the areas of administrative and central business office functions (Eggers et al., 2005; Office of the NYS Comptroller, 2009). "Most studies to date have identified savings of between two and five percent from shared services efforts in these areas" (Office of the NYS Comptroller, 2009, pp.2). Here, savings are realized through indivisibilities, increased dimensions, and price benefits of scale (Duncombe & Yinger, 2007).

Nevertheless, a recent study of BOCES-like organizations in Michigan suggests that such service consolidation may not always yield much cost savings. In this work, researchers found spending reductions in only one area (business office) out of six in which economies were sought (curriculum director, operations and maintenance, transportation, human resources, technology services, and business office) (DeLuca, 2012). Related work suggests several factors that may influence the degree to which service consolidation achieves scale economies, including "characteristics of the service, enrollment size of consolidating local districts, prior practices of local districts, capacity and size of (coordinating entity), and consolidation arrangements between local and intermediate

districts' (Arsen, 2013, pp. 15; see also Arsen, 2011). Here, as with consolidation and service sharing more generally, context matters.

Beyond fiscal efficiencies, however, sharing services can enhance educational programming. School districts that join to share Advanced Placement offerings, or that share special area teachers (foreign language, for example), are able to enrich educational opportunity for their students in ways that they could not if they relied solely on their own resources. As already noted, Ulster BOCES offers innovative educational programming to students in all component districts.

ii. Use of the county as an organizing paradigm

The county itself has a highly developed governance structure and is already in the business of working with school districts, specifically through early intervention services to preschool-age children. Further collaboration among the county (or even local municipalities), BOCES, and school districts is rare however, as regulatory constraints inhibit the process of working together. For example, collaboration must be authorized in education law; BOCES' recently-granted ability to enter into contracts with public libraries for shared services required the passage of legislation that altered New York Education Law. One underutilized route to collaboration requires the development of an Intermunicipal Agreement (IMA). Although this is an important process that permits collaboration it can be cumbersome, as it requires legal review and board approval. The time and expense of developing such agreements may be prohibitive, or at least discouraging, for small municipalities or school districts. Despite these complications, some collaborations among municipalities, school districts, and BOCES have yielded significant efficiencies, as noted above.

ECONOMIES OF SCALE IN A COUNTYWIDE PARADIGM

Looking beyond fiscal efficiencies, countywide efforts can enhance educational programming through mechanisms that link existing resources and institutions to school districts on a more coordinated and systemic basis. Such linkages would draw upon institutional mission and self-interest of regional entities to enhance services. For example, Ulster County is home to two colleges, SUNY New Paltz and SUNY Ulster, both of which offer important services to and get important benefits from local school districts.

SUNY New Paltz School of Education is alma mater to many of the region's teachers and maintains close relationships with regional districts, centered on teacher preparation and development. In fact, many local school districts host SUNY New Paltz teaching candidates in their required student teaching and field experiences. SUNY New Paltz is working to strengthen and enrich this experience for its teaching candidates, as well as for host school districts. For example, the university has created a "looping program" in partnership with the New Paltz School District; teaching candidates conduct their field experience and their student teaching in one school, rather than moving from school to school within a school district, or even between school districts. In addition, a methods course — required for the successful completion of SUNY's teacher education program — is taught on-site at the school, and is open to New Paltz School District teachers. This promotes continuity for the teaching candidate, provides a professional development opportunity to New Paltz teachers, and strengthens the relationship between the university and its neighboring school district. SUNY New Paltz is embarking on a similar program in other districts. In another effort to extend its support to regional school districts, SUNY New Paltz School of Education has joined with Mount Saint Mary's College, the Newburgh Enlarged City School District, and a local philanthropist to support the Newburgh Armory Unity Center Initiative. This initiative provides, among many other enriching activities, literacy services to Newburgh students and pre-service and in-service professional development for teachers in the area of literacy. The Hudson Valley Writing Project, housed at SUNY New Paltz, has a long history of providing support and professional development to Hudson Valley teachers as well as programming for students. The Migrant Education program provides services to migrant children and their families in conjunction with local school districts. And finally, SUNY New Paltz hosts a Master Teacher Program, a gubernatorial initiative that identifies and supports master teachers, particularly in the STEM (science, technology, engineering, math) areas. Master teachers, who are selected through a competitive process, engage in extensive content-related professional development, design, and then implement,

> …it may be more important for us to imagine, and then devise, other options for achieving our efficiency and effectiveness goals.

professional development workshops for colleagues, and serve as mentors for pre-service and early career STEM-area teachers. SUNY New Paltz currently hosts 19 teachers from 12 school districts in this program.

SUNY Ulster's mission is explicitly focused upon serving the county; many of its students are graduates of Ulster County's high schools. It is natural, therefore, for the community college to work with county school districts, targeting its support to both students and teachers. SUNY Ulster provides opportunities for high school students to take college-level classes, and receive college credit, through its Collegian Program. This program is available to students countywide and is widely utilized; it currently serves over 1,100 high school students in 10 Ulster County high schools (public and private) and Ulster BOCES. Collegian classes are taught onsite at the high schools by high school teachers who are vetted by and receive professional development from SUNY Ulster. Students pay the cost of the class, although at a significantly reduced rate: for a 3-credit course, Collegian students pay $165, where a regular SUNY Ulster student would pay $561. Moreover, students who qualify for free-or-reduced price lunch pay only $3.00 for a 3-credit course. In one Ulster County high school, the Collegian Program includes developmental, or remedial, courses; high school students who do not pass SUNY Ulster's placement test can take a developmental course at their high school, with the goal of taking a college-level course the following semester or mitigating the need for remedial courses in college after high school graduation. High school students also have the option of taking courses on the SUNY Ulster campus through the Early College Program.

In addition to the Collegian and Early College programs, SUNY Ulster connects with regional high schools, and their students, through its annual Career Conference Day, continuing education courses (Drivers' Education, SAT/ACT prep, science exploration courses), college preparation workshops and exposure to academic experiences, and arts and cultural events.

SUNY New Paltz and SUNY Ulster are important resources for students and teachers in Ulster County. Expanding their reach could only serve to further enhance—and benefit—Ulster County school districts.

Coordination of education services at the countywide level has the potential to constrain costs while also enhancing educational programming. As such, a deliberate, countywide effort should include consolidation of some administrative and business functions, as well as the further coordination of existing educational resources. Collaborative planning and work among school districts, Ulster BOCES, Ulster County, and regional colleges and institutions would clearly enrich programming for students and teachers while also reducing the cost (and tax burden) for some services.

V. Conclusion and next steps

School district consolidation is a tool, one option for promoting efficiency and equalizing educational opportunity among school districts. But it is a blunt tool. And within the current educational landscape—the fiscal crisis, the tax levy limit, BOCES' mechanisms for shared services, and regional resources, including colleges and universities—it may not be the most effective for reaching regional aims. Rather, it may be more important for us to imagine, and then devise, other options for achieving our efficiency and effectiveness goals. At the *A 2020 Vision for Public Education in Ulster County* symposium, participants began the hard work of visualizing what these tools might look like for their school systems and their county. The next step for symposium participants, and Ulster County, will be to explore more deeply some of these identified options for our county and then determine, within the context of those findings, how we would like to proceed with enhancing efficiency for our schools and greater educational opportunity for our children.

Author Bio

Robin Jacobowitz, PhD, is the interim associate director at the Center for Research, Regional Education and Outreach (CRREO) at SUNY New Paltz. Prior to this position, Robin worked with several national organizations and foundations on a range of education issues. She worked at New York University's Institute for Education and Social Policy, where her research centered on the growth and development of charter schools in New York State, the organizational structures that facilitate teaching and learning in New York City small high schools, and leadership transitions in new schools in New York City. She also worked with the University of Chicago's Chapin Hall Center for Children, where her research focused on the relationship between constituency building and policy work in effecting systemic school reform in New York State. Prior to beginning her career in research, Robin worked with the Public Education Network in Washington DC, where she provided technical assistance to local education funds around the country on issues of school governance, school health, and public engagement. Robin holds a MEd in education policy from the Harvard University Graduate School of Education, and a Ph.D. from the Robert F. Wagner Graduate School of Public Service at New York University. She is currently a trustee on the Kingston City School District Board of Education.

Editorial Staff

Gerald Benjamin, KT Tobin, Janis Benincasa

Sources

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Comment

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CRREO
1 Hawk Drive
New Paltz, NY 12561-2443