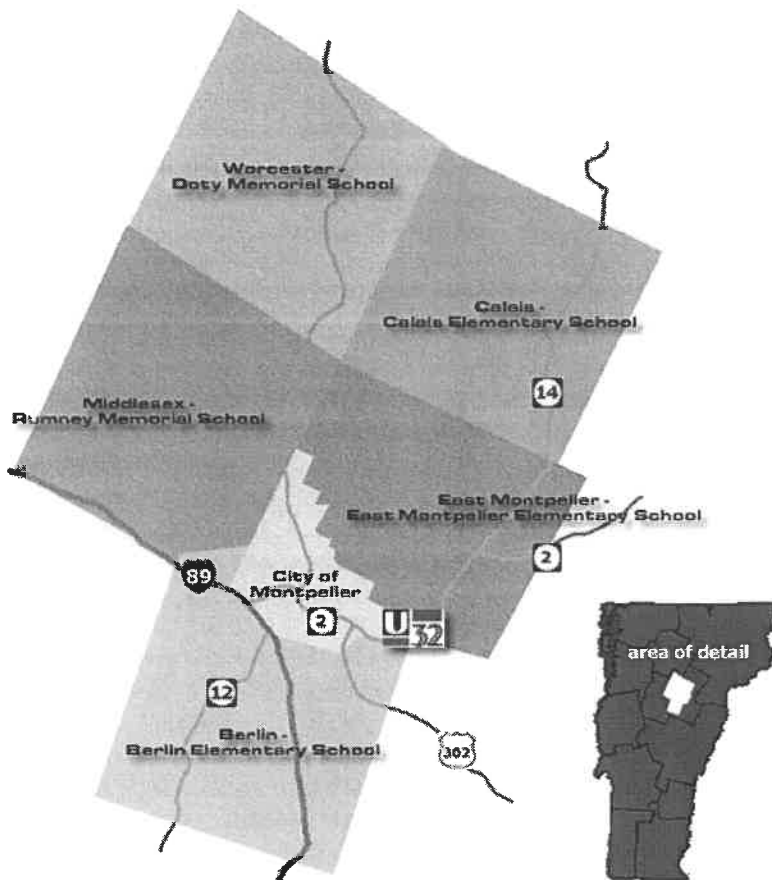


Phase I Governance Study

Structures for Excellence, Efficiency and Effectiveness Options
Rumney Memorial and Doty Memorial Schools

Washington Central Supervisory Union School District



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Preface:

This preface was informed through conversations with board members and administrators as well as through reviews of historic and current documents specific to the WCSU, Doty and Rumney. These voices were important in establishing a back-drop for this study and, more importantly, **providing a values-based framework for future public policy decisions.**

Vision 1: EXCELLENCE IN LEARNING

Doty and Rumney school boards and administration have worked hard to provide excellence in learning for Middlesex and Worcester students. There is a desire to optimize class sizes, attract and retain quality teachers, stabilized classroom configurations and have more consistent use of infra-structures needed to implement curriculum and provide quality of programs. These communities have consistently valued visual arts, performing arts, physical education and other similar learning opportunities. “We need to posture ourselves to be able to continue providing quality learning experiences in these areas. Our working together may also enhance our capacity for providing student support services with excellence and efficiency.”

Vision 2: SUSTAINABLE QUALITY EDUCATION THAT MEETS HIGH EXPECTATIONS.

The structures, ways and means for delivering educational services need to be aligned with current realities including financial conditions, changes in demographics, advancing technologies and greatly expanded expectations being imposed on schools. “We need to have the capacity to sustain the quality we are accustomed to and want”. “Students need to have the opportunity to socialize in more diverse settings and be as ready as possible to transition to secondary school settings.

Vision 3: SYSTEMIC COLLABORATION AND SHARING RESOURCES.

What is going on in education has to be thought about in a broader context. We used to be able to just look locally in meeting challenges and attaining success. However, what is happening across the supervisory union and Vermont causes us to look beyond just ourselves to understand what future generations of kids will need and to leverage resources to meet these needs. We have a new sense of urgency to collaborate and cooperate with others in order to meet our goals. “We need to prepare ourselves better for leveraging resources”.

Vision 4: INFORMED DECISION MAKING.

Change is coming at us from all directions and at a very rapid pace. We need to learn about the potentials that may be gained through some form of collaborative efforts. Will our working together put us in a more advantageous position to face the change being brought upon us? “If we go through this study and make no changes, we still have benefited because we talked together. If we do make change, it will be a conscious decision to attempt to produce greater student skills.”

importance of moving beyond emotion so that you can make data-driven decisions

Vision 5: ENGAGED COMMUNITY MEMBERS AND PARENTS.

“Our school structures need to provide accessibility for parents to engage with schools in numerous ways. We value a “family like school environment” and want parents and community members to have ready access to the schools. Partnering of schools and community members is essential. Parents need to be intimate with their child’s education.

Vision 6: COMMUNITY CENTERS

“Communities need a hub for networking and building togetherness.”

Vision 7: FACILITIES

Our school facilities need to be safe, comfortable, energy efficient and supportive of teaching and learning. We need to be creative and open about ways to provide adequate and efficient schools for all our children.

Vision 8: COMMUNITIES

The communities of Middlesex and Worcester need to be pro-active in preparing for what ever comes at them in the form of State-wide public policy decisions. “We need to be informed about possibilities and take appropriate action that will enable us to be ahead of the curve.”

Introduction:

The demographic, economic, and political landscapes for Vermont's schools have experienced substantial alteration over the past decade. There has been an increase in the overall population in Vermont but with a steady decline in the number of students in most of our schools. The number of full time equivalent public school students in Vermont has dropped to under 90,000 in October, 2010. The cost of fossil fuels, electricity, contracted services, transportation, health insurance premiums, paper products, technology equipment and other areas necessary for school operations have increased exponentially. In addition, school costs have also been impacted by both state and federal departments of education and legislators who have imposed numerous policy decisions, standards and accountability measures beyond what has ever been experienced in the history of Vermont education. Schools have been dealt responsibility for many services to students, families and society that go beyond academics. These initiatives have been needed and are being accepted by Vermont School Districts. At the same time, it is important to connect these areas to the agenda calling for both effectiveness and efficiency.

Finally, the current economic conditions of the United States and world create an urgency to act on all possibilities to enhance excellence, effectiveness and efficiency in every Vermont school. There is a call for new content and new ways for educating our populations of all ages. All of this requires that State public policy makers and local school boards look carefully at how the delivery of education is structured and to measure its effectiveness.

The purpose of this report is to provide base-line data and explore options that will enable the Middlesex and Worcester School Boards to make informed governance policy decisions that will map the future of the member schools. In addition, the content of this report will prepare board members and administrators with some information regarding possible state-wide restructuring of schools that is currently being framed by the work of groups such as:

- The State Board of Education's Re-Governance Committee
- 2010 Proposed Legislation (2 bills are currently in the general assembly) on School Governance and Related Initiatives
- The Legislative Committee on the Financing and Effectiveness of the VT Education System for the 21st Century
- State Board of Education 2009-14 Strategic Planning and Transformation Goals
- State of Vermont Department of Education Policy Direction to streamline how education is delivered reduce costs.
- Other State, local administration and agency initiatives.

To this end, the research will generate data specific to areas of school district staffing, enrollment trends, school budgets, costs per pupil, tax impact, facility space and needs, district debt and assets, and applicable State laws impacting education governance. This report is intended to provide information that will lead to values and vision-based decision making around options that will result in excellence, efficiency and effectiveness in operating schools and delivering quality learning opportunities that result in excellent student performance.

If Middlesex and Worcester desire to formally pursue the formation of a formal union school district, a comprehensive study would have to be initiated and completed in accordance with Vermont State Statutes Title 16, Sections 701 through 706, recently revised in the 2008 Legislative Session. The contents of this report should help to inform and expedite the work of the subsequent study if pursued.

Credits:

Appreciation is extended to WCSU administrators, school principals and staff for their cooperation and assistance. All of these people were instrumental in enabling the collection of data needed to inform this study. I also want to recognize these people, along with Middlesex and Worcester school board members, who provided key information about current conditions, hopes and visions for the future, and collaborative initiatives already in place for Doty and Rumney schools.

Recognition is also extended to the two school boards and administration for being proactive in preparing for the future of its school districts. Their commitment for sustaining quality education in the most efficient manner possible is transparent. The data collected in this report reveals that this work is very timely and necessary.

Executive Summary of General Findings:

Public policy decisions on how Vermont schools should be governed are very complex. There are many variables that must be considered when contemplating action to re-structure schools.

- First, governance of public schools must be a means to improving the quality of education for all students and not an end in itself. Governance is not a result but rather a means to greater productivity.
- Second, structures for delivering education need to be considered in light of values and beliefs such as those stated in the Preface of this Report.
- Third, governance needs to consider intended and unintended consequences on communities and Vermont heritage.
- Fourth, the direction of governance needs to address efficiency and the wisest use of limited resources including finances, structures, technology and people. However, it is most important that this work be examined with the entire system in mind and must focus on how to best achieve goals regarding learning and instruction. In other words, decisions regarding how to govern Vermont schools must be driven by core values and what is considered best for the entire system and all students across all schools.
- Fifth, governance is about public policy needed for the future. Therefore, analysis of this study must explore answers to questions like:
 - How can school communities best insure quality education and learning in the face of declining enrollments and diminishing resources?
 - How can school districts maximize use of school facilities and structures?
 - What governance structure will best enable collaborative efforts among schools?
 - How can we insure equity for all learners?
 - Can school governance structures positively influence equity for students, parents, tax payers and community members?
 - How will schools be most capable of prospering in a global community?
 - How can school communities reach and sustain relevance and success in technology and electronic communications?

The following 11 general findings/options are based on data and specific findings included in the full text of this report. The specific findings are detailed in Areas 1 through 10. In addition, there are numerous appendixes that provided foundation information. Therefore, it is important to read all of the materials provided here-in. At the same time, the following executive summary of general findings is intended to capture the most salient points and provide the reader a quick reference point for future deliberation and decision making.

GENERAL FINDING #1: DECLINING STUDENT POPULATION

The number of public school students in Vermont has steadily declined over the past decade to a point where the current number of pupils is below ninety thousand. This represents a decrease of approximately twelve thousand public school students.

Rumney Memorial School Enrollment

Trends in the Rumney Memorial School enrollments for grades K through 6 have countered the pattern of decreasing number of students in most Vermont schools. Middlesex has seen an actual increase in the number of K-6 students (10 students) from 2006 through 2010. These numbers translate to an increase of 7.69%. The results of the Cohort Survival Population Projection reveal that the Rumney Memorial school population will continue to increase for at least the next four years. It appears that the number of pre-school children has consistently increased from the mid-teens to over thirty. The number of pre-K students moving into the primary grades appears to be the cause for the increased enrollment. The estimated student

enrollment for Rumney in FY 2013 is set projected at 166. The Rumney Memorial School also has approximately 4 Essential Early Education students in attendance. Therefore, the total number of anticipated pupils for FY 2013 is 170.

Data on student enrolments reported by the Vermont Department of Education helps to validate trends portrayed in the previous paragraph. This D.O.E. statistics reveal that the Rumney Memorial School has reported annual enrolment that was 137 in 2005 and 164 in 2009. The annual increase in school enrollment for Middlesex was 4.60%. However, it is important to note that the projected enrollment for Rumney will bring it back to where it was in the late 1990's and 2000. In FY 2000 the Rumney Memorial School reported 178 pupils.

Doty Memorial School Student Population

The Doty Memorial School's history of student population trends is more similar to what has happened in schools across Vermont. Doty has lost approximately 1.59% per year of its student population from 2000 through 2009. The Doty Memorial School Pre-K – 6 enrollment was 82 in FY 2000 and dropped to 71 in 2009 .

The actual number of K-6 students attending the Doty Memorial School has ranged from 69 to 62 from 2006 through 2010. The population projection estimates that the number of students at Doty will continue to trend at about 65 to 69 students. The Worcester Pre-K student population has averaged about 11 per year. Therefore, the total number of students attending Doty Memorial School is approximately 80.

The Average Daily Membership (ADM) of students for each school is tracked annually by the Vermont D.O.E. Analysis of Worcester's ADM reveals that from 2003 to 2010 the average for Doty Memorial Elementary School has gone from 78.53 to 74.18 students. At the same time, the ADM at the secondary level (7-12) has dropped from 89.37 to 73.06 (-22.41%). ADM data shows that the annual decrease in the number of elementary students at Doty has leveled off at about -.08%/year. Worcester's number of secondary students has dropped off at 3.20% per year. The number of Pre-k- 12 students has dropped by 20.66 from 2003 to 2010 (-12.31%).

Combined Student Population for Doty and Rumney Memorial Schools

Trends for increasing student population in Middlesex have been faster than the decrease in the number of students in Worcester. Therefore, the estimated population for the combined schools shows a yearly increase of about 4%. The number of K-6 students for a combined school district made up of these two communities would be 207 in 2010 and is estimated to be 233 in 2013.

The ADM count for Middlesex has seen a very different pattern from Worcester. The elementary ADM count for Rumney Memorial has increased by 13.01% from 2002 to 2010. The yearly average percentage increase for the elementary grades was 1.86%. The secondary ADM count has been almost the same with 145.93 students in 2003 and 145.93 in 2010. The overall increase in ADM for Middlesex from 2003 to 2010 was 7.5% or 22.40 students. The increase is almost all at the elementary school level.

GENERAL FINDING #2: COMMUNITY PROFILES/DEMOGRAPHICS

The data reveals that while Vermont’s student population has declined, the total census of Vermont residents has increased from about 580,000 to over 650,000 during the same period of time. The number of Vermont homes with children in school has become significantly fewer (only 15 to 20 %). School and community demographics are much different now than they were even ten to fifteen years ago. School and community relationships are shifting as the majority of our population advance to more senior status. Both Middlesex and Worcester are exceptions to this state-wide trend for community census but for different reasons. The following description reveals this difference.

Community Populations (2000 and 2008)

Worcester had fewer citizens in 2008 than in 2000. This is a very different phenomenon than that of the majority of Vermont communities who have experienced approximately one half to one percent growth per year during this same span of time. Worcester’s community population dropped from 902 in 2000 to 860 in 2008 or -4.7%.

Middlesex has experienced an increase of 8.3% in community population during this same span of time. The Middlesex population in 2000 was 1,729 and increased to 1,872 in 2008. This increase in total community population for Middlesex is very close to Vermont’s statewide average.

The following chart further explains differences in populations for these two communities. The most significant indicators to look at for this study are the differences in numbers of citizens in the age ranges of 0 to 18, 65 and older and the two areas focused on percentages related to married with and without children. The somewhat younger population in Middlesex appears to be producing more school aged pupils while the more elderly population in Worcester is producing fewer children.

Community Age Distribution by Percent of Total (2000 and 2008)

Percentage of Total Population	Middlesex	Worcester
	2000 2008	2000 2008
0 to 18	26.5% 26.05%	26.4% 22.59%
18 to 24	6.4% 8.11%	6.8% 8.20%
24 to 44	30.5% 28.33%	28.8% 25.45%
45 to 64	29.7% 34.92%	31.6% 34.24%
65 and older	6.8% 7.63%	6.4% 9.52%
Married with Children	28.61%	24.32%
Married with No Children	30.87%	35.33%
Single with Children	8.13%	9.94%

Area 2 B: Household and Per Capita Income

The annual household income for Middlesex was \$51,765 in 2000 and climbed to \$66,352 in 2008. The average annual household income for all of Vermont was \$52,104. Worcester's average household income in 2000 was \$39,732 and \$50,928 in 2008. There was also a difference in the 2008 per capital income with Middlesex averaging \$31,521 while Worcester was at \$27,037.

Area 2 C: Household Property Values

Vermont has realized significant increases in the value of properties over the past decade. These two communities are no exception. The mean prices for all housing units in 2008 for Middlesex and Worcester respectively were \$223,793 (+92% from 2000) and \$205,252 (+105% from 2000). The average household value in Middlesex in 2000 was \$116,600 and Worcester had an average value of \$100,200. Communities across Vermont experienced an average increase in property values of approximately 93%.

Summary: Middlesex and Worcester Community Profiles

Data Area	Middlesex	Worcester	VT
2000 Pop.	1,729	902	608,836
2008 Pop.	1,872	860	
% Change in Pop.	+8.27%	-4.88%	
Median Household Income	\$66,352	\$50,928	\$52,104
Per Capita Income	\$31,521	\$27,037	
Residents in Poverty	5.9%	8.5%	9.4%
Median Age	38.6	38.2	37.7
Average Household Size	2.55	2.6	2.4
Median House Value	\$223,793	\$192,316	\$214,700
Median House Value 2000	\$116,600	\$100,200	
% White	97.3%	96.9%	
% Other	2.7%	3.1%	
High School or Higher	90.9%	87.3%	
BA or Higher	41.6%	33.4%	
Graduate Degree	16.8%	15.3%	

Diversity:

Diversity in communities is usually measured in terms of wealth, poverty, property, age and race. Statistical information collected in this study reveals that there are important indicators of diversity among the school districts included in this review.

FIRST, there are significant differences in median household income and home values. Middlesex has a median household income that is approximately \$16,000 higher than Worcester and \$14,000 higher than the average for all of Vermont. At the same time, Worcester's median household income is approximately \$2,000 lower than State average. The average value of homes in Middlesex is \$31,477 higher than the average value of homes in Worcester.

SECOND, there is diversity in the percentage of community members who are in poverty. It is worthy to note that both communities have poverty levels that are lower than the State average that is at 9.4%. However, Worcester's poverty level is 2.6% higher than Middlesex.

THIRD, there is some diversity in the distribution of ages across the various towns. Worcester has higher numbers of upper age citizens and has a lower percentage of married people with children. It is interesting to note that while the previous statement is obvious the number of people per household in Worcester is higher than the number in Middlesex. This would indicate that homes in Worcester have more adults while homes in Middlesex have more children.

FOURTH, Middlebury and Worcester are very close in numbers pertaining to race and follow patterns similar to most Vermont communities.

FIFTH, there are differences between the two communities regarding percentage of citizens who have engaged at all three levels of post secondary education.

GENERAL FINDING #3: STRUCTURES FOR DELIVERING EDUCATION

Worcester is one of thirty schools that have less than 100 students, operate K-6 schools and belong to a union middle/high school. There are a total of 87 schools in Vermont that have less than 100 pupils. The following bulleted items reveal the education structures currently in place for this group of schools. 34.87% of these 87 schools operate elementary school and belong to a union high school.

- 14 Do Not Operate Schools and Tuition All Students
- 2 Operate Elementary School and Designate High School
- 5 Operate Elementary and Tuition High School
- 30 Operate Elementary and Belong to a Union or Joint High School
- 9 Belong to a Union or Joint Elementary and Tuition High School
- 13 Do Not Operate Elementary but Belong to a Union High School
- 4 Do not Operate an Elementary School but Belong to a Union High School
- 9 Gores or Unorganized Town
- 1 Union Elementary School Districts

These 30 schools (operate elementary and belong to a union high school) average 65 students and have an average budget cost per equalized pupil of \$16,509. The average education spending per equalized pupil for these schools equals \$12,818. The average budget and education spending levels across the State of Vermont for all school structures with less than 100 students are \$15,680 and \$12,303 respectively.

Worcester’s budget spending per equalized pupil (65.32) is \$16,662 in 2010. Education spending per pupil in this same year is \$13,880.

The Rumney Memorial School District is among 66 in Vermont that operate elementary educational facilities and belong to a union high school that have a range of students between 100 and 500. The average size for these 66 schools is 193 pupils. Rumney is very near to the average size. The Rumney Memorial School’s budget cost per pupil in 2010 is \$13,035 and its education cost per pupil is \$8,544. Information in the following paragraph reveals that the Rumney Memorial School district has considerably lower budget and education costs per pupil than the average in their cohort group.

There are a total of 147 Vermont schools that have student populations of between 100 and 500 pupils. 44.90% of these schools operate their own elementary schools and belong to a union high school. The average budget cost per equalized pupils for the 66 elementary schools is \$15,506. The education cost per equalized pupil averages \$12,170.

Vermont Has the Following Variety of Structures for Delivery of Education in 289 School Districts:

- 16 Do Not Operate Schools and Tuition All Students
- 8 Operate Elementary School and Designate High School
- 30 Operate K -12
- 45 Operate Elementary and Tuition High School
- 109 Operate Elementary and Belong to a Union or Joint High School
- 14 Belong to a Union or Joint Elementary and Tuition High School
- 13 Do Not Operate Elementary but Belong to a Union High School
- 9 Gores or Unorganized Towns
- 28 Union High School Districts
- 8 Union Elementary School Districts
- 5 Unified Union School Districts

GENERAL FINDING #4: SCHOOL FACILITIES

The Doty Memorial School has 17,997 square feet of space. The original school included 13,373 square feet and the addition added another 4,624 square feet. The “as-built” blueprint states that this was a “non-expansion project”. This matter would have to be looked into further if another addition to the Doty Memorial School were to be considered. The break down of space at Doty expressed in square feet is as follows:

Room	Square Footage
Art and Music	1,000
Gym and Multi-Purpose Room	3,984
Library/Media Center	1,000
K Classroom	1,004
Grade 1	855
Grade 2	855
Grade 3	838
Grade 4	838
Grade 5	812
Grade 6	812
Pre-school	855
Remediation Room	855
Total classroom space	13,708

The Rumney Memorial School “as-built” prints indicate that there are a total of 21,904 square feet of space available. In addition, there is a storage unit of 864 square feet. The type of space available is:

Room	Square Footage
Library/ Media	1,663
Nurse/Health	110
Guidance	156
Administration	808
Work Room	156
Staff Room	79
Kitchen	516
11 Classrooms	9,900
Gymnasium	5,200
Other learning spaces	850
Total	19,438

The amount of space needed for schools has substantially increased in recent years. Factors that have driven the trend for expanded school space include: new research based teaching methods, use of technology for teaching and learning, requirements for health and physical activities, amount of support services and mainstreaming special education students. The current maximum square feet per pupil allowed by the Vermont Department of Education for construction aide varies by grade levels housed in schools. Construction projects may apply smaller square footage if they desire as long as they comply with Vermont’s Minimum Standards. The maximum square foot regulations have been applied in this analysis to insure adequate space for any option that may be considered. They are as follows:

- 140 square feet for elementary pupils
- 160 square feet for middle level pupils
- 180 square feet for high school students.

Applying the maximum square footage to the existing facilities reveals that the Doty Memorial School currently has room for an additional 47pupils. On the other hand, the Rumney Memorial School is already beyond capacity by 15 students. Therefore, neither school by itself has enough space available to properly house students from both communities. New construction would have to occur as an addition to one of the existing schools or on a new site if the decision called for just one facility to house the combined student enrollment. Otherwise, there is ample space if both school facilities were to be shared and revised grade configurations were applied to maximize utilization of teaching and learning space. There would be ample space available to house the combined enrollment from these two communities.

Playgrounds, parking areas and athletic fields appear to be adequate at both schools to accommodate sharing of facilities. Water and septic systems are assumed to be adequate to house students with the collaborative plan. However, they will need to be analyzed deeper by qualified agents.

Summary of School Space

School	Total Current Square Feet	Per Student Maximum (Allowable For State Aide)	Capacity	Current Enrollment 2010	Difference	Highest Enrollment
Rumney Memorial School	21,904	Grades K-6 = 140 Sq. Ft.	156	140 + 31 Pre-K = 171	(15)	
Doty Memorial School	17,997	Grades K-6 = 140 Sq. Ft.	126	67 + 12 = 79	+47	
Combined Schools Using Both	39,901	285	282	250	+35	
One School for All Students (Rumney)	21,904 +13,096 (new construction) =35,000	Grades K-6 =140 Sq.Ft.	250	250	0	

This study did not include an analysis of structural, health, safety or energy use issues that may be related to either school. Therefore, depending on future direction, a more thorough analysis of these areas may be desired. If so, a qualified engineer should be involved. A few people spoke about the possibilities that both facilities might be in need upgraded in specific areas.

GENERAL FINDING #5: SPENDING PER PUPIL

The State of Vermont uses a variety of formulas (11) for calculating costs per pupil. This study has applied the three most common current formulas for per pupil calculating and comparing cost per pupil across school districts. The formulas are:

- Current cost per Full Time Equivalent Student (FTE) used by the State in determining cost effectiveness
- Gross Budget costs per Equalized Pupil that is used to compare the total budget expenditures by school to all other schools
- Education Spending per Equalized Pupil that is applied in determining “threshold spending” and distribution of Vermont education tax dollars

Note: There are specific findings for all three of these areas in the text of the report. See pages 18 to 22.

The State average current cost per pupil (no special education costs or tuition) was \$11,266 for FY 2009. The average current cost per pupil for the 19 schools used for comparison for Worcester and that operate K-6 and belong to a union high school was \$11,586. This was \$320 higher than the State average. Worcester’s current expense per pupil (\$12,369) was higher than the 19 school average by \$783 and \$1,103 over the average for all Vermont schools.

The Rumney Memorial School was compared with 31 schools of comparable size. The current cost per pupil at Rumney was lower than State average and also lower than the other schools in its classification. The current cost per pupil for Rumney was \$10,753. This cost is also \$1,616 lower than that experienced at the Doty Memorial School.

GENERAL FINDING #6: ASSETS AND OBLIGATIONS

Formal procedures for merging school districts call for articulation of how the new entity will handle assets and obligations belonging to each member school district. Area 6 on page 26 reveals details important to this issue and will need to be reviewed and updated carefully when attempting any consolidation. Some of the questions that these data suggest are:

- Will long term debts for Doty and Rumney, \$71,352 and \$127,993 respectively, be assumed by the new entity or will each school district retain their own debt?
- How will material assets for building and equipment be determined? Will you use insurance values, depreciated audited values, current market values or other determinations? For example, Rumney's property cost value was \$1,119,709, its depreciated value is \$536,454 and its insurance replacement value for buildings and content is \$3,234,444. Will the replacement value be applied to the merger or would it be better to use current appraised value or even depreciated value?
- How will equipment and other contents owned by each district be handled?
- How will current leases and contracts be honored?

GENERAL FINDING #7: WCSU SERVICES AND OPERATIONS

Comparative data for WCSU and seven other supervisory unions with student populations between 1,400 and 2,000 reveal that this supervisory union has historically made tremendous gains in consolidating many services provided to member school districts. Evidence of these efforts include, but are not limited to, the following: common school board policies, consolidated negotiations and master agreements, centralized fiscal services, coordinated curriculum and education programs, planned technology, data collection and analysis, human resources services, student assessment instruments and procedures, consolidated grants and special education. There have been significant accomplishments in establishing coordination of academic areas of study. This level of system wide continuity for curriculum, educational program offerings and assessment is notable among Vermont schools.

There has also been success in coordinating Supervisory Union professional development for teachers and staff. These efforts, although still a work in progress, are reported to have increased effectiveness and efficiency in providing continuous professional development across schools. Teachers across schools as well as from grade to grade collaboratively learn together, share expertise and generally develop as a coordinated learning organization. There is still need to enhance the coordination of professional development at the secondary level.

The mean expense per Average Daily Membership (ADM) of students reveals a cost of \$659/pupil for Worcester and \$734/pupil for Middlesex. The options offered in this Report will not alter the WCSU structure. However, if the Doty and Rumney Schools form a Union School District the assessment of central office costs would have to be recalculated and there would be one cost/ADM for the Union School. The current system for assessing school districts for S.U. services results in a per pupil cost of \$659 for Doty and \$734 for Rumney. The Union cost per pupil would be based on 13.17% of the total number of WCSU students or \$627.

no construction

GENERAL FINDING #8: SUMMARY OF OPTIONS

Impact of Various Options on Budget Costs per Pupil by School District

School District	Status Quo	Middlesex and Worcester Union Elementary School Pre-K-6	Middlesex and Worcester Joint Contract School District	Middlesex and Worcester Collaborative Agreement	Union School With New Construction
Worcester	\$13,777	\$11,842 + \$954 Small Schools = \$2,796 (11,777)	\$11,902 +\$954= \$12,854	\$12,162 Small schools grant not lost	\$12,802 +\$960 = \$13,762
Middlesex	\$11,690	\$11,842	\$11,902	\$11,951	\$12,802

Worcester's small school grant was adjusted by the VT D.O.E. to \$82,989

\$12,319 = the avg. of these 2 #s

Note: The following paragraphs explain some of the variables that apply to all options pertaining to the formation of union schools. Please apply this information to all three scenarios in this report that suggest consideration for forming union schools.

Merger:

The staffing patterns proposed for the Union and Collaborative elementary school options assume that the current subjects and programs offered by present separate schools would be available to all students in the merger option. Staffing also applies approximations of the guidelines for ratios of students to classroom and special subjects/services provided by the Vermont Quality Standards. The number of special subjects teachers also use the VT Quality Standards but are difficult to adhere to because of the smaller number of students even in the merged school districts. In any case, you will note that in some cases the number of special subject teachers and staff are increased and in others the number is reduced. However, the total number of FTE staff members in all three options is lower than under the current structures.

Budget for special education include a substantial reduction in the number of para-educators. The rationale for this reduction is based on these students being integrated into one school so that cooperative efforts and sharing are made easier. The lower number of aides is also driven by the specific areas of need identified for the population of special education students.

A merger would not require establishing a new master contract for teachers but there would be a need to meld the support staff contracts. This proposal is assuming no changes in salaries except for added or deleted positions. An average of current staff salaries for the schools considered for merger have been used in estimating salaries for added and deleted positions in the proposed budget.

The Doty Memorial School currently receives a small school grant in the amount of \$75,371. This grant would be lost due to the increase in the number of students that would be realized in the merged school district. All budgets for options considered in this report have been adjusted accordingly.

GENERAL FINDING #9: FORMATION OF UNION ELEMENTARY SCHOOL

If Middlesex and Worcester elect to merge into a formal union school district they would have to do so in accordance with Title 16, Section 701 through 721. If the union is formed there would be one school board proportioned in accordance with a census of community populations. The school would be governed by this board and there would be a single budget. This budget would be voted on by the two communities and the ballots would be co-mingled. There would also be one cost per pupil for the two member districts and all operations would be under the direction of this union school board. This option, if a stand alone initiative, would reduce the number of school boards within the WCSU by one.

GENERAL FINDING #10: JOINT CONTRACT DISTRICTS

Vermont Law includes provisions for the formation of Joint Contract School Districts whereby two or more school districts may enter into a contract similar to a corporate agreement for operating one or more schools. Under this provision, members from local school districts are elected to the Joint Contract Board and sit on the governance board. The Joint Board employs teachers and staff, sets programs and curriculum, develops its budget and sets policy for governing the school. Community school boards are still elected by their community and school districts continue to hold annual meetings and vote their portion of the budget. This option may be of interest as an alternative to any of the union proposals because it allows for greater flexibility in what is included in the contract, conditions of agreement and also offers greater opportunities in what is sustained at the local school district level. The Joint Contract School District appears to be somewhat easier to enter into than the formal unions. It also appears to be easier to dissolve joint contracts if the need or desire presents itself in future years.

GENERAL FINDING #11: TITLE I GRANT FUNDS

(Calculated by VT DOE March 2010)

Unifications or mergers can impact the eligibility of specific school districts regarding Federal Title I Funds. Eligibility for these funds is dependent upon the level of poverty in each school governance structure. At the present time the Title I poverty levels for WCSU schools are:

- Worcester = 30.99%
- Rumney = 21.34%
- WCSU all Schools = 23%
- Worcester and Rumney Union = 24.25%

The Vermont Department of Education for Title I calculated the eligibility factors for the union option and found that the union would be eligible for Title I because it would still meet the threshold for eligibility. No Title I funds would be lost because of the mergers.

Specific Findings

by Research Area

AREA 1: STUDENT ENROLLMENTS

Area 1 A: Population Projections

Schools in WCSU did use informal single year student population projections at the time of this Phase 1 Study. However, historical enrollment data was collected for each school to be used in estimating multi-year student enrollments for each of the schools. The "Cohort Survival Method" was applied for creating these projections. The basis for Cohort Survival population projections rests in probability whereby past trends in mathematical data apply to equally likely outcomes. Larger population numbers improves probability. The total number of children in small schools can be significantly skewed by just one family and/or one class. This makes projecting future student populations for very small schools challenging. However, applying the "Cohort Survival Method" for projecting future numbers of students can provide viable data and indicators for short term planning of five years or less. This study also included statistical data collected from the Vermont Department of Education pertaining to school enrollments, average daily membership (ADM) and Equalized Pupil Counts in order to validate past trends and to assist in determining factors to be used in estimating future numbers of students. (See attachments: Population Projections, Research Article on Cohort Survival and School Enrollment Data).

Area 1 B: Summary of Average Daily Membership

Average Daily PK-12 Membership for each of the Schools in ACSU includes resident and state placed students only. The count is taken in each school on the 40th day of the school year and reported to the State Department of Education. ADM is the number of resident children plus the state placed students. The information below is from the Vermont Department of Education ADM Annual Reports.

School	FY 2010	FY 2009	FY 2008	FY 2007	FY 2006	FY 2005
Worcester School District K-12	El.= 74.18 Sec. = 73.06 Total = 147.24	Total= 153.71	Total= 156.09	El.= 74.25 Sec.=85.72 Total= 159.47	Total= 161.08	El.= 78.53 Sec.= 89.37 Total= 167.90
Middlesex	El.=177.88 Sec.= 1148.13 Total= 321.31	Total= 313.58	Total= 309.30	El.= 144.71 Sec.= 146.19 Total= 290.90	Total= 285.54	El.= 152.98 Sec.= 145.93 Total= 298.91

School District 2010	Pre-K	EEE
Doty Memorial	12	1
Rumney	31	4
Total	43	5

Area 1 C: Home Schooled Students and Students Attending Private School

Vermont allows students to be schooled at home if a proposal for a program of studies has been submitted and approved by the State Department of Education. Although public school districts need to cooperate and assist with some aspects of home schooling if requested to do so these students are not included in the schools Average Daily Membership (ADM) and are not included in the Act 68/Act 130 number of Equalized Pupils. In addition, students attending private schools are not counted in public school enrollments. Therefore, the number of home and private schooled students serves to reduce the number of students at each grade level as well as to lower the number of equalized pupils used for determining the amount of Act 68 funding. This variable is especially important in Worcester where the district is trying to sustain economy of scale for effectiveness, control of per pupil expenditures and generating income. Worcester has 4 children who are home schooled and 10 who attend private schools in FY 2010. Middlesex has 5 home schooled and 8 private schooled children. The total number of students for both communities that are either home or private schooled equals 27. There are no tuition students from either community that are attending other schools.

Private Schools Include:

- Orchard School, North Montpelier
- River Rock, Montpelier
- Combined St. Monica's and St. Michael's, Barre
- Central Vermont Academy, Berlin
- Turtle Island, Montpelier

AREA 2: COMPARATIVE DATA BY SCHOOL TYPE

Comparative Data for Schools with Similar Pupil Enrollments

Source: FY 2009 Current Expenditures Per Full Time Equivalent Pupil
(FY 2010 Vermont Department of Education Cost Effectiveness Report)

Area 2 A: Expense Comparison

Comparison of current expenses for elementary schools within the WCSU using the 2010 D.O.E. Report on Comparative Current Costs per Full Time Equivalent Student (FTE).

	FTE Cost/Pupil	Amount +/- Cohort Average
Berlin	\$9,767	(\$854)
Calais	\$10,901	+\$250
Doty	\$12,369	+\$1,718
East Montpelier	\$ 9,466	(\$1,185)
Rumney	\$10,753	+\$102
Average	\$10,651	-----

Area 2 B: Full Time Equivalent Students (FTE) and Current Expenses
for School With 50 to 100 Students (Using the D.O.E. 2010 Report on Cost Effectiveness)

K-6 School District with Enrollments of 50 to 100 Students that Belong to a Union High School District	Student PK-6 FTE (does not include standing union grade 5)	Current Expense per <6 Pupil without Special Education and Outlying Tuition Expense
Sherburne	88.02	\$12,629
Waterville	84.60	\$10,829
Leister	58.40	\$14,345
Shoreham	88.26	\$14,030
Mt. Holly	91.15	\$12,233
Salisbury	94.58	\$14,548
Ripton	51.98	\$13,480
Pomfret	79.83	\$11,741
Worcester	74.75	\$12,369
Cornwall	90.83	\$11,226
Weybridge		\$10,984
Holland	64.78	\$ 9,003
Brookfield		\$14,288
Bridport	96.30	\$13,092
Townshend	96.76	\$10,055
Woodbury	50.00	\$14,920
Jamaica	82.62	\$11,222
Shrewsbury	76.00	\$10,876
Bridport	58.51	\$11,200
Average (19 schools)		\$12,265
Average of 51 VT School Districts with < 100 PK-6 Students		\$11,586
Average for all VT School Districts		\$11,266

Area 2 C : Full Time Equivalent Students and Current Expenses for School with Between 100 and 200 Students

(2010 D.O.E. Report)

K-6 School District with Enrollments of 100 and <200 Students	Student PK-5 FTE (does not include outgoing tuition students)	Current Expense per K-5 Pupil (without Special Education and Outgoing Tuition Payments)
Mettawee UESD	188.86	\$10,460
Ferrisburgh	196.85	\$12,155
Vernon	170.53	\$14,275
Woodstock	178.95	\$13,390
Monkton	175.09	\$10,610
Wilmington	170.54	\$10,643
Waitsfield	135.18	\$11,858
Newbury	146.23	\$11,858
Moretown	135.61	\$11,163
Wallingford	149.62	\$13,062
Middlesex	140.87	\$10,753
N. Bennington	140.61	\$10,698
New Haven	129.26	\$12,250
Starksboro	142.86	\$12,937
Warren	158.79	\$9,260
Underhill Town	134.00	\$10,244
Wolcott	142.82	\$10,952
Franklin	117.77	\$8,448
Newfane	114.32	\$10,192
Addison	122.44	\$13,234
Eden	124.88	\$13,392
Lincoln	119.58	\$11,867
Ludlow	125.64	\$17,034
Calais	125.54	\$10,901
Huntington	130.07	\$9,826
Currier Memorial	117.73	\$9,901
Newport Town	114.74	\$11,971
Cavendish	130.48	\$10,156
Fletcher	102.40	\$12,218
Whitingham	110.84	\$11,131
Fayston	109.65	\$11,939
Average of 31 VT School Districts with >100 and <200 Elem. Students		\$11,586
Average for all VT School Districts		\$11,266

Area 2 D: Comparison of Budget and Education Spending in Elementary Schools With Less Than 100 Students

School District Operating PK-6 Elementary School & Belong To A Union High School	Number of Equalized Pupils < 100	2010 Budget Spending Per Equalized Pupil	2010 Education Spending Per Equalized Pupil	Equalized Tax Rate
Sherburne	60.19	\$23,273	\$14,198	\$1.4292
Waterville	59.24	\$21,816	\$12,873	\$1.2957
Leister	60.12	\$17,442	\$13,730	\$1.3820
Shoreham	87.30	\$16,686	\$14,306	\$1.4561
Mr. Holly	96.80	\$16,649	\$13,025	\$1.3110
Salisbury	91.63	\$16,155	\$13,711	\$1.3801
Ripton	46.86	\$17,293	\$14,186	\$1.4279
Pomfret	74.65	\$16,345	\$13,696	\$1.3786
Worcester	65.32	\$16,662	\$13,880	\$1.3971
Cornwall	86.32	\$15,259	\$12,658	\$1.2741
Weybridge	76.11	\$16,654	\$13,195	\$1.3281
Holland	66.02	\$15,132	\$9,361	\$0.9422
Brookfield	85.91	\$15,950	\$13,156	\$1.3243
Bridport	88.83	\$14,989	\$12,400	\$1.2481
Townshend	88.65	\$15,255	\$12,450	\$1.2532
Woodbury	54.12	\$16,641	\$13,860	\$1.2254
Jamaica	73.40	\$15,518	\$11,852	\$1.1949
Shrewsbury	75.61	\$13,554	\$11,290	\$1.1364
Bridgewater	57.53	\$14,467	\$10,594	\$1.0664
Average of 19 VT School Districts with < 100 PK-6 Students		\$16,179	\$12,864	\$1.2869
Average for 4 Unified Union School Districts		\$13,869	\$11,198	
Average for schools that belong to a joint or union elementary school and tuition high school		\$13,934	\$11,185	\$1.2705

AREA 3: ACT 68 AND ACT 130 DATA

Area 3 A: Comparison of Budget and Education Spending in Schools Between 100 and 200 Students

School District Operating PK-6 Elementary School & Belong To A Union High School	Number of Equalized Pupils (100 to 200)	2010 Budget Spending Per Equalized Pupil	2010 Education Spending Per Equalized Pupil	Equalized Tax Rate
Ferrisburgh	195.33	\$14,635	\$12,557	\$1.2640
Woodstock	187.40	\$16,905	\$13,202	\$1.3289
Monkton	170.02	\$14,388	\$12,185	\$1.2264
Waitsfield	133.35	\$16,223	\$13,309	\$1.3396
Newbury	133.26	\$16,366	\$12,762	\$1.2846
Moretown	121.74	\$17,910	\$13,990	\$1.4081
Wallingford	132.36	\$16,694	\$13,878	\$1.3969
Middlesex	134.01	\$14,917	\$13,060	\$1.3145
N. Bennington	137.55	\$14,720	\$12,961	\$1.3045
New Haven	118.07	\$16,231	\$13,472	\$1.3560
Starksboro	137.12	\$16,651	\$13,314	\$1.3401
Warren	122.88	\$15,379	\$12,347	\$1.2428
Underhill Town	129.72	\$15,081	\$12,598	\$1.2681
Franklin	122.73	\$11,928	\$9,855	\$0.9920
Newfane	104.51	\$15,443	\$10,848	\$1.0919
Addison	115.90	\$16,549	\$15,248	1.6620
Eden	118.70	\$20,526	\$13,752	\$1.3842
Lincoln	107.84	\$15,393	\$12,356	\$1.2437
Ludlow	136.54	\$18,189	\$13,547	\$1.3636
Calais	119.13	\$14,220	\$12,727	\$1.2810
Huntington	115.23	\$15,766	\$12,814	\$1.2898
Newport Town	155.63	\$15,974	\$13,048	\$1.3133
Cavendish	106.50	\$16,470	\$13,951	\$1.4042
Fayston	111.11	\$14,937	\$12,799	\$1.2883
Average for 24 schools >100 < 200	131.94	\$15,896	\$12,940	\$1.3079

Area 3 B: WCSU School Districts' Act 68 and Act 130 Comparative Data

Act 68 is Vermont's education funding law that provides categorical grants and the total amount of a school districts "education spending". Categorical grants include such areas as: special education, transportation, small schools, state placed students, essential early education and technical education. "Education spending" is the net result of a school districts gross budget minus revenues from specific funding sources. "Gross Budget Spending" incorporates the total dollars committed to supporting education in a particular school district without any deductions as specified in Education Spending. Gross Budget cost figures are most useful in displaying comparative cost per pupil data.

Education spending per pupil and gross budget per pupil are determined by applying the school district's "equalized pupil count". This is a weighted number of pupils in the school district calculated in accordance with criteria set by Act 68. Education spending and gross budget spending per pupil is one of the ways to compare cost effectiveness of various school districts. The charts on pages 23 and 24 track Act 68/Act 130 experiences for comparative school districts. It is important to note that Act 130 specifically treats union schools as school districts rather than to co-mingle expenditures for State funding purposes at the member school district level. The intent behind Act 130 was to more specifically assign expenditures to school entities and to alleviate unfairness to some school districts that resulted from the merging of the two budgets. Act 130 is also intended to cause each school district board to be responsible for their own budgets, expenditures, revenues and per pupil costs. The intent driving Act 130 was to "create a true measure of education costs that accurately portray expenses by specific school districts and renders responsibility for cost on the specific policy makers".

AREA 4: COST DRIVERS AND CENTERS

Area 4 A: Comparative Cost Centers and Cost Drivers

(Note: the most current summary of Annual Statistical Reports produced by the D.O.E. is dated February 2009. However, the variables by school remain mostly constant from year to year and therefore are reliable for analysis of school expenditures.)

These reports use Full Time Equivalent (FTE) Students to determine Current Expenses Per Pupil. FTE is determined by adding all student attendance days with absent days and dividing the sum by the total number of school calendar days.

Current Expenses do not include costs for tuition students or other assessment that would create mathematical duplications.

Worcester and Comparative Schools
(PK- 6 with less than 100 Students and Belong to a Union High School)

School and Current Exp./ Pupil	Instruction includes spec. ed. But not tuition	Pupil Support	Staff Support	General Adm.	School Adm.	Trans.	Other Support	Food Services
Sherburne \$13,292	60.63%	2.76%	4.24%	0.69%	9.28%	6.66%	11.51%	4.23%
Waterville \$12,509	51.80%	7.00%	2.37%	1.30%	13.31%	6.61%	13.71%	3.89%
Leicester \$12,877	64.71%	1.51%	4.55%	0.92%	8.82%	0.00%	16.25%	3.23%
Shoreham \$12,433	64.27%	0.02%	4.41%	1.46%	9.61%	10.78%	7.20%	2.25%
Mt Holly \$12,290	68.69%	2.10%	2.75%	0.41%	12.14%	5.48%	7.74%	0.78%
Barnard \$16,524	64.17%	3.68%	4.22%	0.86%	9.05%	6.37%	11.24	0.41%
Salisbury \$14,074	65.42%	0.00%	2.94%	1.02%	9.77%	5.90%	10.58%	4.37%
Ripton \$13,003	63.06%	21.01	4.60%	1.40%	9.44%	3.84%	11.86%	4.77%
Pomfret \$12,062	69.06%	3.41%	3.87%	0.49%	8.03%	2.54%	12.61%	0.00%
Worcester \$14,199	59.29%	3.11%	5.98%	0.58%	11.98%	3.00%	11.90%	4.17%
Cornwall \$14,028	63.56%	0.09%	4.85%	0.68%	11.08%	7.26%	7.46%	5.02%
Weybridge \$12,433	60.89%	3.69%	5.78%	0.82%	10.58%	5.63%	7.69%	4.92%
Holland \$12,621	62.43%	6.40%	3.07%	1.44%	9.62%	5.94%	9.58%	1.52%
Brookfield \$12,966	55.97%	6.87%	1.33%	4.55%	10.30%	7.40%	13.13%	0.45%
Bridport \$10,670	58.89%	3.28%	3.39%	1.18%	9.87%	9.31%	10.41%	3.66%
Townshend \$10,914	66.74%	3.41%	1.34%	2.14%	11.58%	1.93%	8.21%	4.66%
Woodbury \$15,798	47.74%	5.88%	2.39%	0.67%	14.98%	10.46%	12.99%	4.90%
Jamaica \$12,000	66.23%	0.22%	0.29%	1.68%	11.73%	5.44%	8.82%	5.59%
Shrewsbury \$11,196	64.16%	2.77%	2.08%	0.65%	10.55%	5.38%	11.88%	2.53%
Bridewater \$11,752	62.84%	2.72%	5.12%	1.00%	9.40%	3.61%	9.44%	5.85%
Average N=20 \$12,882								
Vermont	60.46%	7.61%	4.20%	2.44%	7.04%	3.57%	11.77%	2.81%

Area 4 B: Middlesex and Comparative Schools

(PK -6 with between 100 and 200 Students and Belong to a Union High School)

School	Instruction includes spec. ed. But not tuition	Pupil Support	Staff Support	General Adm.	School Adm.	Trans.	Other Support	Food Services
Ferrisburgh	59.38%	6.76%	1.41%	1.20%	6.36%	7.64%	11.07%	6.18%
Woodstock	59.32%	6.84%	4.10%	0.86%	5.33%	3.61%	16.73%	3.21%
Monkton	65.95%	2.72%	4.49%	1.03%	7.69%	6.33%	8.26 %	3.54%
Waitsfield	66.58%	12.41	0.00%	0.29%	7.86%	2.08%	10.76%	0.00%
Newbury	68.48%	7.22%	2.82%	0.71	5.64%	4.30%	7.46%	3.37%
Moretown	64.45%	9.82%	0.00%	0.82%	8.18%	0.00%	12.75%	6.98%
Wallingford	64.24%	6.17%	5.01%	0.51%	6.45%	2.37	12.90%	2.35%
Middlesex	59.93%	5.70%	5.06%	0.60%	7.96%	4.69%	12.74%	3.32%
N. Bennington	64.39%	8.09%	2.42%	2.17%	8.78%	0.36%	13.78%	0.01%
New Haven	59.90%	5.10%	6.60%	1.18%	8.03%	7.52%	8.31%	3.36%
Starksboro	58.87%	6.82%	5.80%	0.92%	6.45%	9.01%	8.31%	3.82%
Warren	64.24%	9.61%	0.00%	0.30%	8.12%	3.85%	9.81%	4.07%
Underhill Town	64.78%	2.95%	0.46%	1.10%	11.15%	0.00%	15.72%	3.83%
Franklin	52.04%	6.57%	4.23%	0.50%	10.80%	4.24%	15.39%	6.22%
Newfane	64.38%	6.73%	3.65%	1.61%	9.43%	6.54%	7.67%	0.00%
Addison	56.85%	7.74%	1.65%	0.78%	8.20%	6.90%	12.97%	4.90%
Eden	56.29%	13.07%	2.93%	1.47%	6.31%	5.68%	10.25%	3.99%
Lincoln	56.89%	5.33%	7.55%	1.15%	9.26%	7.80%	7.25%	4.76%
Ludlow	59.70%	5.00%	1.27%	0.48%	5.61%	0.09%	18.79%	9.08%
Calais	59.81%	2.37%	6.01%	0.56%	8.44%	5.21%	14.34%	3.26%
Newport Town	64.56%	6.14%	2.87%	0.43%	8.58%	8.28%	9.14%	0.00%
Cavendish	65.03%	4.19%	0.42%	0.78%	8.17%	3.44%	13.97%	4.01%
Fayston	61.45%	9.82%	0.00%	0.82%	8.18%	0.00%	12.75%	6.98%
Vermont Average	60.46%	7.61%	4.20%	2.44%	7.04%	3.57%	11.77%	2.81%

Area 4 C: 16 schools (2010 DOE data)

School	Student to Teacher ratio	FTE Enrollment	Total Teachers	Total School Administration Including Administrative Assistants	Para-ed	Average Teacher Salary
Sherburne	10.58:1	91	8.60	1.80	3.60	\$55,068
Waterville	11.52:1	91	7.90	2.00	5.00	\$38,140
Leister	9.52:1	59	6.20	1.57	1.57	\$52,115
Shoreham	8.87:1	86	9.70	2.00	5.60	\$50,842
Mt. Holly	10.09:1	107	10.06	2.00	3.50	\$52,505
Barnard	13.33:1	76	5.70	0.94	4.20	\$51,487
Salisbury	9.62:1	102	10.60	2.00	4.00	\$49,372
Ripton	9.79:1	46	4.70	1.50	4.70	\$49,781
Pomfret	9.65:1	82	8.50	0.80	2.90	\$52,679
Worcester	9.10:1	71	7.80	1.80	3.45	\$48,244
Cornwall	11.14:1	98	8.80	2.00	3.37	\$54,936
Weybridge	10.07:1	74	7.35	1.52	3.61	\$47,357
Holland	9.26:1	75	8.10	1.75	2.50	\$42,191
Brookfield	10.11:1	93	9.20	1.80	4.35	\$44,510
Bridport	9.41:1	96	10.02	2.00	7.60	\$41,439
Townshend	10.68:1	78	7.30	2.00	4.00	\$53,205
Woodbury	9.40:1	55	5.85	2.00	3.00	\$39,640
Jamaica	9.58:1	68	7.10	2.00	3.00	\$46,613
Shrewsbury	8.23:1	65	7.90	2.00	3.80	\$37,868
Bridewater	7.50:1	54	7.50	1.00	2.50	\$38,896
Average of 20 VT School Districts with < 100 PK-6 Students	9.87:1	78.35	7.94	1.72	3.57	\$47,344
State of Vermont	10.69	-	-	-	-	\$49,437

Area 4 D: Middlesex and Comparative Schools
2010 DOE Report 2009 Data

School	Student to Teacher ratio	Enrollment	Total FTE Teachers	Total School Administration and Admin. Assistants	Paraded	Average Teacher Salary
Woodstock	10.70	198	18.50	1.00	7.30	\$56,494
Monkton	10.94	180	16.45	1.00	17.70	\$53,122
Newbury	9.00	135	15.00	1.00	13.61	\$47,828
Moretown	11.17	141	12.62	1.00	10.75	\$52,923
Middlesex	13.25	164	12.38	1.00	9.90	\$46,127
N. Bennington	11.46	141	12.30	1.00	00	\$54,417
Starksboro	9.86	143	14.50	1.00	8.60	\$54,636
Warren	11.42	149	13.05	1.00	6.41	\$49,351
Underhill Town	15.22	137	9.00	1.00	3.01	\$55,279
Franklin	13.51	125	9.25	1.00	10.80	\$39,219
Addison	9.74	112	11.50	1.00	4.00	\$46,257
Eden	10.69	124	11.60	0.90	9.00	\$46,276
Lincoln	10.28	109	10.60	1.00	8.92	\$51,201
Ludlow	9.34	142	15.20	1.00	7.50	\$49,850
Calais	12.79	151	11.81	1.00	6.84	\$45,309
Newport Town	8.94	115	12.87	1.00	7.00	\$43,670
Cavendish	13.09	127	9.70	1.00	4.50	\$56,085
Fayston	12.50	141	11.28	1.00	5.90	\$44,338
Huntington	17.28	140	8.10	1.00	00	\$54,593
Average N=19	11.64:1	141	13.97	0.99	19.89	\$49,841
State of Vermont	10.69:1					\$49,437

AREA 5: WCSU CENTRAL ADMINISTRATION SERVICES
Area 5 A: Supervisory Union Data

Supervisory Union	# of FTE Students	Total FTE Staff	Total FTE Students to Total FTE Staff	Total S.U. Current Expenses for all Schools	Total Average Current Exp. Per Pupil (all schools)	Current Cost/ FTE Pupil for General Administration
Washington Central S.U.	1,649	330	5.00	\$23,478,462	\$14,238	\$228

Supervisory Union	Current Exp. for General Admin.	Current Cost/Pupil for General Admin.	# Of General Admin. Staff	# of School Based Admin. Staff	Central Support Staff
Washington Central S.U.	\$375,972	\$228	4.50	24.27	8.00

Area 5 B: School Districts Pay for Centralized Services (FY 2010)

Costs for the WCSU centralized services are paid for through **assessments** received from the 6 member school districts. The FY 2010 Central Office Services budget is \$1,004,987. Some of the major services provided by the WCSU are:

- Fiscal Services
- Education Leadership Services
- Curriculum, Instruction and Assessment Services
- Information/Technology Services
- Spec. Education Administrative Services
- Early Education
- General Administration
- School Board Communication Services
- Human Resources Services

School district assessments to pay for these services are calculated on the proportion of each school's Average Daily Membership (ADM) to the total ADM for the Supervisory Union.

Assessments for 2010 are based as follows:

WCSU School Assessment of Expenses

School	ADM	% of WCSU	Total Assessment	Cost per Pupil (ADM)
Berlin	209	13.00%	\$132,701	\$635
Calais	137	8.60%	\$93,430	\$682
East Montpelier	244	15.20 %	\$157,258	\$645
Middlesex	146	9.10 %	\$107,296	\$734
Worcester	65	4.00%	\$42,843	\$659
Union 32	802	50.00%	\$471,459	\$587
Total	1,602	100.00%	\$1,004,987	Ave. \$657

Note: variations in the cost per pupil for Central Services is due to different formulas related to the number of Pre-Kindergarten students.

Any reorganization of the member school districts would necessitate re-visiting and re-calculating the assessment numbers. For example, if all six of the individual schools were to merge into a Unified School District these costs (\$1,004,987) would become part of the consolidated school district budget. The total budget would then be divided by the total number of pupils which would result in one cost per pupil for all students regardless of which one of the six communities they reside in. Partial reorganization of schools within the WCSU would also impact the current formula causing it to be adjusted accordingly.

AREA 6: CURRENT ASSETS AND OBLIGATIONS

Any efforts to establish new structures for governing schools must consider how to deal with existing school district assets and debts. What assets do the various entities have? How will they be handled in the case of merger, joint contracts or dissolving of one or more school districts? What are the fiscal obligations such as long term debt, multi-year contracts, employee benefits and leases? Who will assume these debts? How will they be paid? Answers to these questions will need to be addressed if the school board and communities desire to engage in a formal study of alternative governance structures. **All of this would be handled in accordance with Vermont State Statutes Title 16, Sections 701 through 706 if the policy**

decision is to pursue a union or unified union school district. The following information is intended to help inform the initial considerations about governance policy decisions and options. *Note: All of the Union #32 member districts already own the assets and debts specific to the Middle and High School. The primary area for obligations is for long term debt incurred through building projects. All of the school districts have debt to carry forward for consideration in any new governance structure.*

Area 6 A: Obligations

Obligations	Middlesex	Worcester
Long Term Debt June 2010	\$127,993 paid up in 2013	\$71,352 paid up in 2015
Short Term Debt	Symquest photocopier lease = \$2,138 paid up in 2011	DeLage Landen Financial Services lease for copier=\$20,520 over 5 years
Accrued Vacation	\$2,794	
Accumulated Sick Leave	\$2,772	\$2,595
Commitment	Bus contract	Bus contract

Area 6 B: Assets-- Building and Equipment/Content Assets
FY 2009-10 Audited and Insurance Values

Middlesex	Property Cost Value = \$1,119,709	Depreciated Value = \$526,464
Middlesex	Insurance Value : Building = \$2,725,604 Contents = \$408,840 Portable = \$77,750 Contents = \$4,400	
Worcester	Property Cost Value = \$1,041,911	Depreciated Value = \$29,460
Worcester	Insurance Value: Building = \$2,169,472 Content \$325,420	

AREA 7: EMPLOYEE MASTER CONTRACTS

Many school districts and supervisory unions across the State have entered into regional negotiated master agreements. This move has streamlined the negotiation process and has simplified implementation of contracts. Board members and administrators in schools and school districts that have consolidated their employee contracts report savings of time and money in the negotiating process, greater equity in salaries, benefits and working conditions across their regions and fewer complications in administering collective and individual contracts. The WCSU school districts have consolidated teacher contracts into one Collective Bargaining Agreement. The Berlin, Calais and East Montpelier school districts have also consolidated master agreements for support staff. Therefore, teachers in all schools are employed under the same salary schedule, benefits and working conditions. Support staff in the Doty Memorial School are employed under a policy adopted in February 2003. Support staff in the Rumney Memorial School are employed via an agreement that is effective through June 30, 2012.

However, salaries, benefits and working conditions for employees in these two schools are quite similar.

Redesigning structures for teaching and learning in many school districts and supervisory unions is made very complex when numerous negotiated agreements exist. This is especially true when the working conditions, benefits and salaries vary greatly from one unit to another. The member school districts in WCSU have one master agreement and policy makers and teachers have done their will to uniform contracts for all employees. Therefore, moving to alternative governance structures should not be impeded by differing master agreements.

AREA 8: NEW SCHOOL CONSTRUCTION AT RUMNEY SITE

The Rumney Memorial School currently has 21,904 square feet of space. The maximum number of students to be housed in this school would be 156 if we apply the 140 square foot guideline for State Aid that is suggested by the Vermont DOE. If this school site were to be used for Pre-K through Grade 6 students from both Middlesex and Worcester then it should plan for 300 students (current enrollment is at 250). Therefore, construction would have to include additional space for 144 students. **The following is an estimate of costs associated with this project.**

School Construction for new space only (does not include renovations of existing facilities):

- 144 students at 140 square feet each = 20,160 square feet
- Construction cost at \$170/sq.ft. = \$3,427,200
- State aid at 30% = \$1,028,160
- Bond amount = \$2,399,040
- 20 year bond annual principal = \$119,952
- First year interest at 5% = \$119,952
- Total annual payment = \$239,904
- Cost per pupil at 250 = \$960

AREA 9: OPTION: UNION ELEMENTARY SCHOOL FOR MIDDLESEX AND WORCESTER

Area 9 A: Staffing

Grade /Subject/ Position	Doty # of FTE Staff	Doty # of Students	Rumney # of FTE Staff	Rumney # of Students	Total # of Pupils	Total # FTE of Staff	Proposed # of Staff	Difference
Pre-School (T)	.30	12	1.00	31	43	1.30	1.30	00
Pre-School (Para-Ed)	.32	12	1.40	31	43	1.72	1.72	00
K	.40	8	1	21	29	1.40	1.40	00
1 and 2	.50	9	1	19	28	1.5	1.5	00
1 and 2	.50	9	1	24	33	1.5	1.5	00
3 and 4	1	23	2	37	60	3	3	00
5 and 6	1	17	2	39	57	3	3	00
Classroom Para-Ed.	1.23	67	2.02	140	207	3.25	3	(.25)
Spec. Ed. Teachers	1.00	9	1.00	12	21	2.00	2.00	00
Spec. Ed. Para-Ed.	1.90	9	6.28	12	21	8.18	4.00	(4.18)
Speech SLP	.20	1	.60	3	4	.80	.50	(.30)
Phys. Ed.	.70	67	.70	140	207	1.40	1.00	(.40)
Music	.30	67	.60	140	207	.90	1.00	+10
Art	.20	67	.60	140	207	.80	1.00	+20
Spanish	.20	67	.50	140	207	.70	.40	(.30)
Technology	00	67	.70	140	207	.70	1.00	+30
Reading Specialist	.20	67	.70	140	207	.90	.90	00
Library-Media (T)	.40	67	.60	140	207	1.00	1.00	00
Library- Media Para-Ed.	.40	67	.40	140	207	.80	.80	00
Guidance	.40	67	.60	140	207	1.00	1.00	00
Nurse	.20	79	1.00	171	250	1.20	1.20	00
Custodian- Maintenance	1.00	17,997 sq/ ft/	1.79	21,904 sq. ft.	39,901 sq. ft.	2.79	2.79	00
Principal	1.00	79	1.00	171	250	2.00	1.00	(1.00)
Asst. Principal	00	79	00	171	250	00	1.00	+1.00
Adm. Asst.	1.00	79	1.20	171	250	2.20	2.00	(.20)
Food Service	1.20	79	1.00	171	250	2.20	2.00	(.20)
School Wide	.70							
Total	16.25	79	30.69	171	250	46.24	41.01	(5.23)

Area 9 B: Estimated Budget

Expense Area	Doty PK -6 Current Budget 67 +12 = 79 pupils	Rumney PK-6 Current Budget 140 + 31 = 171 pupils	Total Combined PK -6 Budget 207 + 43 = 250 pupils	Proposed Budget for Merger of Two Schools	Increase/ Decrease in Budget
Teacher Salaries (Regular and Temp)	\$322,047	\$536,172	\$858,219	\$852,682	(\$5,537)
Regular Aide Salaries	\$25,035	\$41,072	\$66,107	\$60,598	(\$5,509)
Subs	\$7,500	\$9,500	\$17,000	\$17,000	00
Workers' Comp.	\$2,691	\$4,095	\$6,786	\$6,255	(\$531)
Section 125	\$315	\$666	\$981	\$981	00
Unemployment Comp.	\$158	\$258	\$416	\$411	(\$5)
Health Ins.	\$40,094	\$79,429	\$119,523	\$117,291	(\$2,232)
FICA	\$26,593	\$43,830	\$70,423	\$69,599	(\$824)
Disability	\$1,234	\$2,295	\$3,529	\$3,490	(\$39)
Municipal Retirement	00	\$1,643	\$1,643	\$1,643	00
Tuition Reimbursement , Inservice and Travel	\$9,225	\$13,400	\$22,625	\$22,454	(\$171)
Dental Ins.	\$2,108	\$5,385	\$7,493	\$7,493	00
Services	\$2,700	\$9,975	\$12,675	\$12,675	00
Fiscal Audit Services	\$13,674	\$28,322	\$41,996	\$31,497	(\$10,499)
Services SVC Part	00	\$867	\$867	\$867	00
All Technology	\$41,487	\$43,670	\$85,157	\$85,157	00
Curriculum	\$4,827	\$10,933	\$15,760	\$15,760	00
Supplies, Books and Repairs	\$18,727	\$19,650	\$38,377	\$38,377	00
Equipment and Rentals	00	\$8,000	\$8,000	\$8,000	00
Guidance	\$24,730	\$38,556	\$63,286	\$63,286	00
Health	\$10,439	\$71,886	\$82,325	\$82,325	00
Principal Office	\$135,319	\$159,949	\$295,268	\$271,910	(\$23,358)
Library /Media	\$32,242	\$59,596	\$91,838	\$91,838	00
Board of Ed. & Treasurer	\$4,503	\$9,424	\$13,927	\$9,424	(\$4,503)
WCSU Assessment	\$13,041	\$29,535	\$42,576	\$42,576	00
Operation and Maintenance	\$105,720	\$180,683	\$286,403	\$286,403	00
Transportation & Field Trips	\$34,310	\$99,899	\$134,209	\$152,612	+\$14,774 \$18,403
Debt Service	\$13,448	\$29,375	\$42,823	\$42,823	00
Special Ed.	\$143,240	\$337,805	\$481,045	\$388,935	(\$92,110)
EEE and Pre-School	\$28,628	\$103,656	\$132,284	\$132,284	00
Food Services	00	00	00	00	00
Fund Transfer	\$24,318	\$19,500	\$43,818	\$43,818	00
Total Budget	\$1,088,354	\$1,999,026	\$3,087,380	\$2,960,464	(\$126,915)
Budget Cost/Pupil	\$13,777 @ 79	\$11,690 @ 171	\$12,350 @ 250	\$11,842 @ 250	(\$508) @ 250
Note: Worcester Loses Small Schools Grant	(\$75,371)	00	(\$75,371)	+\$954 for Worcester = \$12,796	

Assumptions for Budget Building:

- No change in delivery of EEE and Pre-School. Same staffing and same expenses.
- The staffing sheet reveals increases and decreases in the number of teachers for the various program areas. The net result is a decrease of .10 FTE teacher. The average salary for teachers is \$55,369. Therefore, a decrease of \$5,537 was applied to teacher salaries.
- Classes/Programs Offered K-6:
 - Art = 2 classes per week
 - Music = 2 classes per week
 - Physical Education = 3 classes per week
 - Spanish = 1 class per week
 - Reading Specialist as needed
- The number of classroom para-educators was reduced by .25 FTE. This translates to a decrease of \$5,509 (.25 of \$22,036).
- Adjustments in fringe benefits represent the .35 FTE decrease in staff.
- The number of people in technology was increased by .30 FTE so that all students would have equal access to technology. This increase has been applied to teacher salaries.
- If this union is established there would be only one budget and one fiscal accounting system. Therefore, the cost for the professional fiscal audit has been reduced by \$10,499.
- The number of principals is proposed at 1 FTE. This person would be principal for both schools. However, this estimated budget also includes 1 FTE assistant principal. Therefore, this budget proposal includes \$39,961 for expenses at Worcester plus \$60,000 for the assistant's salary. The net is a reduction \$23,358.
- The cost for student transportation has been estimated to increase by \$18,403. The reason is due to additional mileage estimated to be 12,960 miles per 180 days at \$1.42/mile.
- The number of students identified as eligible for special education totals 25 for both schools. Four of these students receive speech-language services, two are autistic, two with emotional impairment and the remaining have some form of learning disability. Therefore, the number of special educators built into this budget remains at 2 FTE's. However, the number of para-educators is reduced by four FTE's and speech is reduced by .30. The net budget reduction is \$92,110.
- The formation of a union elementary school would result in having only one school board. Therefore, this estimated budget retains the costs currently associated with Rumney and subtracts the current expenses stipulated for Worcester.

* Need to reexamine this assumption.
Was EEE speech factored in?

AREA 10: OPTION: COLLABORATIVE AGREEMENT BY AND BETWEEN MIDDLESEX AND WORCESTER

Area 10 A: Estimated Budget

Expense Area	Doty PK -1 Estimated Budget 100 pupils	Rumney Grades 2-6 Estimated Budget 150 pupils	Total Combined PK -6 Budget 207 + 43 = 250 pupils
Teacher Salaries (Regular and Temp)	\$128,733	\$729,486	\$858,219
EEE and Pre-School	\$132,284	00	\$132,284
Regular Aide Salaries	\$18,179	\$42,419	\$60,598
Subs	\$2,550	\$14,450	\$17,000
Workers' Comp.	\$1,018	\$5,316	\$6,334
Section 125	\$147	\$833	\$980
Unemployment Comp.	\$62	\$354	\$416
Health Ins.	\$17,594	\$99,697	\$117,291
FICA	\$10,440	\$59,159	\$69,599
Disability	\$523	\$2,967	\$3,490
Municipal Retirement	\$246	\$1,397	\$1,643
Tuition Reimbursement , Inservice and Travel	\$3,368	\$19,086	\$22,454
Dental Ins.	\$1,124	\$6,369	\$7,493
Services	\$1,901	\$10,774	\$12,675
Fiscal Audit Services	\$13,674	\$28,322	\$41,996
Services SVC Part	00	\$867	\$867
All Technology	\$12,774	\$72,383	\$85,157
Curriculum	\$4,827	\$10,933	\$15,760
Supplies, Books and Repairs	\$15,351	\$23,026	\$38,377
Equipment and Rentals	\$3,200	\$4,800	\$8,000
Guidance	\$12,657	\$50,629	\$63,286
Health	\$13,995	\$68,330	\$82,325
Principal Office	\$135,319	\$159,949	\$295,268
Library /Media	\$18,388	\$73,470	\$91,858
Board of Ed. & Treasurer	\$4,503	\$9,424	\$13,927
WCSU Assessment	\$17,030	\$25,546	\$42,576
Operation and Maintenance	\$114,561	\$171,842	\$286,403
Transportation & Field Trips	\$61,045	\$91,565	\$152,610
Debt Service	\$13,448	\$29,375	\$42,823
Special Ed.	\$155,574	\$233,361	\$388,935
Food Services	00	00	00
Fund Transfer	\$24,318	\$19,500	\$43,818
Total Budget	\$938,833	\$2,065,629	\$3,004,462
Budget Cost/Pupil	\$9,388 @ 100	\$13,771 @ 150	\$12,018 @ 250
Note: Worcester Retain Small Schools Grant	\$75,371	00	\$75,371

Expense Area	Doty PK -1 Estimated Budget 100 pupils	Rumney Grades 2-6 Estimated Budget 150 pupils	Total Combined PK -6 Budget 207 + 43 = 250 pupils
	29 pupils X \$9,388 = \$272,252	71 pupils X \$9,388 = \$666,548	
Summary Cost per Pupil	50 pupils X \$13,771 = \$688,550	100 pupils X \$13,771= \$1,377,100	
	Total = \$960,802 \$12,162 @ 79 pupils	Total = \$2,043,648 \$11,951 @ 171 pupils	

This collaborative venture assumes that the Doty Memorial School will be used to educate Pre-School through Grade one students and the Rumney Memorial School will house Grades 2 through 6. Worcester would have 15% of the total staff and Middlesex would have 85%. At the same time, the percentage of students for Worcester and Middlesex would be 40% and 60% respectively.

The budget estimates for this option applies the same reductions in instructional staffing and special education as those applied in the option for forming a Union School. However, the costs for a principal at Doty is computed at 80% FTE. In addition, expenses for school board and annual fiscal audits were included at the amount shown in the 2010 school district budgets.

Appendix 1: Doty and Rumney Student Population Projections

DOTY MEMORIAL SCHOOL: STUDENTS ENROLLED ON FALL ADM COUNT

Doty Memorial School										Projected		
Grade	FY 6	FY 7	FY 8	FY 9	FY 10	FY 11	FY 12	FY 13				
K	12	10	6	9	8	8	8	8				
1	6	10	10	8	9	8	9	9				
2	6	8	13	11	9	9	9	10				
3	8	7	10	12	11	9	9	9				
4	12	8	6	7	12	11	8	8				
5	14	13	9	6	11	12	13	9				
6	11	13	15	9	7	11	13	14				
Total	69	69	69	62	67	68	69	67				

Factor	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual
K to 1	NA	#DIV/0!	83%	100%	133%	100%	100%	100%	108%	110%
1 to 2	NA	#DIV/0!	133%	130%	110%	113%	100%	100%	113%	109%
2 to 3	NA	#DIV/0!	117%	125%	92%	100%	100%	100%	104%	99%
3 to 4	NA	#DIV/0!	100%	86%	70%	100%	100%	100%	89%	90%
4 to 5	NA	#DIV/0!	108%	113%	100%	157%	100%	100%	117%	119%
5 to 6	NA	#DIV/0!	93%	115%	100%	117%	100%	100%	108%	106%
Total	NA	#DIV/0!	100%	100%	90%	108%	101%	100%	100%	100%

Rumney Elementary School Enrollment Projection

Grade	FY 6	FY 7	FY 8	FY 9	FY 10	FY 11	FY 12	FY 13
K	16	18	22	20	21		24	25
1	21	19	19	20	19	21	33	23
2	14	20	19	17	24	19	21	34
3	17	15	20	19	17	24	19	21
4	17	18	17	21	20	17	25	20
5	24	18	19	16	21	20	17	25
6	21	25	18	21	18	21	21	18
Total	130	133	134	134	140	156	160	166

Factor Actual Actual Actual Actual Actual Actual Actual Actual

K to 1	NA	119%	106%	91%	95%	100%	98%	96%
1 to 2	NA	95%	100%	89%	120%	100%	102%	103%
2 to 3	NA	107%	100%	100%	100%	100%	100%	100%
3 to 4	NA	106%	113%	105%	105%	100%	106%	104%
4 to 5	NA	106%	106%	94%	100%	100%	100%	99%
5 to 6	NA	104%	100%	111%	113%	100%	106%	107%
Total	NA	102%	101%	100%	104%	111%	104%	105%

Appendix 2: Projecting Enrollments in Rural Schools

Journal of Research in Rural Education, 2004, 19(3)

Projecting Enrollment in Rural Schools: A Study of Three Vermont School Districts

Richard S. Grip
Statistical Forecasting LLC

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Large numbers of rural districts have experienced sharp declines in enrollment, unlike their suburban counterparts. Accurate enrollment projections are required, whether a district needs to build new schools or consolidate existing ones. For school districts having more than 600 students, a quantitative method such as the Cohort-Survival Ratio (C-SR) can be employed with a high level of confidence. For districts having fewer than 600 students, enrollment projections using quantitative methods may have diminishing accuracy. In the present study, enrollment projections were performed for three rural school districts in Vermont with populations fewer than 600 students. The objectives were to determine if (a) the C-SR method can be a viable alternative for school planners, (b) a lower enrollment threshold for employing quantitative techniques can be established, and (c) the number of years used to develop the survival ratio affects the accuracy of the projections. To test the accuracy of the C-SR method, enrollments were calculated for school years 1997-1998 to 2001-2002 and were compared to actual enrollments. Percent error rates were calculated for each school district for the prediction time period. The results showed that the C-SR method can be used cautiously to project enrollments for rural districts in the short-term, 1 to 3 years into the future, but loses its effectiveness in long-range planning. In addition, the results showed that the C-SR method could be used reliably for districts with as few as 100 students, which is a significantly lower threshold than reported in the literature.

While school districts in suburban settings such as New Jersey and Massachusetts are encountering rising enrollment and overflowing school buildings, many school districts in rural sections of the country are experiencing problems of a different kind, declining enrollments. From 1996-2000, 36.9% of rural public elementary and secondary schools had declines of at least 10% in their enrollments (Beeson & Strange, 2003). In an effort to plan for future enrollment trends, school districts rely on accurate enrollment projections using methods such as the Cohort-Survival Ratio, the Modified Regression Technique, and the Dwelling Unit Multiplier Technique. However, for districts of fewer than 600 students, the aforementioned enrollment projection techniques tend to produce less reliable results than they do for larger districts (Caffarella, 1983). While not all districts with fewer than 600 students are prone to less reliable projections, there is a greater probability that these districts will have more inaccurate projections than larger school districts.

Beeson and Strange (2003) defined "rural" as a community which consists of fewer than 2,500 people. In the same study, the state of Vermont was identified as having the

largest percentage of rural population in the United States (61.8%) and for having the largest percentage of public school students enrolled in rural schools (56.1%). Vermont is ranked 16th nationally for having declining enrollment of at least 10% in its rural schools (43.1% of the rural schools in the state) between 1996-2000. Although many Vermont school districts are small due to its rural nature, important decisions still need to be made regarding facility planning, staffing, grade configurations, curriculum programs, and revenues (Dekel, 1994; Glass & Fulmer, 1991; Weldon, Hurwitz, & Menacker, 1989).

The most popular method for performing enrollment projections is the Cohort-Survival Ratio method. This method assumes that the rate of progression from one grade to the next (and also the ratio of the number of births to the number of kindergarten students 5 years later) will be consistent with rates of progression in previous years. The main assumption of this technique is that past enrollment patterns will continue into the future (Caffarella, 1983). The Cohort-Survival Ratio method is preferred due to its ease of use and small amount of historical data needed (3-5 years) to calculate future enrollment. Although research by Webster (1970) and Grip and Young (1999) suggested regression techniques provide better estimates than the Cohort-Survival

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Ratio method, the complexity of using multiple regression tools limits its usage by school district administrators.

To compute a survival ratio, the enrollment (e) in grade g in year y is divided by the enrollment in grade $g-1$ in year $y-1$ as shown below:

$$\text{Survival Ratio (from } g-1 \text{ to } g) = \left(\frac{e_{g,y}}{e_{g-1,y-1}} \right)$$

For example, if a district has 100 students in the third grade in 2000 and 108 students in the fourth grade in 2001, the survival ratio would be 1.08. Ratios greater than 1.00 indicate increasing enrollments while ratios less than 1.00 indicate declining enrollments. Rather than computing survival ratios to project future enrollment based on the data progression solely of 1 year, demographers often compute survival ratios based on an average of the past two, three, or four survival ratios. If a school district has seen an influx of new children as a result of homes constructed 3 or 4 years prior to performing the projections and expects similar growth from additional construction for the next 5 years of the projection period, a demographer may choose to use a 2- or 3-year average survival ratio to best capture the rate of growth. However, if a district's long-term historical enrollment growth is similar to what may be expected in the future, a 4- or 5-year average survival ratio can be utilized. The 4- or 5-year average survival ratio has the added advantage of smoothing out extreme survival ratios that may be considered an anomaly.

For districts with fewer than 600 students, the survival ratio can vary extensively with the slightest movement of students into or out of a school district. For example, consider two K-8 districts of 360 and 900 students, respectively. If the students are spread evenly among the nine grades, there would be 40 and 100 students in each grade, respectively. If five students enter each grade in each school district, the resulting enrollment would be 45 students and 105 students in each grade, respectively. In the first district, the computed survival ratio would be 1.12 while in the second district the computed survival ratio would be 1.05. In the district with smaller grade sizes, small movements of students either into or out of the district has the tendency to alter the value of the survival ratio more than in school districts with larger grade sizes. This increased variability in the computed survival ratios for districts with smaller grade sizes can result in less reliable results when projecting enrollments.

Methodology

In this study, enrollment projections for three Vermont school districts of fewer than 600 students were analyzed to determine if (a) an empirical enrollment projection technique (the Cohort-Survival Ratio method) could be effectively utilized; (b) a lower enrollment threshold could be estab-

lished whereby some districts with enrollments fewer than 600 students could use a quantitative method to accurately project enrollment; and (c) the number of years utilized to compute an average survival ratio effects the accuracy of the projections based on the size of the district.

The three school districts selected in this study varied in both enrollment and the number of grade levels. Two districts consisted of grades K-12 while the third district consisted of grades K-8. The enrollment projections, which were computed for the school years 1997-1998 through 2001-2002, were based on historical enrollment data collected from 1991-1992 through 1996-1997. Actual enrollments collected from 1997-1998 through 2001-2002 were compared to projected enrollments to judge the Cohort-Survival Ratio method's effectiveness. Percent errors were only computed for each district's total enrollment and not by grade level. The formula for percent error is:

$$\text{Percent Error} = \left(\frac{\text{Projected Enrollment} - \text{Actual Enrollment}}{\text{Actual Enrollment}} \right) \times 100$$

According to Schellenberg and Stephens (1987), two thirds of surveyed school administrators target an overall error rate of 1% or less when projecting enrollment 1 year into the future. An acceptable error rate projecting 4-5 years into the future was 4-5%. Shaw, Alspaugh, and Wat-Aksorn (1997) investigated 20 school districts to determine the accuracy of the Cohort-Survival Ratio, Percentage Survival, and Law of Growth methods. The Cohort Survival-Ratio method, which performed the best of the three methods, had a mean error rate of 1.55% for projecting 1 year into the future and a mean error rate of 4.73% for projecting enrollment 5 years

Table 1
Total Enrollment by School District and Year

Year	District A (Grades K-8)	District B (Grades K-12)	District C (Grades K-12)
1991-1992	101	255	454
1992-1993	96	242	468
1993-1994	111	247	458
1994-1995	112	248	471
1995-1996	99	257	479
1996-1997	110	291	510
1997-1998	107	284	530
1998-1999	104	265	514
1999-2000	99	266	492
2000-2001	92	228	398
2001-2002	89	222	413

Note. Italicized data from 1997-1998 through the 2001-2002 school years were used for comparing the enrollment projections computed in the study.

Table 2
Projected Enrollment and Error Rates for District A

Year	Actual Enroll.	2-Year Cohort		3-Year Cohort		4-Year Cohort		5-Year Cohort	
		Projected Enroll.	Percent Error	Projected Enroll.	Percent Error	Projected Enroll.	Percent Error	Projected Enroll.	Percent Error
1997/1998	107	107	0.00%	106	-1.06%	110	2.45%	108	0.73%
1998/1999	104	105	1.23%	103	-1.19%	111	7.19%	109	4.42%
1999/2000	99	108	9.10%	106	7.47%	119	19.77%	115	15.98%
2000/2001	92	104	12.60%	101	10.04%	118	28.63%	113	23.30%
2001/2002	89	99	11.59%	97	8.96%	116	30.78%	111	24.40%

Note. Bolded values represent the lowest error rates of the survival ratios in a given projection year.

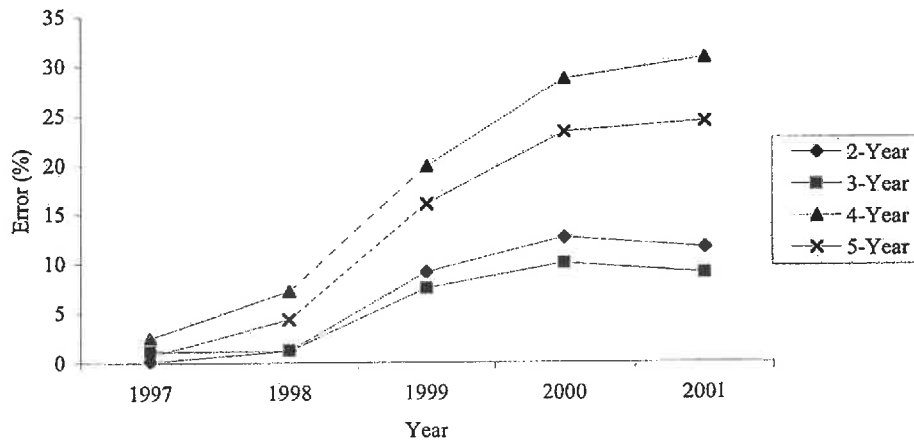


Figure 1. Percent error rates for the projected school years of 1997-1998 to 2001-2002 in District A based on 2-, 3-, 4-, and 5-year average survival ratios

into the future. In the intermediate years, mean error rates increased by slightly less than 1% per year.

Historical birth data were collected from the state of Vermont for the three sending communities for the years 1987-1996 to compute birth to kindergarten survival ratios from 1992-1996 and to project kindergarten enrollment for 1997-1998 through 2001-2002.

Table 1 shows historical total enrollment for each school district. While none of the districts experienced declining enrollment for the historical time frame, all districts had declining enrollment for 1997-1998 through 2001-2002. From 1991-1992 to 1996-1997, District A did not display any consistent trends of enrollment growth or decline. Enrollment vacillated between 96 and 110 pupils for the 6-year

time period. Enrollment in District B was relatively stable for the same time period before rising sharply in 1996-1997, the last year of the historical enrollment data. Finally, District C experienced rising enrollment except for the 1993-1994 school year when a small decline was recorded.

Each of the three district's enrollments was projected using a 2-, 3-, 4-, and 5-year average survival ratio. As discussed previously, since the ratio in smaller districts and subsequently smaller grade levels can be sharply affected by the inward or outward migration of just a few students, it was projected that the 5-year average would produce the most accurate results as any anomalies in the survival ratio would be minimized.

Table 3
Projected Enrollment and Error Rates for District B

Year	Actual Enroll.	2-Year Cohort		3-Year Cohort		4-Year Cohort		5-Year Cohort	
		Projected Enroll.	Percent Error	Projected Enroll.	Percent Error	Projected Enroll.	Percent Error	Projected Enroll.	Percent Error
1997/1998	284	287	0.98%	280	-1.58%	275	-3.34%	273	-4.03%
1998/1999	265	292	10.21%	279	5.20%	270	1.94%	266	0.53%
1999/2000	266	294	10.71%	273	2.56%	261	-1.87%	255	-3.99%
2000/2001	228	297	30.18%	268	17.55%	256	12.17%	249	9.05%
2001/2002	222	310	39.86%	271	22.06%	256	15.20%	247	11.22%

Note. Bolded values represent the lowest error rates of the survival ratios in a given projection year.

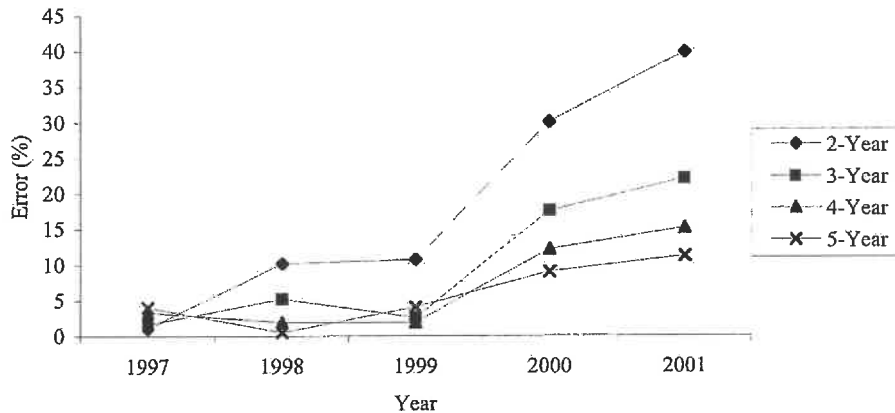


Figure 2. Percent error rates for the projected school years of 1997-1998 to 2001-2002 in District B based on 2-, 3-, 4-, and 5-year average survival ratios

Results

For District A, both the 2- and 3-year average survival ratios produced the most accurate projections (see Table 2). Actual enrollment for District A steadily declined over the 5-year period from 107 students in 1997-1998 to 89 students in 2001-2002. This contrasts with District A's historical enrollment from 1991-1992 to 1996-1997, which showed relatively no pattern.

In the first two years of the projection period, the 2-year average survival ratio resulted in error rates of 0.00% and 1.23%, which were the most accurate projections of the four calculations. For the remaining 3 years of the projection, the 3-year average survival ratio was most accurate with

error rates ranging from 7.47% to 10.04%. Each projection method overestimated the number of children in projection years 3 through 5. Of the four ratios, the 4-year average survival ratio generated the least accurate results. The error rates, which are displayed in Figure 1, show the relative accuracy of the four enrollment projections.

In District B, the most accurate projections were produced by the 5-year average survival ratio for 3 of the 5 projection years. Like District A, District B's enrollment declined from 284 students in 1997-1998 to 222 students in 2001-2002. The declining trend also contrasts the stable historical enrollment recorded from 1991-1992 to 1996-1997 (see Table 3). The 2-year average survival ratio produced the most accurate projection in the first projection year but

Table 4
Projected Enrollment and Error Rates for District C

Year	2-Year Cohort			3-Year Cohort		4-Year Cohort		5-Year Cohort	
	Actual Enroll.	Projected Enroll.	Percent Error	Projected Enroll.	Percent Error	Projected Enroll.	Percent Error	Projected Enroll.	Percent Error
1997/1998	530	479	-9.56%	471	-11.15%	464	-12.42%	464	-12.41%
1998/1999	514	480	-6.59%	464	-9.74%	451	-12.27%	452	-12.01%
1999/2000	492	461	-6.30%	440	-10.51%	424	-13.91%	427	-13.11%
2000/2001	398	454	14.02%	430	8.14%	412	3.52%	417	4.78%
2001/2002	413	443	7.17%	418	1.29%	397	-3.83%	405	-2.02%

Note. Bolded values represent the lowest error rates of the survival ratios in a given projection year.

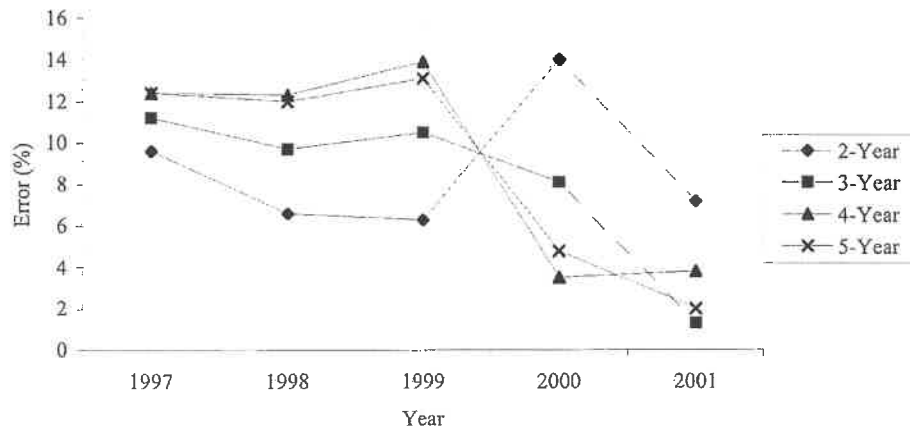


Figure 3. Percent error rates for the projected school years of 1997-1998 to 2001-2002 in District C based on 2-, 3-, 4-, and 5-year average survival ratios

then significantly overestimated enrollment for projection years 2 through 5. The 4- and 5-year average survival ratios produced the most accurate results for the remaining 4 projection years, yet each of these methods significantly overestimated enrollment in the final 2 years of the projection period. Error rates for each of the four enrollment projections are shown in Figure 2.

For District C, the 2-year average survival ratio produced the most accurate projections for 3 of the 5 projection years. Actual enrollment steadily declined from 530 in 1997-1998 to 398 in 2000-2001 before rebounding to 413 in 2001-2002. Prior to 1997-1998, District C had been experiencing increasing enrollment. Except for the projection by the 2-year average survival ratio, percent errors for the

remaining projections typically decreased over the 5-year period (see Figure 3).

Figures 1 and 2 for District A and District B both show low error rates in the first few projection years followed by larger error rates near the end of the projection period. Each of these districts experienced greater declining enrollments in the long-term than was anticipated by historical enrollment trends leading to larger error rates. In contrast, District C's percent errors were greatest in the first few projection years and declined over time (see Figure 3). The large error rates initially were caused by an unexpected growth in enrollment. District C grew much faster than originally projected. Percent errors declined over time because the drop

in enrollment that was projected was similar to the declining enrollment that actually occurred.

Discussion

The results of this study confirm the difficulty of projecting enrollment in school districts with fewer than 600 students. District C, the largest district, had the lowest error rates when projecting 4 or 5 years into the future. However, contrary to what was projected, the 2-year average survival ratio produced the most accurate projections for the first three projection years. None of the four enrollment projection methods had error rates less than 6% in the first three projection years.

In the short term, projecting one or 2 years into the future, the smaller district projections were more accurate than in the longer term. Error rates for District A and District B were less than 2% when projecting enrollment for the first two years which is consistent with the mean error rates reported by others (Schellenberg & Stephens, 1987; Shaw, Alspaugh, & Wat-Aksorn, 1997).

In the longer term, the projected enrollments of District A and District B were less accurate. District A and District B had differing results in the projection method that performed best. For District B, the 5-year average survival ratio produced the most accurate results for 3 of the 5 projection years. For District A, the 3-year average survival ratio provided the most accurate results in 3 of the 5 projection years. On average, the 4- and 5-year average survival ratios produced the most accurate results for District B while the 2- and 3-year average survival ratios produced the most accurate results for District A.

The results suggest that there is no conclusive evidence on the number of years that should be used to compute a survival ratio based on district size. Instead, the Cohort-Survival Ratio method can be used with caution for short-term (1-3 years) planning for districts having fewer than 600 students. District A, which had low error rates in the first two projection years, had an enrollment of approximately 100 students. This indicates that the Cohort-Survival Ratio method can be used for districts with fewer than 600 students. Since the effectiveness of the Cohort-Survival Ratio method was limited to short-term planning, school districts should update the enrollment projections yearly to reevaluate enrollment growth or decline to ensure the highest level of accuracy. Unfortunately, the Cohort-Survival Ratio method is unreliable for projecting enrollments in the long-term

for smaller school districts. District administrators in small schools cannot rely on projections using this method to make decisions about constructing new schools or consolidating existing ones.

While clearly the greatest limiting factor of this study was the small number of districts in each size category, future research could analyze a larger number of districts of similar size to determine if there are advantages to using a specific survival ratio (2-year average, 3-year average, etc.) based on district size. In addition, other quantitative enrollment projection techniques can be investigated to determine their accuracy compared to the Cohort-Survival Ratio method for small school districts.

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Appendix 3: Housing and Vermont School Enrollments

Appendix 4: MAXIMIUM SPACE FOR CONSTRUCTION AID

The space parameters below shall determine the Maximum Gross Square Footage per Student Capacity for State Participation on portions of a project eligible for construction aid.

Space Allowance Table

Grade Range	Gross Square Footage Per Student for schools of any size
K-6	140
K-8	160
Middle or Junior High School	160
High School	180

- A. The Commissioner will determine an average gross square footage per student when a 7-12 or K-12 combination is proposed.
- B. The Commissioner will determine an average gross square footage per student and apply the necessary minimum and maximum square footages to unique combinations of grades.
- C. In cases of renovations and additions the Commissioner will determine the gross square footage useable for educational purposes of an existing building establishing the maximum square footage allowable for construction aid.

Data Source: Vermont Department of Education

Appendix 5: Minimum School Operating Space

MINIMUM SQUARE FEET/STUDENT PROGRAM AND SERVICES FOR HIGH SCHOOL

If one or more of the following are included in the proposed construction aid project, the following minimum requirements shall apply by grade range and school size for the program and service areas.

Program and Services	Minimum Square Footage Required for Design
1. General Instruction	30 square feet x capacity @ 70%
2. Library	4 square feet x capacity; minimum 1000 square feet
2a. Library Storage	10% floor area
2b. Library Workroom/Conference	10% floor area
3. Art	50 square feet net per student use
3a. Art Storage	10% floor area
4. Music Classroom	30 square feet net per student use
4a. Music Storage	10% floor area
5. Music/Instrumental	50 square feet net per student use >100 students 2,500 sq. feet
5a. Music/Instrumental Storage	10% floor area
6. Science Lab	50 square feet net per student use
6a. Science Preparation/Storage	10% floor area
7. Foreign Language	30 square feet net per student use
8. Tech Ed/ Family Consumer Science	50 square feet net per student use
8a. T.E./Fam Cons Sci Storage	10% floor area
9. Combined Lab of 2 or more Specific Programs above	50 square feet net per student use
9a. Lab Storage	10% floor area
10. Computer Lab	30 square feet net per student use
10a. Computer Lab Storage	50 square feet
11. Special Services	2 square feet x capacity
12. Multipurpose Room	<60 students: 1,200; >59 students: 2,400 square feet net
12a. Multipurpose Room Storage	<60 students: 10% floor area; >59 students: 15% floor area
13. Gymnasium	5,040 square feet Regulation Court
13a. Gymnasium Storage	10% floor area
13b. Locker Rooms	10% floor area of gym, per locker room
14. Cafeteria/Dining Room	10 square feet net x planned seating capacity
14a. Cafeteria/Dining Room Storage	5% floor area
15. Kitchen: Onsite production and all required storage	<400 students: 3 square feet; >399 students: 2 square feet
16. Auditorium	8 square feet x capacity
17. Theater	3 square feet x capacity
18. Stage	5% floor area: multipurpose, gymnasium, or dining room
19. Health	<500 students: 500 square feet; >499 students: 2 sq. feet x capacity
20. Guidance	2 square feet x capacity
21. Conference	2 square feet x capacity
22. Administration	4 square feet x capacity
23. Project Rooms/Student Centers	3 square feet x capacity
24. Teacher Planning Rooms	2 square feet x capacity
25. General Storage	2 square feet x capacity
26. Sub-Total	
27. Supports (toilets, halls, etc...)	No more than 30% of sub-total

Data Source: Vermont Department of Education

Appendix 6: School Quality Standards

2120.8.1 SCHOOL LEADERSHIP

Each school shall employ a licensed principal who shall be responsible for the day-to-day leadership of the school. The principal shall be answerable to the superintendent in the performance of his or her duties.

Schools with 10 or more full-time equivalent teachers shall employ a full-time licensed principal. Schools with fewer than 10 FTE teachers shall employ a licensed principal on a pro-rata basis.

2120.8.2 STAFF

All professional staff shall be licensed and appropriately endorsed and shall have had adequate academic preparation and training to teach or provide services in the area to which they are assigned.

- (b) At the elementary level, classes in grades K-3, when taken together, shall average fewer than 20 students per teacher. In grades 4-8, when taken together, classes shall average fewer than 25 students per teacher.
- (d) The services of a library-media specialist shall be available to students. Schools with over 300 students shall have at least one full-time library-media specialist and sufficient additional staff to carry out the program. Schools with fewer than 300 students shall employ a library-media specialist in at least an approximate proportion of the number of students in the school to 300.
- (e) Each school shall employ sufficient and qualified special education staff as are needed to identify students eligible for special education services and to implement each eligible student's Individual Education Plan and Section 504 Plan.

2120.8.4 SCHOOL COUNSELORS

- (a) A school counseling program shall be available to all students in grades K-12. At the elementary level, there shall be no more than 400 students per school counselor. Schools with fewer than 400 students shall employ a school counselor at least proportionate to the ratio of the number of students to 400.

2120.8.5 HEALTH SERVICES

- (a) Each school shall engage the services of a person licensed as a School Nurse or Associate School Nurse and shall specify in writing his or her duties. There shall be no more than 500 students per school nurse. Schools with fewer than 500 students shall employ a nurse at least proportionate to the ratio of the number of students to 500. Notwithstanding the ratios set forth above, a school shall provide for sufficient coverage by a School Nurse or an Associate School Nurse to develop individual health care plans (IHPs), train staff on the implementation of IHPs, and ensure appropriate administration of medication.

Appendix 7: Laws for Formation of Union School District

Chapter 11: Union Schools and School Districts
Revised May 2008

16 V.S.A. § 701. POLICY

It is declared to be the policy of the state to provide equal educational opportunities for all children in Vermont by authorizing two or more school districts, including an existing union school district, to establish a union school district for the purpose of owning, constructing, maintaining, or operating schools and to constitute the district so formed a municipal corporation with all of the rights and responsibilities which a town school district has in providing education for its youth.

16 V.S.A. § 701B. APPLICATION OF CHAPTER

(a) Whenever referred to in this subchapter, the term “school district” shall include a “town school district,” “incorporated school district,” “union school district,” or “city school district,” and this subchapter shall accordingly apply to the organization and operation of a union school district of which any school district is a member or prospective member. The provisions of this subchapter shall apply and take precedence in the event of any conflict between those provisions and the provisions of the charter of a municipality which is a member or prospective member of a union district. Upon the organization of a union district under this subchapter, any charter of a member municipality is considered to be amended accordingly without further action.

16 V.S.A. § 706. PROPOSAL TO FORM PLANNING COMMITTEE

When the boards of two or more school districts believe that a planning committee should be established to study the advisability of forming a union school district, or if five percent of the voters eligible to vote at the last annual or special school district meeting petition the board of their respective school districts to do so, each of the boards shall meet with the superintendent of each participating district. With the advice of the superintendent, the boards shall establish a budget, and shall fix the number of persons to serve on the planning committee, that prepares the report required by this subchapter. The boards’ proposal shall ensure that each participating district share in the committee’s budget, and be represented on the committee, in that proportion which the equalized pupils (as defined in section 4001 of this title) of the district bear to the total equalized pupils of all school districts intending to participate in the committee’s study. Nothing in this section shall be construed to prohibit informal exploration between and among school districts prior to the formation of a planning committee.

16 V.S.A. § 706A. APPROVAL OF PLANNING BUDGET; APPOINTMENT OF PLANNING COMMITTEE

- (a) If the proposed budget established in section 706 of this chapter exceeds \$25,000.00, then:
- (1) The voters of each participating district shall be warned to meet at an annual or special school district meeting to vote on a question in substantially the following form: “Shall the school district of appropriate funds necessary to support the district’s financial share of a study to determine the advisability of forming a union school district with some or all of the following school districts:? It is estimated that the district’s share, if all the above-listed districts vote to participate, will be \$..... The total proposed budget, to be shared by all participating districts, is \$.....” It is not

- necessary for the voters of each participating district to vote on the same date to establish a union school district planning committee.
- (2) If the vote is in the affirmative in two or more districts, the boards of the participating districts shall appoint a planning committee consisting of the number of persons previously fixed. At least one school director from each participating district shall be on the committee. A district board may appoint residents to the committee who are not school directors.
 - (3) The sums expended for planning purposes under this section, shall be considered a part of the approved cost of any project in which the district participates pursuant to sections 3447 through 3449 of this title.
- (b) If the proposed budget established in section 706 of this chapter does not exceed \$25,000.00, then the boards of the participating districts shall appoint a planning committee consisting of the number of persons previously fixed. At least one school director from each participating district shall be on the committee. A district board may appoint residents who are not school directors to the committee. The sums expended for planning purposes under this section shall be considered a part of the approved cost of any project in which the district participates pursuant to sections 3447 through 3449 of this title.

16 V.S.A. § 706B. PLANNING COMMITTEE; CONTENTS OF PLANNING COMMITTEE REPORT

- (a) Planning committee. When a planning committee is appointed, the members shall elect a chair who shall notify the commissioner of education, of the appointment. The commissioner shall cooperate with the planning committee and may make department staff available to assist in the study of the proposed union school district. The committee is a public body pursuant to 1 V.S.A. § 310(3). The committee shall cease to exist when the clerk of each district voting on a proposal to establish a union school district has certified the results of the vote to the commissioner of education pursuant to section 706g of this chapter.
- (b) Decision and report. The planning committee may determine that it is inadvisable to form a union school district or it may prepare a report in the form of an agreement between member districts for the government of the proposed union school district. In making its determination, the committee may contact additional school districts it believes may be advisable to include within a new union school district. If the committee decides to recommend formation of a union school district, its report shall specify:
 - (1) the names of school districts the committee considers necessary to the establishment of the proposed union; provided, however, only districts named in the warning for the vote under section 706a of this chapter may be identified as necessary;
 - (2) the names of additional school districts the committee considers advisable to include in the proposed union school district;
 - (3) the grades to be operated by the proposed union school district;
 - (4) the cost and general location of any proposed new schools to be constructed and the cost and general description of any proposed renovations;
 - (5) a plan for the first year of the union school district's operation for the transportation of students, the assignment of staff, and curriculum that is consistent with existing contracts, collective bargaining agreements, or other provisions of law. The board of the union school district shall make all subsequent decisions regarding transportation, staff, and curriculum subject to existing contracts, collective bargaining agreements, or other provisions of law;
 - (6) the indebtedness of proposed member districts that the union school district shall assume;
 - (7) the specific pieces of real property of proposed member districts that the union shall acquire, their valuation, and how the union school district shall pay for them;
- (8) the allocation of capital and operating expenses of the union school district among the member districts;

- (9) consistent with the proportional representation requirements of the equal protection clause of the Constitution of the United States, the method of apportioning the representation that each proposed member district shall have on the union school board. The union school board shall have no more than 18 members, and each member district shall be entitled to at least one representative;
- (10) the term of office of directors initially elected, to be arranged so that one-third expire on the day of the second annual meeting of the respective districts, one-third on the day of the third annual meeting of the respective districts, and one-third on the day of the fourth annual meeting of the respective districts, or as near to that proportion as possible;
- (11) the date on which the union school district proposal will be submitted to the voters;
- (12) the date on which the union school district will begin operating schools and providing educational services; and
- (13) any other matters that the committee considers pertinent, including whether votes on the union school district budget or public questions shall be by Australian ballot.

16 V.S.A. § 706c. APPROVAL BY STATE BOARD OF EDUCATION

If a planning committee prepares a report under section 706b of this chapter, the committee shall transmit the report to the commissioner who shall submit the report with his or her recommendations to the state board of education. That board after notice to the planning committee and after giving the committee an opportunity to be heard shall consider the report and the commissioner's recommendations, and decide whether the formation of such union school district will be for the best interest of the state, the students, and the school districts proposed to be members of the union. The board may request the commissioner and the planning committee to make further investigation and may consider any other information deemed by it to be pertinent. If, after due consideration and any further meetings as it may deem necessary, the board finds that the formation of the proposed union school district is in the best interests of the state, the students, and the school districts, it shall approve the report submitted by the committee, together with any amendments, as a final report of the planning committee, and shall give notice of its action to the committee. The chair of the planning committee shall file a copy of the final report with the town clerk of each proposed member district at least 20 days prior to the vote to establish the union.

16 V.S.A. § 706d. VOTE TO ESTABLISH UNION SCHOOL DISTRICTS

Each school district that is designated in the final report as necessary to the proposed union school district shall vote, and any school district designated in the final report as advisable to be included may, vote on the establishment of the proposed union school district. The vote shall be held on the date specified in the final report. The vote shall be warned in each proposed member school district by the school board of that district, and the vote shall be by Australian ballot, at separate school district meetings held on the same day and during the same hours. The polls shall remain open at least eight hours. Early or absentee voting as provided by sections 2531 to 2550 of Title 17 shall be permitted. The meetings shall be warned as a special meeting of each school district voting on the proposal. The school board of a school district designated as "advisable" in the proposed union school district may choose not to hold a meeting to vote on the question of establishing the union school district; provided, however, it shall warn and conduct the meeting on application of ten percent of the voters in the school district.

16 V.S.A. § 706F. CONTENTS OF WARNING ON VOTE TO ESTABLISH THE UNION

The warning for each school district meeting shall contain two articles in substantially the following form:

WARNING

The voters of the town (city, union, etc.) school district of _____ are hereby notified and warned to meet at _____ on the _____ day of _____, _____, to vote by Australian ballot between the hours of _____, at which time the polls will open, and, at which time the polls will close, upon the following articles of business:

Article I

Shall the town (city, union, etc.) school district of _____ which the State Board of Education has found (necessary or advisable) to include in the proposed union school district, join with the school districts of _____ and _____, which the State Board of Education has found necessary to include in the proposed union school district, and the school districts of _____ and _____, which the State Board of Education has found advisable to include in the proposed union school district, for the purpose of forming a union school district, as provided in Title 16, Vermont Statutes Annotated, upon the following conditions and agreements:

- (a) Grades. The union school district shall operate and manage offering instruction in grades _____ through _____.

16 V.S.A. § 706J. ORGANIZATION MEETING, BUSINESS TO BE TRANSACTED

- (a) The meeting shall be called to order by the commissioner of education or a person designated by the commissioner, and at such meeting or at an adjournment thereof:

* * *

- (8) The board of directors may be authorized by the electorate to borrow money pending receipt of payments from the education fund by the issuance of its notes or orders payable not later than one year from date. A newly formed union school district, however, is authorized to borrow sufficient funds to meet pending obligations;

16 V.S.A. § 706N. AMENDMENTS TO AGREEMENTS REACHED BY ESTABLISHMENT VOTE, ORGANIZATION MEETING, OR FINAL REPORT

- (a) Any specific condition or agreement adopted by the member districts pursuant to section 706f of this chapter at the vote held to establish the union, or any amendment subsequently adopted, may be amended only at a special or annual union district meeting; provided that, the prior approval of the state board of education shall be secured if the proposed amendment concerns reducing the number of grades that the union is to operate. The warning for the meeting shall contain each proposed amendment as a separate article. The vote on each proposed amendment shall be by Australian ballot. Ballots shall be counted in each member district, and the clerks of each member district shall transmit the results of the vote in that district to the union school district clerk. Results shall be reported to the public by member district; however, no amendment is effective unless approved by a majority of those voting.

* * *

- (c) Any provision of the final report which was not contained in a separate article in the warning required pursuant to section 706f of this chapter for the vote to form the union may be amended by a simple majority vote of the union board of school directors, or by any other majority of the board as is specified for a particular matter in the report.

WITHDRAWAL FROM DISTRICT

- (a) A school district that is a member of a union school district may vote to withdraw from the union school district if one year has elapsed since the union school district has become a body politic and corporate as provided in section 706g of this title.
- (b) When a majority of the voters of a school district present and voting at a school district meeting duly warned for that purpose votes to withdraw from a union school district the vote shall be certified by the clerk of the school district to the secretary of state who shall record the certificate in his or her office and give notice of the vote to the commissioner of education and to the other member districts of the union school district. Those member districts shall vote by Australian ballot on the same day during the same hours whether to ratify withdrawal of the member district. Withdrawal by a member district shall be effective only if approved by an affirmative vote of each of the other member school districts within the union school district.
- (c) If the vote to ratify the withdrawal of a member district is approved by each of the other member districts, the union school district shall notify the commissioner of education who shall advise the state board of education. At a meeting held thereafter, if the state board finds that the pupils in the withdrawing district will attend a school that is in compliance with the rules adopted by the board pertaining to educational programs, the board shall declare the membership of the withdrawing school district in the union school district to end as of July 1 immediately following or as soon thereafter as the obligations of the withdrawing district have been paid to, or an agreement made with, the union school district in an amount satisfactory to the electorate of each member district of the union school district. The board shall give notice to the remaining member districts in the union of its meeting and give representatives of the remaining member districts an opportunity to be heard. It shall then determine whether it is in the best interests of the state, the students, and the school districts remaining in the union, district for the union to continue to exist. The board may declare the union dissolved as of July 1 immediately following or as soon thereafter as each member district's obligations have been satisfied, or it may declare that the union shall continue to exist despite the withdrawal of the former member district. The state board of education shall file the declaration with the secretary of state, the clerk of the withdrawing district, and the clerk of the union school district concerned.
- (d) A vote of withdrawal taken after a union school district has become a body politic and corporate as provided in section 706g of this title but less than one year after that date shall be null and void.

Appendix 8: Joint Contract Schools

16 V.S.A. § 571 ET SEQ.

What are they? Joint contract schools are schools that are operated by a board of directors made up of members of school district boards that have joined together to operate a school. Once formed, the joint contract board has “full authority to act on all matters pertaining to finance, location, construction, and operation of (joint) schools...including the selection and hiring of teachers.”

Joint board representation shall consist of members chosen annually from the duly elected school boards of the school districts...Unless the school districts ... have agreed upon a different method of allocating board members... the school district having the largest number of pupils attending the joint, contract or consolidated school shall have three members on the joint board. Each other school district shall have at least one member on the joint board, and its total membership shall be determined by dividing the number of pupils from the school district with the largest enrollment by three, rounding off the quotient to the nearest whole number, which shall be called the “factor” and by then dividing the pupil enrollment of each of the other school districts by the “factor,”...

How are they formed? The electorate of a school district may authorize its board to enter into a joint contract with another school district or school districts. Upon authorization, the board may “enter into a contract or contracts with other towns and parties for the financing, construction, operation and maintenance of a competent school or schools...”

What are their advantages? Joint contract schools have the advantage of being easily formed.

What are their disadvantages? There are several potential disadvantages to a joint contract school. They result in the formation of a new school board, while maintaining the prior existing boards even though those boards may no longer operate a school. The new board can develop and adopt a budget without a vote of the electorates of the member districts. There are numerous ambiguities in the law related to the operation of joint contract schools. The financing and ownership of property by member districts is, for example, not clearly prescribed in the law.

Where are they? There are joint contract schools in Jay/Westfield, Barstow, Granville/Hancock, Wilmington/Whitingham, and Athens/Grafton.

16 V.S.A. § 571. CONTRACTS TO CONSTRUCT AND OPERATE JOINT SCHOOLS

By a majority vote of the voters present and voting at a meeting, duly warned for that purpose, a town school district or incorporated school district may authorize its school directors to enter into a contract or contracts with other towns and parties for the financing, construction, maintenance and operation of a competent school or schools to provide means and facilities for the convenient and adequate development, education and training of the youth of such town.

16 V.S.A. § 572. JOINT BOARDS FOR JOINT, CONTRACT OR CONSOLIDATED SCHOOLS

- (a) The control of joint, contract or consolidated schools, set up by two or more school districts, shall be vested in a joint school board from such school districts and such board shall be chosen in the manner hereinafter provided for and for the purpose of this section, a joint, contract or consolidated school board shall be referred to as a joint board.
- (b) The joint board shall have full authority to act on all matters pertaining to the finance, location, construction, maintenance and operation of schools set up as joint, contract or consolidated schools, including the selection and hiring of teachers.

- (c) The joint board shall consist of members chosen annually from the duly elected school boards of the school districts, each school district board electing a member or members to the joint board from among its own members.
- (d) Unless the school districts which are parties to the contract have agreed upon a different method of allocating board members that is consistent with law, the allocation of the board members shall be as follows. The school district having the largest number of pupils attending the joint, contract or consolidated school shall have three members on the joint board. Each other school district shall have at least one member on the joint board, and its total membership shall be determined by dividing the number of pupils from the school district with the largest enrollment by three, rounding off the quotient to the nearest whole number, which shall be called the "factor" and by then dividing the pupil enrollment of each of the other school districts by the "factor," rounding off this quotient to the nearest whole number, this number being the number of school directors on the joint board from each of the other school districts. Pupil enrollment for the purpose of determining the number of members on the joint board to which each school district is entitled shall be taken from the school registers on January 1 of the calendar year in which the school year starts. Such joint board shall annually select from among the members thereof a chairman and clerk. (Amended 1961, No. 79; 1991, No. 173 (Adj. Sess..))

Appendix 9 Union School Districts.

16 V.S.A. § 701ET SEQ.

What are they? Union school districts are formed by agreement between participating school districts to operate a single school in certain grades for residents of the participating districts. A union school district has a school board comprised of representatives of the member district, elected on a one-person-one-vote basis from each district. A union school district has its own school district meeting to adopt an annual budget, and member districts pay assessments in accord with the union district's articles of agreement.

How are they formed? There is a comprehensive statutory process for the formation of union school districts. Formation requires an extensive study process (preceded by vote of the electorate *only if the budget is over \$25,000*), approval by the State Board of Education and final approval by the electorate of each member district to create the new union.

What are their advantages? Union school districts are municipal entities, as are all school districts. As such, union school districts have powers to build, finance, own and operate schools. They are therefore stable entities. The level of public participation in union school districts is on a par with the level of public participation in "town" school districts.

What are their disadvantages? Union school districts are difficult to form and difficult to alter once formed. On occasion, a member district may want to leave a union district, or a new district may wish to join an existing union district. While there are statutory processes to allow these things to happen, a single district will be unable to enter or leave a union without the assent of other members.

Where are they? There are approximately 36 union school districts. Most are high school or middle school unions. Union districts for elementary schools have recently been formed in Waterbury/Duxbury and Metawee Valley (Rupert and Pawlett).

. Who goes where? report