



South Shore Regional School Board

Program Review: Phase II

SCHOOL UTILIZATION STUDY: PART 1

REPORT

**SCHOOL UTILIZATION STUDY
PART 1**

Table of Contents

	<u>Page No.</u>
Executive Summary	iii
Background	1
Purpose of the Study	1
Internal and External Processes	2
Will Schools Be Closed?	2
Enrolment History and Projection	2
The Primary Issues in School Utilization in a Time of Declining Enrolment	5
Optimal School Size	6
When is a school too small?	6
Changes in School Grade Configurations	10
Equitable Access to Programs	11
Adjustments in Student Transportation	11
Financial Issues in School Utilization	12
Part 2 Consultation Process	13
Appendix A	14
Appendix B	15

EXECUTIVE SUMMARY

The South Shore Regional School Board called for a “Program Review” in 2005. One of the main conclusions from the Review was that a school utilization study be carried out.

The primary purpose of the school utilization study is to develop recommendations on how the schools of the South Shore Regional School Board may be used more efficiently to deliver the required or basic programs to all students. The following questions define the purpose more specifically:

1. What changes in school grade configurations and school boundaries would contribute positively to a more effective delivery of basic educational programs?
2. How can student access to the Board’s special or alternate programs be made more equitable?
3. What are the financial implications of the recommendations to deliver programs more effectively and equitably?
4. What schools should be considered formally for possible closure under the new, provincial “School Review” process?
5. What is a reasonable timeline for the implementation of the recommendations?

This School Utilization Study is being carried out in 2 parts. In Part 1, this paper was prepared for release as a public discussion paper. Part 2 is about to get underway as a consultation process for school and community input.

Although this school utilization study is not a school closure process, it is reasonable to anticipate that individual schools will be identified for closure consideration as a result. Such considerations must occur within the new “School Review” process, a completely separate process which must span an entire year, beginning on April 1, 2008.

The enrolment of the SSRSB declined by 18% over the past 10 years and is projected to decline by 25% over the next 10 years. Whereas the elementary school enrolment decline will be less severe compared to the previous ten years, the junior high and senior high enrolments will be considerably more severe. The junior high enrolment declined by 10% over the previous ten years and will decline by 28% over the next decade. Likewise, the senior high enrolment declined by 9% and will decline by 28%.

A steady and significant decline in enrolment over many years affects the operation of individual schools and whole school systems in numerous ways. Adjustments should be made to ensure ongoing effective program delivery and a high level of operational efficiency.

Recently, this writer reviewed the literature on optimal school size. The term, “optimal”, refers to what is best for students educationally (cognitively, socially, emotionally, and physically) and to what is best in terms of operational efficiency. The “basic conclusions” from the review are provided verbatim in this report. The literature on school size is predominantly about comparing small schools with large schools and not in any way about answering the separate question, “How small is too small?”

A set of factors, which indicate when a school may have reached the point of being too small, is offered in this paper for open critical analysis.

Very few numerical measures exist to assess the ability of a school to deliver programs effectively. A teacher/student index is introduced in this paper as a numerical answer to the question, “How many full-time-equivalent (FTE) teaching positions are required to deliver the educational program?”. The number of FTEs per 100 students demonstrates that, relative to enrolment, more teaching positions are required to deliver the educational program in the

smaller elementary schools compared to the larger schools. More specifically, a comparison of averages shows that the 3 smallest schools require 56% more teaching positions per 100 students than the 3 largest schools to deliver the educational program.

Based on his professional experience and that of other educators, the writer offers for discussion the following “opinions” on minimum school sizes:

- The enrolment of an elementary school with 7 grades (P-6) should be approximately 100.
- The enrolment of a junior high or middle school with 3 grades (6-8 or 7-9) should be approximately 175.
- The enrolment of a high school with 3 grades (10-12) should be approximately 300.

Another research review carried out recently supports the position that the grade configuration of a school may be changed without a negative effect on students and on learning. Various configurations may be set up to use existing school facilities more efficiently: an elementary school with Grades P-6 may become a P-8 school and a high school with Grades 10-12 may become a 9-12 high school or a 6-12 middle level - high school.

A secondary but important purpose of this study is to recommend ways to improve student access to the Board’s special regional programs which are not available in every school. Access to, or availability of, special programs is related to school size. It is very difficult to offer special programs in a small school because of the organizational inflexibilities and because of an insufficient number of students to justify offering the program. Equitable access to special programs should be addressed specifically in the student transfer policy and in the level of transportation service to students. How this can be done fairly and constructively is not answered easily. Hopefully, the consultations around this paper will produce some answers.

Some cost savings result from reducing the amount of school space in operation or by closing schools, but the amount saved in terms of a board’s operating budget is less than what is generally expected. The more significant financial benefits are in terms of major “capital” expenditures.

In the interest of being open and “up front”, readers of this report should anticipate that several schools will be given individual attention because of their size and projected enrolments. Although some schools are very small, mitigating factors exist. In the legislated School Review process, one of the “mitigating factors” to keep a school operating is “essential schools as determined by geographic isolation”. Perhaps no change will be proposed for geographically isolated schools, but raising the question publicly may generate new and interesting possibilities.

Regarding a timeline, the year-long School Review process occurs between April 1 and March 31. Thus, any schools to come under this formal review must be identified before April 1. This means that the final report must be submitted before March 1, 2008, if the SSRSB wishes to begin the School Review process on April 1, 2008, and have it continue for the next 12 months. With the final report deadline of March 1, 2008, all consultations should be completed before February 15, 2008.

Once this paper is released publicly, the consultant will facilitate public sessions to answer questions and gather input on its contents. Rather than attending the public meetings, individuals and groups may wish to prepare written submissions. All written submissions, received by February 15, 2008, will be reviewed prior to the completion of the final report.

SCHOOL UTILIZATION STUDY PART 1

Background

The South Shore Regional School Board called for a "Program Review" in 2005. In general terms, the review was intended to assess whether or not the basic educational programs are being delivered in each school as effectively as possible within the limited resources of the Board, and whether or not the special or alternate programs are being delivered equitably to all students across the school system. The Program Review was carried out in two phases.

Phase I addressed the programs being offered in the schools, the basic program that should be provided at the various grade levels and the supports required for program delivery. This first phase was carried out during the 2005-06 school year. The Director of Programs and Student Services and a Program Review Committee coordinated the work of three sub-committees to focus on program delivery in the elementary schools, middle level schools and high schools. The results of their work were reported first in June, 2006.

Phase II followed in the fall and winter of the 2006-07 school year. The committees completed their work from which a set of "general principles" were generated (See Appendix A). Both the results of the work of the committees in Phase I and the general principles, established specific expectations, some of which were met by the Board in planning for the 2007-08 school year.

One of the main conclusions arising from Phase I of the Program Review was that a school utilization study be carried out. The reasons behind this conclusion are partly financial in nature and partly related to the effects of trying to deliver the required programs in a large number of relatively small schools which will continue to decrease in size over at least the next ten years. In trying to achieve a higher level of effectiveness in program delivery, the efficient use of school facilities is an important variable, especially when the number of students is decreasing.

The total enrolment of the South Shore Regional School Board, as with all boards in Nova Scotia, has been declining annually for over 10 years and it will be in steep decline over the next decade. Because student enrolment is the most significant determinant of school system funding levels in all provincial jurisdictions, the effects of the enrolment decline on the delivery of educational programs requires careful attention.

Purpose of Study

In general terms, the primary purpose of the school utilization study is to develop recommendations on how the schools of the South Shore Regional School Board may be used more efficiently to deliver the required or basic programs to all students. If the school facilities are used as efficiently as possible to provide safe, secure learning environments, then any dollars saved can be applied directly to program delivery. Improved efficiency in school utilization can generate a direct educational benefit to students.

A secondary but important purpose of this study is to recommend ways to improve student access to the Board's special programs. The SSRSB has raised concerns about equitable access in recent years and expects that improvements be made from a regional perspective. Such improvements may result from changes in the number and location of the regional programs and from revisions to the student transfer and transportation policies.

The following questions define the purpose specifically:

1. What changes in school grade configurations and school boundaries would contribute positively to a more effective delivery of basic educational programs?
2. How can student access to the Board's special or alternate programs be made more equitable?
3. What are the financial implications of the recommendations to deliver programs more effectively and equitably?
4. What schools should be considered formally for possible closure under the new, provincial "School Review" process?
5. What is a reasonable timeline for the implementation of the recommendations?

Internal and External Processes

As with the Program Review, the School Utilization Study is being carried out in two parts.

Part 1 has been completed and its results are reported in this paper. It was an internal process in that the consultant worked "behind the scenes" and under a degree of confidentiality with regional administrative staff. During this internal process, the purpose of the study was defined, data were gathered and analyzed, and the main issues were articulated through various drafts of this paper.

In simple terms, the purpose of Part 1 was to prepare this paper for release as a public discussion paper. Part 2 is about to get underway.

Part 2 is an external process to provide opportunities for open, public consultation on the contents of this paper, prior to the development of recommendations specific to individual schools, programs, and board policies. This paper will be distributed publicly throughout all schools. The consultant will use it as a discussion paper to seek input from school staffs and school communities. A timeline for this external process is provided in the last section of this paper.

After Part 2 has been completed, the consultant will submit a final report with recommendations to the Superintendent of Schools.

Will Schools Be Closed?

The broad "Program Review" and this school utilization study are not school closure processes. Nevertheless, it is reasonable to anticipate that individual schools will be identified for closure consideration as a result. If schools are identified for consideration of closure, among other options, that consideration must occur within the new "School Review" process guidelines which are set out in provincial legislation. School Review is a completely separate process from this school utilization study and must span an entire year, from April 1 to March 31. "School Review" for individual schools may occur only after this study has been completed.

To be "up front" and avoid surprises, one of the final outcomes of this study will be a recommendation of the schools which should be taken through the School Review process between April 1, 2008 and March 31, 2009, for possible closure by September 1, 2009.

Enrolment History and Projection

In 1995-96, the student enrolment of the South Shore Regional School Board was 10,202. Ten years from now, in the school year 2016-17, the enrolment is projected to be 6,109, according to projections prepared by the Department of Education. In other words, over this 21-year period, the enrolment will have declined by 40%, if the projection proves to be accurate. More

specifically and perhaps more importantly, the enrolment of the SSRSB declined by 18% over the past 10 years and is projected to decline by 2,051 or 25% over the next 10 years (See Table 1).

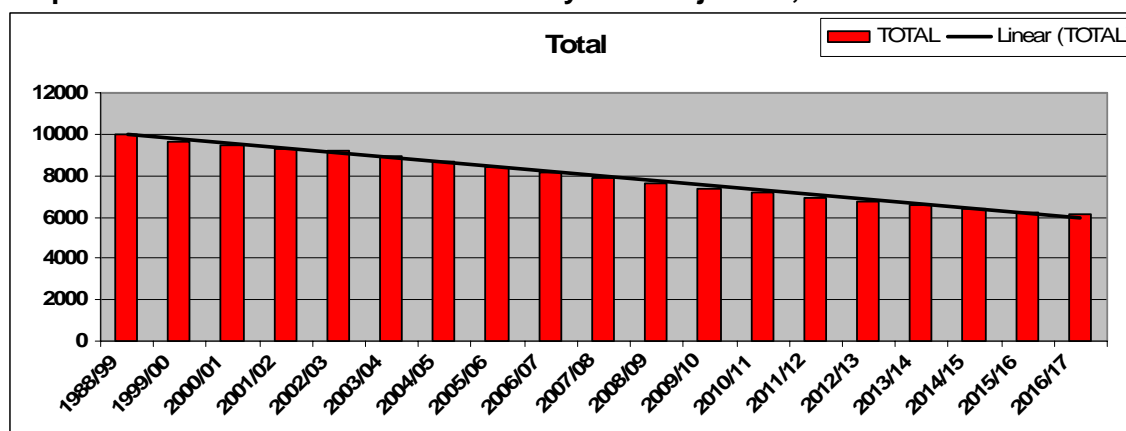
The data in Table 1 show some other significant projections. Whereas the elementary school enrolment decline in the future will be less severe, compared to the previous ten years, the junior high and senior high enrolments will be considerably more severe. The elementary enrolment declined by 26% between 1995/96 and 2005/06 and it is projected to decline by 22% between 2006/07 and 2016/17. The junior high enrolment declined by 10% over the previous ten years and will decline by 28% over the next decade. Likewise, the senior high enrolment declined by 9% and will decline by 28%.

TABLE 1: Ten-Year Comparisons of Enrolment Declines

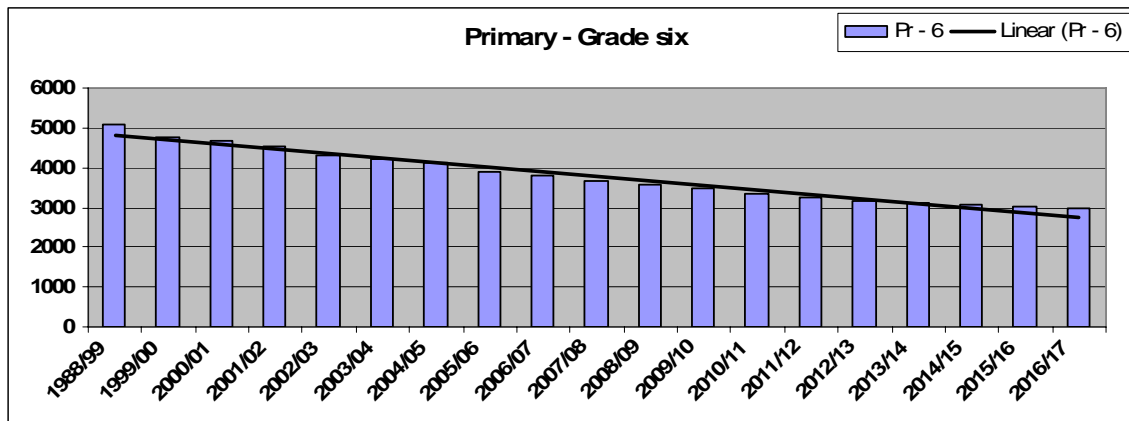
Grades	1995/96	2005/06	Difference	% Diff.	2006/07	2016/17	Difference	% Diff
Pr - 6	5265	3903	1362	26	3818	2989	829	22
7 - 9	2354	2110	2110	10	2009	1444	565	28
10 - 12	2583	2358	2358	9	2333	1676	657	28
TOTAL	10202	8371	1831	18	8160	6109	2051	25

Using the annual data available from the Department of Education, Graph 1 depicts a combination of total enrolment history of the SSRSB since 1998-99 and a ten-year projection to 2016-17. The rate of decline for the total enrolment is relatively constant over the 18-year period. Graph 2, Graph 3 and Graph 4 give a breakdown by elementary, junior high and senior high, respectively, for the same period. Graph 2 confirms that the elementary enrolment has been through its steepest decline and will level off a bit by 2006/17. Graph 3 and 4 confirm that the junior high and senior high enrolments will decline at a somewhat steeper rate than that of the past 8 years.

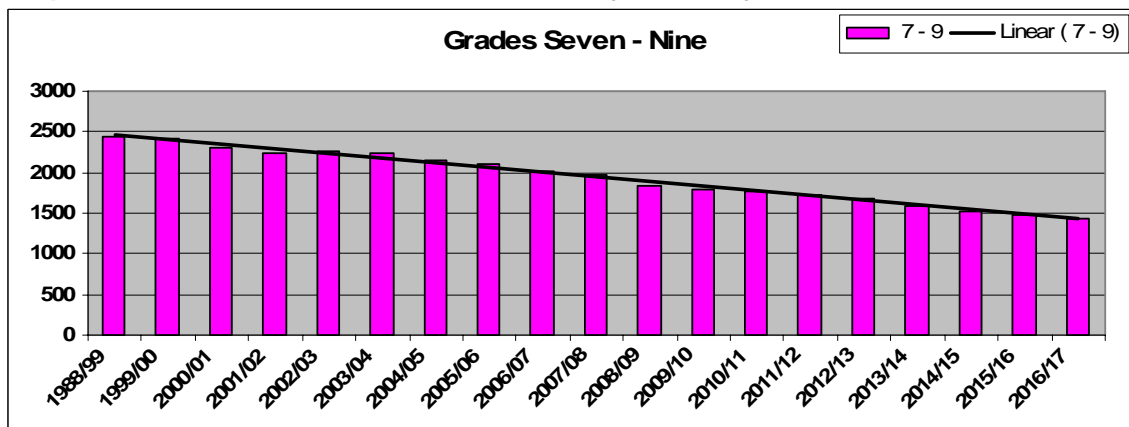
Graph 1: Total SSRSB Enrolment History and Projection, 1988/99-2016/17



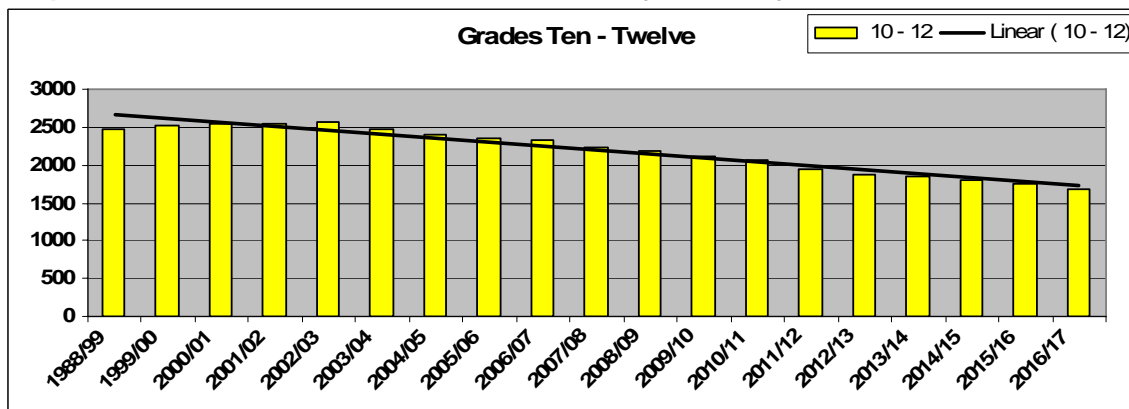
Graph 2: Primary-Grade 6 Enrolment History and Projection, 1998/99-2016/17



Graph 3: Grade 7-Grade 9 Enrolment History and Projection, 1998/99-2016/17



Graph 4: Grade 10-Grade 12 Enrolment History and Projection, 1998/99-2016/17



Although this system decline is significant, the enrolments of certain individual schools have declined by a much higher percentage over the past 11 years. Table 2 provides the percentage decrease for each school from 1995/96 until 2006/07. Based on the system projections shown in the graphs above, it is reasonable to assume that these individual school enrolments will at least follow the general pattern of decline, unless unique, local demographic circumstances indicate otherwise.

Table 2: Percentage Enrolment Decrease School-by-School, 1995/96-2006/07

Name of School	Enrolment 1995/96	Enrolment 2006/07	Enrolment Decrease	Percentage Decrease
Aspotogan Consolidated Elem. School	167	150	17	10%
Bayview Community School	562	462	100	17%
Big Tancook Island Elementary School	14	3	11	79%
Bridgewater Elementary School	657	483	174	27%
Bridgewater Junior-Senior High School	597	453	144	24%
Centre Consolidated School	618	489	129	21%
Chester Area Middle School	470	380	90	19%
Chester District School	313	218	95	30%
Dr. John C. Wickwire Academy	440*	432	8	2%
Forest Heights Community School	442	419	23	5%
Gold River-Western Shore School	152	132	20	13%
Greenfield Elementary School	33	36	-3	-9%
Hebbville Academy	759**	675	84	11%
Liverpool Regional High School	411	358	53	13%
Lunenburg Academy	175	117	58	33%
Lunenburg Junior-Senior High School	248	170	78	31%
Mill Village Consolidated School	92	44	48	52%
Milton Centennial School	121***	163	-42	-35%
New Germany Elementary School	335	245	90	27%
New Germany Rural High School	512	443	69	13%
New Ross Consolidated School	212	176	36	17%
Newcombville Elementary School	315	145****	170	54%
North Queens Elementary School	146	114	32	22%
North Queens Rural High School	223	151	72	32%
Park View Education Centre	924	867	57	6%
Pentz Elementary School	172	102	70	41%
Petite Rivière Elementary School	138	76	62	45%
Riverport & District Elementary School	134	63	71	53%
South Queens Jr High School	370	308	62	17%
West Northfield Elementary School	259	178	81	31%

* The configuration of Dr. John C. Wickwire Academy included Grades P-1 in 1995/96.

** The 1995/96 enrolment for Hebbville Academy is an estimate.

*** Milton Centennial School gained students from Dr. J.C. Wickwire Academy after 1995/96.

**** Grades 5 and 6 moved to Hebbville

The Primary Issues in School Utilization in a Time of Declining Enrolment

A steady and significant decline in enrolment over many years affects the operation of individual schools and whole school systems in numerous ways that should not be ignored. Adjustments must be made to ensure ongoing effective program delivery and a high level of operational efficiency.

The annual decrease in the per-student operating revenue may be the most measurable impact (in numerical terms), from the school system perspective. Because school board funding is tied directly to the September 30th enrolment, and because teacher salaries absorb about 60% of the budget, the number of teachers must decrease annually. Likewise, other staff positions are tied, directly or indirectly, to the student enrolment, at least in the long run. For example, a large enrolment decrease over a number of years will cause a decrease in staff allocations for program support assistants, administrative assistants, school administrators and, in the extreme, bus drivers. These staff decreases will occur even if no schools are closed. In fact, the closure of a school may have relatively little impact on total staff allocations because the allocations are primarily based on the number of students in a system, not the number of schools. The most obvious exception is the number of school principals. Even in this case, the closure of schools will cause the loss of an equivalent number of school principals, but the number of vice-principals in the system may increase as a consequence.

One major effect of declining enrolment from a school perspective is the loss of flexibility in matching teacher qualifications to teaching assignment and in providing suitable programs for students. The impact of this loss of flexibility on schools and students is complex or multi-faceted. It is characterized from several perspectives in the sections below.

Optimal School Size

Recently, and as part of another project, this writer reviewed the literature on optimal school size. A report of the findings is being prepared and may be available before 2008. The following “basic conclusions” drawn from the literature review are relevant to this study:

1. Although an optimal school size has not been defined precisely, a range of 300-400 for elementary schools and a range of 400-800 for secondary schools should contribute to a balance of effective program delivery with operational efficiency.
2. Although the recent research favours small schools over large schools, the size of “small” is defined neither numerically nor in relation to “large”.
3. The literature comparing small schools to large schools is silent on the question, “How small is too small?”.
4. Secondary schools of over 1200 students push the reasonable limits of educational advantage, economy of scale and operational efficiency.

The term, “optimal”, refers to what is best educationally (cognitively, socially, emotionally, and physically), for students and to what is best in terms of operational efficiency. The literature on school size is predominantly about comparing small schools with large schools and not in any way about answering the separate question, “How small is too small?”. This question must be answered from practical experience because no answer can be found in the research literature.

When is a school too small?

As school enrolments decline, it is reasonable to question whether or not individual schools are reaching a limit at which they may be described as too small. At some point, the disadvantages of smallness outweigh the advantages. Although this limit is not precise or distinct and may vary from one school to another, it is important that the question be asked openly and answered carefully.

The most important question is educational in nature and is about how a very low enrolment affects the ability of a school to deliver the required programs. The factors or variables listed below should be evaluated school-by-school as potentially serious barriers to effective program delivery. A school may have reached the point of being too small when:

- To deliver the required programs, various staff allocations for a school must be increased beyond what the regional staffing formulas or methods provide.
- Teaching assignments cannot be matched appropriately to teacher qualifications because of the low number of teachers on staff. This means that some teachers must carry responsibilities which do not fit well with their qualifications, experience, and/or interests.
- A relatively significant number of the teachers are itinerant teachers who have their assignments spread across two or three schools. This creates a variety of difficulties in program delivery and other aspects of the school's operation.
- It is difficult to sustain effective special education services. This difficulty is related to being unable to attract and hold suitably qualified teachers, create a "learning centre" approach to special services delivery, ensure reasonable minimum case loads for specialists, and provide Reading Recovery (25% of population and at least 2 students per term).
- The expectations on teachers and other staff members to carry the numerous mandatory and "volunteer" responsibilities are very unrealistic and unreasonable. In every school, many expectations for staff involvement come from the school, the regional office, and the community. Because a small staff cannot meet the expectations, the result is often burnout and high staff turnover.
- Multi-age classes with more than 2 grades per class must be created for operational reasons, although the school staff and the parents may not have accepted multi-age classes as being pedagogically sound.
- Building a "professional learning community" (PLC) is very difficult, if not impossible in a practical sense. There is strong evidence that a PLC is beneficial to students and their learning. It is very impractical to adopt this approach to professional development and collaborative support among colleagues when the number of staff is very small.
- Likewise, teacher teaming for instructional and program purposes is extremely difficult.
- When unique programs such as French Immersion cannot be offered because of low numbers, thus causing the transfer of students to other schools.

This list is not intended to be comprehensive and all-inclusive. Other factors could be added and those already listed suggest others implicitly. For example, there may be student issues in a very small school that are more social than educational. If multi-age classes require that each student will stay with the same classmates and the same teacher for three years, certain problems of a social or behavioral nature may be very difficult to solve.

Overall, or broadly speaking, one word categorizes the difficulties or disadvantages in a school that is too small. That word is inflexibility. Inflexibility is a formidable barrier to applying good practice in most operational or administrative activities; e.g., staffing, scheduling, assigning students to classes, setting up intra-mural and extra-curricular activities.

Very few numerical measures exist to assess the ability of a school to deliver programs effectively. One of the most helpful may be the number of teachers in a school compared to the number of students. In financial terms, teacher salaries and benefits comprise a very significant portion of the total expenditures for operating a school - about 60% of the total school board budget. The first item in the list of conditions above regarding allocation of staff is most directly related to the number of teachers in a school. This important factor needs further explanation because of its potential as a significant numerical measure in the ability of a school to deliver the program.

Table 3 lists the September 30, 2007 enrolments for the elementary schools, the number of Full-Time-Equivalent (FTE) teaching positions, the pupil/teacher ratio (PTR), and the number of FTEs per 100 students - the FTEs per 100 students has a reciprocal relationship with the commonly used PTR. This "teacher/student index" is introduced in this paper as a numerical indicator to answer the question, "How many full-time-equivalent teaching positions are required to deliver the educational program?"

In Nova Scotia, the total number of FTEs in a school includes the principal, vice-principals, guidance counselors, classroom teachers, and all specialist teachers on staff. At least as a basic starting point, the number of teachers and administrators are assigned to each school using a staffing formula. Individual school allocations may be increased beyond the formula base to accommodate unique circumstances. The formula includes limits on class size in some elementary grades and ratios for specialist allocations such as administration, guidance, music, French, physical education, and Reading Recovery.

The totals in Table 3 exclude Big Tancook Island Elementary School because the numerical values are "extreme" and would skew the calculation of the average pupil/teacher ratio and the teacher/student index.

The FTEs per 100 students (or teacher/student indices) in Table 3 demonstrate that more teaching positions are required to deliver the educational program in the smaller elementary schools compared to the larger schools. More specifically, the average teacher/student index of the 3 smallest elementary schools (excluding Big Tancook Island Elementary) is 10.41 compared to an average index of 6.67 for the 3 largest schools. Comparing these averages, the 3 smallest schools require 56% more teaching positions to deliver the educational program.

Table 4 provides the teacher/student indices for the elementary-junior high schools, middle schools and junior high schools. New Ross Consolidated School is significantly smaller than the other schools and its teacher/staff index is, likewise, significantly larger than the others.

**Table 3: Full-Time-Equivalent (FTE) Teaching Positions per 100 Students
(Elementary Schools)**

Name of School	Enrolment 2007-08	Full-Time- Equivalent Positions	Pupil/ Teacher Ratio	FTEs per 100 Students
Aspotogan Consolidated Elem. School	159	10.00	15.9	6.29
Big Tancook Island Elementary School	3	1.00	3.0	33.0
Bridgewater Elementary School	475	31.60	15.0	6.65
Chester District School	210	14.95	14.0	7.12
Dr. John C. Wickwire Academy	419	27.00	15.5	6.44
Gold River-Western Shore School	113	9.00	12.6	7.96
Greenfield Elementary School	25	3.20	7.8	12.8
Lunenburg Academy	106	7.95	13.3	7.50
Mill Village Consolidated School	46	4.35	10.6	9.46
Milton Centennial School	138	10.15	13.6	7.36
New Germany Elementary School	222	15.37	14.4	6.92
Newcombville Elementary School	149	10.40	14.3	6.98
North Queens Elementary School	125	8.80	14.2	7.04
Pentz Elementary School	103	8.16	12.6	7.92
Petite Rivière Elementary School	83	6.45	12.9	7.77
Riverport & District Elementary School	59	5.30	11.1	8.98
West Northfield Elementary School	178	12.25	14.5	6.88
Total (Excluding Big Tancook Island)	2610	184.93	14.1	7.09

**Table 4: Full-Time-Equivalent (FTE) Teaching Positions per 100 Students
(Elementary-Junior High Schools)**

Name of School	Enrolment 2007-08	Full-Time- Equivalent Positions	Pupil/ Teacher Ratio	FTEs per 100 Students
Bayview Community School	461	29.05	15.9	6.30
Centre Consolidated School	461	29.35	15.7	6.37
Chester Area Middle School	366	23.20	15.8	6.34
Hebville Academy	652	41.05	15.9	6.30
New Ross Consolidated School	161	11.80	13.6	7.33
South Queens Jr High School	315	19.35	16.3	6.14
Total	2416	153.8	15.7	6.37

The same type of data for the junior-senior high schools is presented in Table 5. In comparing the average indices of the 2 smallest highest schools to the 2 largest schools (8.54 and 6.14), the smallest schools require 39% more teaching positions to deliver the educational program.

Table 5: Full-Time-Equivalent (FTE) Teaching Positions per 100 Students (High Schools)

Name of School	Enrolment 2007-08	Full-Time-Equivalent Positions	Pupil/Teacher Ratio	FTEs per 100 Students
Bridgewater Junior-Senior High School	456	28.15	16.2	6.17
Forest Heights Community School	403	26.50	15.2	6.58
Liverpool Regional High School	335	22.50	14.9	6.72
Lunenburg Junior-Senior High School	173	14.05	12.3	8.12
New Germany Rural High School	428	28.15	15.2	6.58
North Queens Rural High School	149	13.35	11.2	8.96
Park View Education Centre	845	51.65	16.4	6.11
Total	2789	184.35	15.2	6.61

One final, important matter needs to be introduced in regard to the question, “When is small too small?” As noted in the previous section, a recent review of the literature on optimal school size did not produce any numerical values on enrolment to answer the question. This question is difficult to answer and there are risks to assigning numerical values. Nevertheless, in any serious discussion about school size in the context of school utilization, the question should not be ignored. At least for discussion purposes, some values should be “put on the table”.

Since no values are available from the research literature, one must turn to practical, professional experience. This writer has discussed the questions many times over many years with school-based educators. Based on his professional experience and that of other educators, the following “opinions” are offered for critical discussion:

- The enrolment of an elementary school with 7 grade levels (P-6) should be approximately 100.
- The enrolment of a junior high or middle school with 3 grade levels (6-8 or 7-9) should be approximately 175.
- The enrolment of a high school with 3 grade levels (10-12) should be approximately 300.

It must be emphasized that these approximations are offered for critical analysis in consultation with those who are responsible for program delivery in the schools. The numbers may change significantly after consultation with professional staff. The actual numbers may not be as important as having the discussion.

Changes in School Grade Configurations

Can the grade configuration of a school be changed without a negative effect on students and on learning? The short answer is “Yes”. Recently, this writer completed a research paper for the Department of Education entitled, “The Relationship between Learning and Grade Configuration”. The section entitled, “Summary and Conclusions” from this paper is provided as Appendix B at the end of this paper. The “overall conclusion” from that section is repeated here:

1. Grade configuration need not affect student learning negatively;
2. Possible negative effects can be prevented in designing a school’s physical layout and its organizational characteristics;
3. Whatever the configuration, there is some advantage to students if Grade 9 is recognized as a year of transition; and

4. The number of school-to-school transitions experienced by students during their school years should be given weight in selecting school configurations.

In other words, schools can be set up in various grade level configurations without causing a negative or positive effect on student learning. All kinds of grade level configurations have been operating for many years in Nova Scotia and all seem to be satisfactory or without unique, significant problems. These are the common configurations: P-5, P-6, P-8, P-9, 6-8, 7-9, 7-12, 8-12, 9-12, and 10-12.

Given these conclusions on grade configuration, various configurations are suitable options to use existing school facilities more efficiently. An elementary school with Grades P-6 can become a P-8 school; a high school with Grades 10-12 can become a 9-12 high school or a 6-12 middle level – high school; and even a P-12 school can be reasonably considered as an option. Such schools have been in common use across Nova Scotia over the past 40 years or more.

Equitable Access to Programs

As indicated at the beginning, a secondary but important purpose of this study is to recommend ways to improve student access to the Board's special regional programs, which are not available in every school. The SSRSB oversees a variety of unique programs beyond what must be provided in each school. The alternate programs in Liverpool and Lunenburg and the program at Verge House in Bridgewater are offered in facilities external to the schools. Although these programs are intended to be accessible to all students in the region, equitable access is hindered by geographical and other types of barriers. Also, some unique programs are delivered in one school and not in others. Perhaps the most visible school-based program is the International Baccalaureate program at Park View Education Centre. Because this program is not offered in other high schools, equitable access for students from other high schools is a matter of concern.

Availability of special programs is related to school size. It is very difficult to offer special programs in a small school because of the organizational inflexibilities and because of an insufficient number of students to justify offering the program. And indirectly, the availability of a unique program in a larger school creates a negative effect on a smaller neighboring school because of the tendency for students to transfer out, thus reducing the smaller school's enrolment even more. The school offering the program wants to attract students through transfer and the smaller neighboring school does not want to lose more students. As an option for discussion, this present and common circumstance could be turned around by providing special programs in the smaller school and then transporting students from the larger school.

This tension between schools caused by the desire to increase or maintain enrolments is most observable in the ability or inability of students to transfer easily from one school to another to access a unique program. Equitable access to special programs should be addressed constructively in the student transfer policy. How this can be done fairly and constructively is not answered easily. Hopefully the consultations around this paper will produce some answers.

Other factors influence the level of real and perceived equitable access. Can the program locations be improved and can the bus runs and schedules be adjusted to accommodate more students? These questions are open for discussion and suggestions.

Adjustments in Student Transportation

Any possible changes to school grade configurations and school boundaries must always take into account the required adjustments in student transportation. The main issue is about the

amount of time students must spend on a bus and this is related directly to the maximum distances traveled during a bus run. The amount of time spent on a bus, the departure time from home in the morning, and the arrival time at home after school are important factors which must be considered. How these factors affect all students should be evaluated, with particular attention to the impact on younger children.

Financial Issues in School Utilization

Three major financial issues in school utilization, in times of declining enrolment, may be expressed in the following questions:

1. How much additional funding is required to staff a small school, beyond what the staffing formula provides?
2. Can underutilized school facilities be used more efficiently and in different ways to bring them closer to their full operational capacity?
3. What major capital maintenance and renovations are required to keep a school operating?

Analysis of the operational inefficiencies in schools that are under-utilized is complex. Some of this complexity results from the fact that school staffing levels and school size (square footage) are directly related to the annual operating cost, but the same numbers are used in the provincial school board funding formula to determine a school board's operating revenue.

This complexity is most observable in how school boards receive their revenue for "property services" each year from the Department of Education. The "property services" portion of a board's total funding is the amount assigned to operate the school facilities. Fifty percent of the property services funding is tied directly to the total square footage of all schools, with the assumption that schools are operating at 87% capacity on average. The other 50% is directly related to the total enrolment of the school system. This second half of the property services funding is calculated by multiplying a dollar amount per student by the total number of students.

This 50-50 combination based on both the square footage of school space and the student enrolment means that reducing the amount of space being used in a school or closing a school entirely is not related directly to how much money is saved. Reducing the amount of square footage in operation cuts expenditures on a per square foot basis, but also it reduces revenue by the formula amount.

The student enrolment half of the property services funding is not affected when schools are reduced in operational square footage or when a school is closed entirely. This student enrolment portion of the funding "travels with the students" no matter where they are attending school.

Some cost savings result from reducing the amount of school space in operation or by closing schools, but the amount saved in terms of a board's operating budget is less than what is generally expected. The more significant savings are in terms of "capital" expenditures. Outside of the annual operating costs, every school requires capital upgrades and maintenance on a regular basis over a period of years. If a school needs a new roof or new flooring, then the additional capital costs are very significant. It is a matter of sound stewardship for a school board to manage its capital assets responsibly.

Part 2 Consultation Process

As explained at the beginning, Part 1 was the preparation of this paper and Part 2 allows for public discussion of its contents before recommendations are formalized. A final report will be prepared after the consultations and will contain recommendations in answer to the 5 questions set out in the purpose.

In the interest of being open and “up front”, readers of this report should anticipate that several schools will be given individual attention because of their size and projected enrolments. Although some schools are very small, mitigating factors exist. In the legislated School Review process, one of the “mitigating factors” to keep a school operating is “essential schools as determined by geographic isolation”. Perhaps no change will be proposed for geographically isolated schools, but raising the question publicly may generate new and interesting possibilities.

Regarding a timeline, the year-long School Review process occurs between April 1 and March 31. Thus, any schools to come under this formal review must be identified before April 1, 2008. This means that the final report after the Part 2 consultations must be submitted before March 1, 2008, if the SSRSB wishes to begin the School Review process on April 1, 2008, and have it continue for the next 12 months.

With the final report deadline of March 1, 2008, all consultations should be completed before February 15, 2008.

Once this paper is released publicly by the South Shore Regional School Board, it will be distributed to all schools, school advisory councils and municipal councils. Dr. Gunn, the writer and consultant, will meet with principals individually if their school may be affected directly by the recommendations formulated during Part 2 of the process. Public meetings will be scheduled throughout the region. Also, he may meet with the South Shore Regional School Board, a representative group of school administrators, and the regional Student Development Team to gain further insights.

Rather than attending the public meetings, individuals and groups may wish to prepare written submissions. All written submissions received by February 15, 2008 will be reviewed prior to the completion of the final report.

One point about the consultation sessions needs to be emphasized. The purpose of this Part 2 consultation is not to debate the relative advantages and disadvantages of closing particular schools. Such debates should be left for the School Review process if and when schools are identified for formal review and they would take place between April 1, 2008 and March 31, 2009. The purpose of this consultation is to gather input on the contents of this paper before any recommendations are drafted.

Appendix A

SOUTH SHORE REGIONAL SCHOOL BOARD Program Review P to 12 Phase II

General Principles:

- ★ More teachers to deliver recommended courses to keep class sizes reasonable based on the nature of the courses and the class make-up.
- ★ Teacher qualifications and competencies must match their assignments.
- ★ All students to have access to the following at their respective levels and according to any guidelines: Late French Immersion, Alternate and Transition programs, Community-Based Education, Advanced Placement, International Baccalaureate, Reading Recovery. The availability of these programs should be within the eastern, central and western areas of the South Shore Regional School Board.
- ★ To effectively support these recommendations a utilization study needs to be completed regarding operational issues around a facility use and transportation.
- ★ Review of grade configuration within the Board.
- ★ Although there is a decreasing enrollment, there is an increase in the need for special education services. All decisions made in relation to program review should ensure a continuum of special education support for all students at all levels.
- ★ Transitioning of students from home to school, grade to grade, school to school, level to level (elementary, middle, and senior) and school to community be supported.
- ★ To support professional growth school staff should be provided time within the schedule to meet as professional learning communities for collaboration, consulting and coaching.
- ★ Any decisions made in relation to program review must consider and respect diversity.
- ★ Staffing for schools must reflect minimum time allotments as stated in the Public Schools Program (PSP).
- ★ Staffing for schools must reflect the need for both professional and support staff.

Appendix B

The following Summary and Conclusions is quoted fully from a research paper entitled, "The Relationship between Learning and Grade Configuration", which was completed for the Department of Education by this writer in March, 2007.

Summary and Conclusions

From a broad or general perspective, the literature on grade level configuration does not yield consistent and definite answers to the questions of this study or those of the various questions investigated in other research studies on the topic. Consequently, anyone reviewing this body of literature must exercise some professional judgment and apply some experiential expertise to draw conclusions. Perhaps Wayne Sellers, a member of the OISE/UT faculty, expressed it best. He recently completed a review of the literature on configuring schools and, in his "Conclusions", he summarized the literature this way:

The literature on grade span and school configuration informs us that there is no single model to achieve all desired goals related to what we hope to accomplish through the use of various models. Indeed, there is no single configuration to achieve any particular goal. And goals need to be balanced. Academic achievement, student social development, and school drop out rates are all influenced by grade span configuration. Focusing on one of these must take into consideration how the others will be affected. In order to make the best decision about which configuration to use, therefore, it is imperative to know what goals are being sought and where they fit in the organization's list of priorities. Any chosen grade span configuration will have strengths as well as weaknesses. (Seller, 2004, p. 11)

This conclusion by Seller sets the tone and confirms the difficulty in trying to answer the specific questions of this study with any degree of precision. Although ambiguity cannot be avoided, the purpose of this study requires that some answers be formulated as precisely as possible. The conclusions drawn from this literature review take the form of specific answers to the first four questions that were stated in the Purpose of the Study. Thus, the "Conclusions" below match numerically Questions 1, 2, 3 and 4.

Conclusion 1: The findings from educational research are indefinite with respect to the effects of various grade level configurations on students, in terms of how different configurations affect their learning and their social and emotional development. The most referenced and most current findings are about student achievement levels for middle school grades when tested under different configurations - these are detailed in Conclusion 2. Other findings address Grade 9 as a year of transition between middle or junior high school and high school. A few studies are about the negative effects of school-to-school transitions on students between Grade Primary and Grade 12. Very generally, academic achievement and other areas of student development are influenced by grade configurations, but negative effects can be minimized as schools are configured. Educators who are aware of the potentially negative influences of particular configurations and of school-to-school transitions should be able to make beneficial adjustments in program delivery and organizational structures and processes.

Conclusion 2: The educational research on configuration does not clearly delineate the relative advantages and disadvantages of the Grade 6-8 middle school configuration compared to other configurations in common use, particularly the 7-9 junior high configuration. Some recent research has found that student achievement for middle school students in P-8 schools is higher than that for the same grades in 6-8 middle schools. As it should be, this finding is being questioned seriously because other factors may be the determinant variables.

Conclusion 3: From the educational perspective, Grade 9 should be housed in high schools, rather than middle schools or junior high schools, given the choice and with the understanding that no evidence strongly supports one configuration over another. The research does suggest that, whether in high schools or not, the Grade 9 year should be recognized as a period of transition, from the perspective of learning and teaching and the perspective of social, emotional and physical maturation.

Conclusion 4: The specific research on grade configuration contains very little direct reference to the P-12 configuration. Research on P-12 is more likely to be found indirectly by referencing the literature that compares small schools to large schools and rural schools to urban schools. Most P-12 configurations in North America have relatively small enrollments and many of these are in rural areas. In comparative studies of such schools, it is very difficult to distinguish the effects of the grade configuration, school size and rural-versus-urban variables. Whether or not the P-12 configuration has a direct relationship with student achievement is irrelevant in some respects because P-12 schools are the only practical option in areas of very low enrollments.

The overall conclusion drawn by this writer is summarized in these four points:

- 1) Grade configuration need not affect student learning negatively;
- 2) Possible negative effects can be prevented in designing a school's physical layout and its organizational characteristics;
- 3) Whatever the configuration, there is some advantage to students if Grade 9 is recognized as a year of transition; and
- 4) The number of school-to-school transitions experienced by students during their school years should be given weight in selecting school configurations.