

# **Class Size in Nova Scotia Schools**

Prepared by the Nova Scotia Teachers Union  
2003 – 2004

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## Introduction

This study received its mandate from the Nova Scotia Teachers Union 2002 Council, the policy making body of the Union. Council is held each year during the Victoria Day weekend in May. Resolutions are submitted during the fall of the school year for debate and disposition during the Council.

Council resolution 2002-51 states:

BE IT RESOLVED THAT the NSTU conduct a survey through school representatives whereby data is collected on actual class sizes in all schools in Nova Scotia.

The approach frequently taken by government is that class size information is reported through the student-teacher ratio. The current student-teacher ratio is approximately 16.5:1. Superficially, this appears to be an excellent classroom environment. Unfortunately however, this does not provide a picture of classrooms as experienced by teachers. Included in the calculation of this ratio are all administrators, guidance counsellors, resource teachers, central office school board staff and any other teachers who have either no classroom contact with students or reduced classroom and teaching duties. The ratio therefore is generally much lower than the number of students in classrooms as experienced by classroom teachers.

The intent of the resolution is to provide a picture of classrooms that more accurately reflects the day-to-day experience of teachers.

Administrative difficulties delayed the study until the fall of 2003.

## Methodology

In September 2003 a survey instrument was designed to collect data to meet the requirements of resolution 2002-51. The survey was distributed to NSTU school representatives at each of the Province's 491 public schools at the end of October 2003. They were asked to obtain the information from teachers in their schools and return the completed survey form to the NSTU by the end of November.

Rather than asking teachers to report student numbers, they were asked to report the number of classes they taught that were in specific size ranges. They were asked to report these numbers by one of four grade level ranges; early elementary, late elementary, middle level, and senior high school.

Although teachers typically work with classes of students at the same grade level, there are significant numbers of multi-grade classrooms. This has a pedagogical impact primarily at the elementary level. While classes at the high school level may include students from more than one grade level, specific curriculum content is usually the focus of instruction rather than different curricula to students at different grade levels. At the elementary level, teachers of multi-grade classes are usually delivering a different curriculum to each grade level. There were only one eighth as many multi-grade classrooms identified at the middle and senior high school level combined as at the elementary level.

School representatives were asked to distinguish between regular classrooms and multi-grade or split classes. If a multi-grade classroom encompassed grade levels spanning the grade level groups, the information was to be entered for the lower grade level range. For example, a split class of grade three and grade four students would be recorded in the "Primary to 3" grade level.

Segregated resource classes are rapidly being replaced by alternate formats for providing additional resources to students with special needs. The focus of this study did not include an examination of the demands placed on the school in the effort to provide extra resources to students. The intent of the study is to focus explicitly on class size. An opportunity was provided for school representatives to submit information about the size of dedicated resource classes.

The complete survey is included as Appendix A.

## The Data

A total of 220 surveys were returned or a return rate of 45%. Data were reported for 6792 regular classrooms, 446 multi-grade classrooms and 320 resource classrooms. These classroom data were reported from 220, 145 and 63 schools respectively.

### Regular Classrooms

The 6792 regular classes consisted of 827 classes at the Primary to 3 level, 756 classes from grades four to six, 1506 classes in the middle level of grades seven to nine, and 3703 classes at the high school level, grades ten to twelve.

The number of classes in each size category at each grade range is presented in Table 1 below.

	Class Size								Total
	Less than 8	9 to 14	15 to 19	20 to 24	25 to 29	30 to 35	More than 35	More than 40	
<b>Primary to 3</b>	5	27	159	377	236	22	1	0	827
<b>Grades 4 to 6</b>	2	24	64	294	319	53	0	0	756
<b>Grades 7 to 9</b>	6	73	164	359	611	277	11	5	1506
<b>Grades 10 to 12</b>	106	253	511	869	1034	815	99	16	3703
<b>Totals</b>	119	377	898	1899	2200	1167	111	21	6792

**Table 1 - Number of Classes at each grade range and size**

This information is translated into the percentage of classes at each grade level in the specific size category in Table 2.

At all grade levels, the proportion of very small classes of fewer than eight students is very low.

While there are very few very large classes at the elementary level, it is of note that over one quarter of the classes in the primary to grade-three grade level are in excess of 25 students. At the upper elementary level, the number of classrooms larger than twenty-five students increases to 42%, or more than two-fifths.

It is reassuring to teachers, parents and students that almost 69% of the classes from grades Primary to three have 24 students or fewer. This, however, does not diminish the difficulties faced by students and teachers of the other 31% of classes in these early formative years that are so crucial to later learning.

The proportion of larger classes generally increases with grade level. The percentage of classes with fewer than twenty-five students in grades four to six drops to 51.8%. In grades seven to nine this drops further to 39.9%. This is reversed somewhat in high school where 47% of the classes have fewer than twenty-five students. High schools have the greatest number of very large and very small classes. The largest proportion of classes with less than eight students and the largest proportion of classes with more than forty students are found in grades ten to twelve.

Grade Level	Class Size							
	Less than 8	9 to 14	15 to 19	20 to 24	25 to 29	30 to 35	More than 35	More than 40
Primary to 3	0.6%	3.3%	19.2%	45.6%	28.5%	2.7%	0.1%	0.0%
Grades 4 to 6	0.3%	3.2%	8.5%	38.9%	42.2%	7.0%	0.0%	0.0%
Grades 7 to 9	0.4%	4.8%	10.9%	23.8%	40.6%	18.4%	0.7%	0.3%
Grades 10 to 12	2.9%	6.8%	13.8%	23.5%	27.9%	22.0%	2.7%	0.4%
Total	1.8%	5.6%	13.2%	28.0%	32.4%	17.2%	1.6%	0.3%

**Table 2 - Percent of Classes at each grade range**

At the middle level and high school, the number of students in larger classes climb significantly compared to the elementary grades. Almost one fifth (18.4%) of the classes at the middle level and 22% of the classes at the high school level are in the 30 to 35 student range. 60% (40.6 + 18.4 + 0.7 + 0.3) of all middle level classes have 25 or more students and more than half (27.9 + 22.0 + 2.7 + 0.4 = 53) of all senior high school classes exceed twenty-five students. This is in comparison to only 2.8% at the Primary to grade 3 level and 7% for senior elementary.

The percent of classes in excess of 35 and 40 students is small. However, there are still more than one hundred classes reported in this range. It is small consolation to these students that their overcrowded learning conditions constitute just a small fraction of the total number of classrooms. The classes at the high school level that have more than forty students represent a very difficult learning and teaching environment for those affected.

### ***Multi-grade classrooms***

Generally, multi-grade classrooms are less than twenty-five students, but the proportion that is larger is significant with 32.1% and 37.9% at the Primary to grade 3 and Grade 4 to Grade 6

levels respectively. Multi-grade classrooms involve additional educational and pedagogical challenges that should not be compounded by large numbers. It is disturbing to note that one school reported a multi-grade class with more than forty students in the youngest grade level grouping.

Because the number of multi-grade classrooms at the middle-senior level is small, it is difficult to make generalizations or assert patterns with a strong degree of confidence. In particular, the number of reported multi-grade classrooms at the middle level is sufficiently small that it is difficult to know whether the figure of 70% of such classrooms in excess of twenty-five students is a generalized pattern. The figure does, however, suggest a reason for further investigation.

Grade Level	Class Size								Grand Total
	Less than 8	9 to 14	15 to 19	20 to 24	25 to 29	30 to 35	More than 35	More than 40	
Primary to 3	7	21	51	111	84	5		1	280
Grades 4 to 6	6	3	13	50	38	6			116
Grades 7 to 9		2		1	2	3	2		10
Grades 10 to 12		10	10	8	6	5	1		40
<b>Grand Total</b>	13	36	74	170	130	19	3	1	446

**Table 3 Multi-grade classes, reported numbers**

Grade Level	Class Size							
	Less than 8	9 to 14	15 to 19	20 to 24	25 to 29	30 to 35	More than 35	More than 40
Primary to 3	2.5%	7.5%	18.2%	39.6%	30.0%	1.8%	0.0%	0.4%
Grades 4 to 6	5.2%	2.6%	11.2%	43.1%	32.8%	5.2%	0.0%	0.0%
Grades 7 to 9	0.0%	20.0%	0.0%	10.0%	20.0%	30.0%	20.0%	0.0%
Grades 10 to 12	0.0%	25.0%	25.0%	20.0%	15.0%	12.5%	2.5%	0.0%
<b>Total</b>	2.9%	8.1%	16.6%	38.1%	29.1%	4.3%	0.7%	0.2%

**Table 4 Multi-grade classrooms, percent of grade level**

### ***Resource Classrooms***

Generally, there were many fewer classrooms reported that were classified specifically as resource classrooms. The large majority of these classrooms were comparatively small.

Grade Level	Class Size								Grand Total
	Less than 8	9 to 14	15 to 19	20 to 24	25 to 29	30 to 35	More than 35	More than 40	
1	44	10	6	2	5	1		1	69
2	32	11	5	4	2		1	2	57
3	55	8	10	6				1	80
4	79	33	2						114
Grand Total	210	62	23	12	7	1	1	4	320

**Table 5 Resource Classrooms, reported numbers**

Grade Level	Class Size							
	Less than 8	9 to 14	15 to 19	20 to 24	25 to 29	30 to 35	More than 35	More than 40
Primary to 3	63.8%	14.5%	8.7%	2.9%	7.2%	1.4%	0.0%	1.4%
Grades 4 to 6	56.1%	19.3%	8.8%	7.0%	3.5%	0.0%	1.8%	3.5%
Grades 7 to 9	68.8%	10.0%	12.5%	7.5%	0.0%	0.0%	0.0%	1.3%
Grades 10 to 12	69.3%	28.9%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	65.6%	19.4%	7.2%	3.8%	2.2%	0.3%	0.3%	1.3%

**Table 6 Resource Classrooms, percent of grade level**

At all grade levels, the proportion of resource classrooms with fewer than twenty students was greater than 80%. However the exceptions to this place students and teachers in very stressful and difficult situations. Students in resource classrooms are there because they require focused, individualized attention. Those resource classrooms of twenty or more students are defeating the purpose of the resource classroom in the first place. The four resource classrooms with more than 40 students can only be described as both absurd and appalling.

## Conclusions

While it is encouraging to discover that almost half the Province's classrooms (48.6%) consist of twenty-four or fewer students, there remains some significant problems areas. It is clear that there are many more very large classes at the middle level and high school level than at the elementary levels. This jump in large classes is not negligible. One fifth of these classrooms are in excess of thirty students.

The fact that 31% of all early elementary classrooms consist of twenty-five or more students is of considerable concern. The effort made to reduce the size of these classes continues to fall short of the desired goal. In addition, a fifth of all middle level students and a quarter of all high school students are expected to learn in classrooms with thirty or more of their peers.

We also find an unacceptable number of classes in excess of thirty-five students. Extrapolating from the collected data, there are over 220 such classrooms across the province at the high school level and over 240 across all grade levels. The proportion of these classrooms (2.7% for high schools and 1.6% for all schools) belies the impact of these classrooms on actual students and teachers. There are more than eighty classrooms exceeding forty students at the middle and high school level. Any public school classroom with more than forty students is unacceptable.

Although multi-grade classrooms present additional learning challenges, there are still almost a third (32.2%) of such classrooms at the earliest level in excess of twenty-five students. At the upper elementary level, this rises to 38%. Efforts must be made to reduce and eliminate the compound challenges of multi-grade classrooms coupled with large class size.

The examination of dedicated resource classes exposes disturbing exceptions to the expectation for and the general reality of small class size for such classes. Although comprising only a small proportion of the reported resource classes, almost 2% have more than thirty students. Such classes impose impossible expectations along with unacceptable working and learning conditions for students and teachers alike.

In recent years progress has been made toward the reduction of class size. Every teacher is acutely aware that he or she can provide a greater focus on each student's specific educational challenges in smaller classes. The number of large and very large classes continues to be a problem at all grade levels. This must continue to be a focus of the efforts of both the Nova Scotia Teachers Union and the Government of Nova Scotia through the Department of Education in order to address the educational and pedagogical issues presented by large class size.



## Appendix A

## **NSTU Class Size Survey**

Regional School Board: \_\_\_\_\_

School: \_\_\_\_\_

Local: \_\_\_\_\_

NSTU School Rep Name(s): \_\_\_\_\_

Please complete the following three tables. Each table is distinct and the information in one should not be part of the information in another table. Enter the number of classes in your school that are in the indicated class size ranges. These forms may be photocopied if additional copies are required.

### **Regular Classes**

**(e.g. Primary, Grade 5, Grade 7 English, Physics 12, etc.)**

Class Size	Grades P through 3	Grades 4 through 6	Grades 7 through 9	Grades 10 through 12
Less than 8				
9 to 14				
15 to 19				
20 to 24				
25 to 29				
30 to 35				
Greater than 35				
Greater than 40				

### **Split Classes**

**(e.g. P-1, 3-4, etc. If a split is across the categories below, such as a 3-4 split, please enter the class size in the lower category, which in the case of a 3-4 split would be the “Grades P through 3” category.)**

Class Size	Grades P through 3	Grades 4 through 6	Grades 7 through 9	Grades 10 through 12
Less than 8				
9 to 14				
15 to 19				
20 to 24				
25 to 29				
30 to 35				
Greater than 35				
Greater than 40				

## ***NSTU Class Size Survey***

Regional School Board: \_\_\_\_\_

School: \_\_\_\_\_

Local: \_\_\_\_\_

NSTU School Rep Name(s): \_\_\_\_\_

### **Resource Classes**

(Record separately here and not to be included in the “Regular Class” information)

Class Size	Grades P through 3	Grades 4 through 6	Grades 7 through 9	Grades 10 through 12
Less than 8				
9 to 14				
15 to 19				
20 to 24				
25 to 29				
30 to 35				
Greater than 35				
Greater than 40				

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