

3. SCHOOL DIVISION SIZE

Is there an optimal size for a school division?

Many have researched the topic of school division size. Most of those who have, also attempted to answer the above question. It was important for the Commission to address this apparently simple question directly since it is at the very core of a boundaries review of the existing 57 school divisions and districts in Manitoba.

When we refer to school division size, the usual measurement is the number of students enrolled. However, size must also be influenced by factors of distance, density, topography and location. These additional influencing factors are extremely important in Manitoba due to our massive geographical area, our limited and imbalanced areas of population concentration, low density factors and varied terrain.

Size is a very relative term. In heavily populated areas school divisions can be "small" at 10,000 students whereas in some rural areas "small" can mean as low as a few hundred students. A division can be very large geographically but if it has low density ratios it may still have small student numbers. Widely spaced farms mean long distances for bus routes and a greater portion of budgets spent on transportation. The difficulty in gathering reasonable numbers of students at an education centre creates programming dilemmas in many rural areas.

In seeking to address the issue of appropriate school division size, the Commission reviewed recent history throughout Canadian school divisions, with special emphasis on recent activity in Saskatchewan and Alberta due to their similarities to Manitoba. Additionally, a major component of research commissioned to Dr. Ball included a literature review of appropriate areas in Canada, the United States and beyond, to ascertain the extent, validity and pertinency of previously completed studies.

Our reviews uncovered pertinent work done in several areas of the world on the sizing topic and the Commission found the research done in Illinois, Kentucky, Minnesota and some parts of Canada to be very useful in approaching this issue. Unfortunately, Canadian research is not plentiful and there is room for future focus on this topic for Canadian universities and educational researchers.

Respecting the State of Illinois, A. Ramirez provides pertinent comments in *Size, Cost and Quality of Schools and School Districts: A Question of Context* published in: *Source Book on School and District Size, Cost and Quality*. He concluded that any type of school (small or large, urban, suburban, or rural) can achieve successful outcomes. Noting that a school is not just a building but a learning community, he pointed out that the organization within the building is more of a key element than size. School district or division size is an even more elusive variable when judging educational outcomes since the nature, will and mission of each division/district can be quite distinct. The Commission found this to be the same in Manitoba. Some divisions have the assessment base to be able to provide wider opportunities to their students; others have the assessment base but choose not to. In other cases, divisions stretch themselves to the outer limit of their financial capability in order to provide what they feel is an appropriate level of education.

New technology has the potential to reduce the significance of size but size for administrative groupings is different than size for student groupings especially when the bussing issue is considered. The Commission heard frequently and observed on a number of occasions that the bussing times and distances in rural Manitoba appear to be at their maximum limits now and that major attempts to further consolidate students and increase bussing are questionable. The optimum size for educational institutions (both schools and school divisions) must be an elastic concept related to the educational mission of the Department of Education and local boards tempered by local factors and available resources. It is also important to recognize that rationalization at the administration/school board level does not necessarily translate to major changes at the school level and certainly not necessarily to school closures.

Ramirez advised researchers and policy makers to consult with those affected by size decisions to gain perspective on the historical, cultural and political context of the affected communities. The 58 public meetings achieved this objective for the Commission - the consultation and interaction gave all members a valuable context within which to weigh all of the potential options.

In a submission to the Commission on March 15, 1994, Faculty of Education members from the University of Manitoba, Dr. Benjamin Levin and Dr. J. A. Riffel related the results of their experience and review of both the American and Canadian research on size of schools and school divisions. Quoting research performed by David Monk (United States) and Peter Coleman (Canada) to support their contention that it is difficult to find economies of scale

connected with school division size, Riffel and Levin advanced the opinion that both schools and districts should be relatively small in the interests of student achievement and well-being.

The Manitoba Teachers' Society has reviewed extensive research on this topic and presented a different view to the Commission in its brief:

"Scale greatly influences scope of education program and service delivery by Manitoba public school divisions and districts. Today, divisions which benefit from economies of scale can provide more enriched learning conditions for students, and offer more stable and enabling teaching environments for their teachers. Divisions which have lost economies of scale are unable to provide more enriched learning conditions for their students, and offer a less stable, more difficult teaching environment for teachers.

The diseconomies of scale present in most Manitoba school divisions/districts in the opening years of the 1990s have raised barriers to uniform student access to education programs and services throughout the province, and a burden on teachers striving to maintain the equality of education. Each new education jurisdiction should be viable both educationally and economically."

American examples of opposing views vis-à-vis school division size are advanced by B. Berlin in a paper presented to the annual meeting of the American Educational Association in 1989 promoting "smaller is better" and Robert F. Hall in a paper presented at the annual conference of the National Rural Education Association in 1993 supporting the move towards amalgamation and integration of school districts.

Berlin and others maintain that "people seem to learn, change, and grow in situations where they have some control, some personal influence and some efficacy". They claim that small size of both school and school districts produces superior graduates.

Hall argued the opposite view following a review of recent school district consolidation in Illinois. His literature search summarized: (1) evidence that lead the State of Illinois to offer financial incentives for school and school district consolidation; (2) research on strengths and weaknesses of large and small schools and school districts; (3) attitudes towards consolidation expressed by State Departments of Education in Minnesota, Iowa, Missouri, Kentucky, Indiana and Michigan. In Illinois, where state financial incentives are pushing small rural districts to reorganize, extensive on-site interviews were conducted with administrators, board members, teachers and others in nine school districts that had been reorganized since 1983. Hall suggested that the results point towards the advantages of reorganization and consolidation greatly outweighing the disadvantages. His review concluded that reorganized districts have provided students with a broader curriculum; teachers with increased salaries, benefits, and opportunities

to focus on fields of interest; and taxpayers with a more efficient school system. He also cautioned, however, that in some cases consolidation increased travel time and did not appear in itself to have solved financial difficulties.

Herbert J. Walberg in his publication *On Local Control: Is Bigger Better?* advanced the opinion that increasing division/district size was producing negative education indicators. He noted that from 1940 to 1990: (1) the number of U.S. school districts decreased 87% from 117,108 to 15,367 while average district enrollment increased over ten times from 217 students to 2,637; (2) the number of public schools decreased 69% from approximately 200,000 to 62,037, while average enrollment increased over 4 times from 127 students to 653; (3) the percentage of school revenues from state funding increased from 30% to 48%. During all of these changes, average state scores for grade 8 mathematics proficiency were significantly and negatively related to average school size, average district size, and percentage of educational funding paid by the state. Walberg believed that this finding was supported by other literature reviews covering research on economies and diseconomies of scale, the relationship of organizational size to efficiency in productivity, the growth of state educational bureaucracies, the influence of school size and educational outcomes, and the effects of "remote" educational funding on local control and accountability.

The foregoing examples of opinions on opposite sides of the optimal size issue are but a few of many. Even their opinions and research have been criticized and challenged subsequently by others who disagree. These are only to display the variation of opinion that exists on this matter and to provide context for the Commission's own conclusions to be discussed later.

In the section entitled *Elsewhere in Canada*, found in Chapter III of this report, details of major change evolving in almost all provinces and territories of Canada were reviewed. Virtually all changes involve reducing the number of divisions and trustees with varying emphasis on local school advisory councils and parental involvement.

Not only is the extent of change variable throughout Canada, but the methodology for achieving change also ranges from one of participatory democracy to autocratic imposition. In Alberta, we see major change being imposed by a government that campaigned on a platform of major change, was elected, and feels it has a mandate to implement substantial change directly. In Saskatchewan, we see a modified approach to achieve some changes voluntarily by utilizing financial incentives.

During the public hearing process, the Commission heard numerous opinions as to appropriate school division sizes. The majority of these opinions related to the current size of the division or district making that presentation. There was a reluctance on the part of most to being definitive in their opinions as to the non-viability of the smallest divisions. However, there was an underlying feeling that there is a need to rationalize the smallest divisions due primarily to their inability to provide a comprehensive range of educational services and the apparent inefficiencies of having school boards and administrations for very small numbers of students.

A difficulty in the research found on division/district sizes emanates from the question "How small is small?". In much of the literature and research publications, the term small is used in reference to high schools where the student population is under 500, graduating less than 100 per year. When comparing research, one must be careful in ensuring that it is applicable. The term small as used in some American research would refer to sizes of schools that in Manitoba would be deemed large. The same comparisons can be made with district and division sizes.

The most recent activity in any province of Canada that is particularly pertinent to sizing Manitoba divisions is that which has taken place in Saskatchewan over the past two years. Our westerly neighbour is very comparable in that we have a similar number of students. Although Saskatchewan is able to make much more use of its provincial land area than does Manitoba, there are comparable distance, density, climatic and rural depopulation problems.

Following publication of a consultants report on school division governance, commissioned by the Provincial Government, that did not meet with a high level of favor, the Saskatchewan School Trustees Association was challenged to articulate its own set of recommendations. A task force was established in November, 1992 and reported to the full membership in November of 1993. The task force included representation from all areas of Saskatchewan at the trustee level together with representatives from other educational groups such as teachers, school business officials, educational leaders, and the provincial department. Its core recommendations which were adopted at the November, 1993 convention included very specific references to number and size of school divisions. The summary provided at the Saskatchewan School Trustees Association convention reads in part:

"The task force recommended that there be approximately 35 public school divisions in Saskatchewan, each with a minimum enrollment of between 2,500 and 5,000 students. Exceptions to these enrollment guidelines might occur in areas where the population is sparse or dense. School divisions of this size would allow economies of scale to be realized, administrative expenses to be rationalized and a full range of services to be offered to students. They would have budgets that are large enough to provide some flexibility and enough students so that the

ongoing declining enrollment predicted for the future would not reduce them to an inefficient size. Each of these school divisions would be governed by an elected board of education responsible for educational outcomes and system operations."

The task force in recommending the reduction from 92 public boards to 35, argued that it was difficult to justify the existence of a full complement of trustees and administrators for school divisions with less than 2,500 students. Thus, they recommended that, subject to local anomalies, division minimums be between 2,500 and 5,000.

In summary then, it is obvious that there is wide ranging opinion on the merits and demerits of increasing school division size and integrating school division administrations. There are arguments well advanced on both sides of the issue. The difficulty in distilling the myriad of positions and arguments vis-à-vis school division size was evident in Dr. Ball's comments to the Commission when he said: "Is the lack of a trend a trend, or is the lack of a definitive answer a definitive answer? There are no clear answers that define the most efficient or effective school district size."

The accompanying Figure 24 depicts groupings of existing Manitoba school divisions and districts by September 30, 1993 student enrollments.

Manitoba's school divisions range in size of student enrollment from 764 to 34,764 (September 1993). The 6 remote school districts range from a low of 156 to a high of 3,701. Special revenue school districts range from 21 to 435.

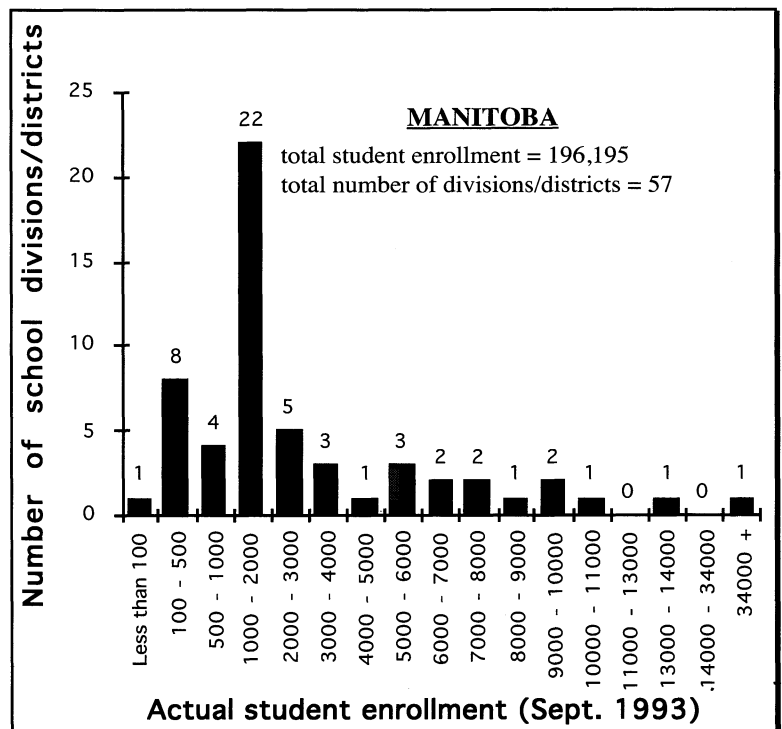


Figure 24

OBSERVATIONS ON DIVISION SIZE

- 13 out of 57 Manitoba divisions/districts have less than 1,000 students. All except Pointe du Bois have their own administration and elected school trustees.

- 38 out of 57 divisions/districts have less than 2,500 students representing 22.9% of total provincial enrollment.
- 67% (38) of the divisions/districts account for less than 23% of the students.
- 33% (19) of the divisions/districts provide for more than 77% of students.
- Research does not appear to prove conclusively the existence of optimally sized school divisions. Exclusive of numerous other factors, size alone is not a good predictor of either educational or financial effectiveness.
- The major thrust of change, especially in North America in the last ten years, has been to reduce the number of school divisions, thus increasing the size of divisions both in terms of area and enrollment.
- The research most pertinent to Manitoba on attempted optimal sizing is that of Saskatchewan where minimums of between 2,500 and 5,000 students in each division were recommended.

CONCLUSIONS ON DIVISION SIZE

- There is no optimal division size. Manitoba needs to design its divisions taking into account numerous factors inclusive of student population, number of schools, population density, community of interest, trading areas, normal transportation patterns and resources available.
- Change in the number and size of divisions does not mandate school closures. Rationalization of administration at the school board and senior management levels may change the numbers of students administered by each but should not be seen as dictating a change in the schools children attend or whether individual schools continue to exist. Students will continue to live in the same place and their most logical school choice should not be directly affected by a change in size of the division.
- Rationalization of the number of divisions and redeployment of some administrators could help the continued existence of smaller schools as opposed to closing them, by ensuring that available resources are focussed closer to the classroom level.
- Bussing in rural areas is stretched to its elastic limit. The one hour maximum used as a guideline by most divisions appears to be appropriate under the circumstances. Consideration of enlarging school divisions should be entertained only in the context of potentially consolidating or integrating administration and school boards - not in the context of increased bussing or school closures.
- It is very difficult to rationalize a board and full administration for less than 2,500 students. In fact, that minimum should range closer to the 5,000 figure were it not for distance, density and transportation limitation factors in rural areas. In urban areas, where distance is not a major consideration, division size could be much larger (in terms of enrollment) with other factors such as balance, symmetry and simplicity being more consequential in dictating eventual size and boundary locations.
- Other implications on school division size will be dealt with later under sections pertaining to cost of operation, property assessment, taxation and distance education.

4. COST OF OPERATING SCHOOL DIVISIONS/DISTRICTS

On an annual basis, Manitobans invest more than \$1.1 billion in the public school system.

The adjacent Figure 25 displays graphically that over 82.3% of expenditures are for salaries and benefits. The education system of necessity is primarily staff related and this accounts directly for over \$900 million of the \$1.1 billion in total expenditures.

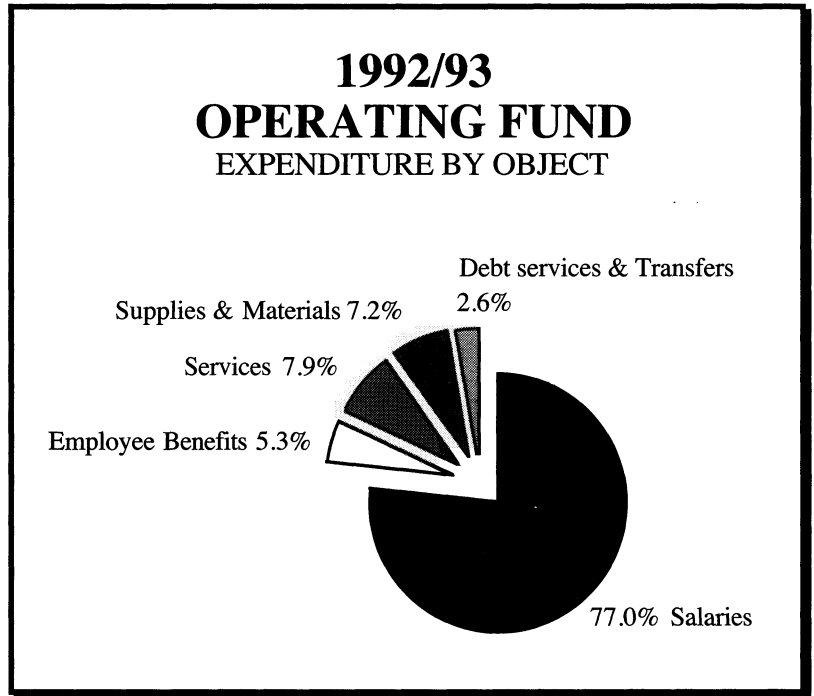


Figure 25

Figure 26 on the right displays the distribution of expenditures by function. Regular instruction consumed less than 57% of the budget; exceptional services (special needs and support services) has grown to almost 12%; transportation accounts for 4.3%; and administration 4.0%.

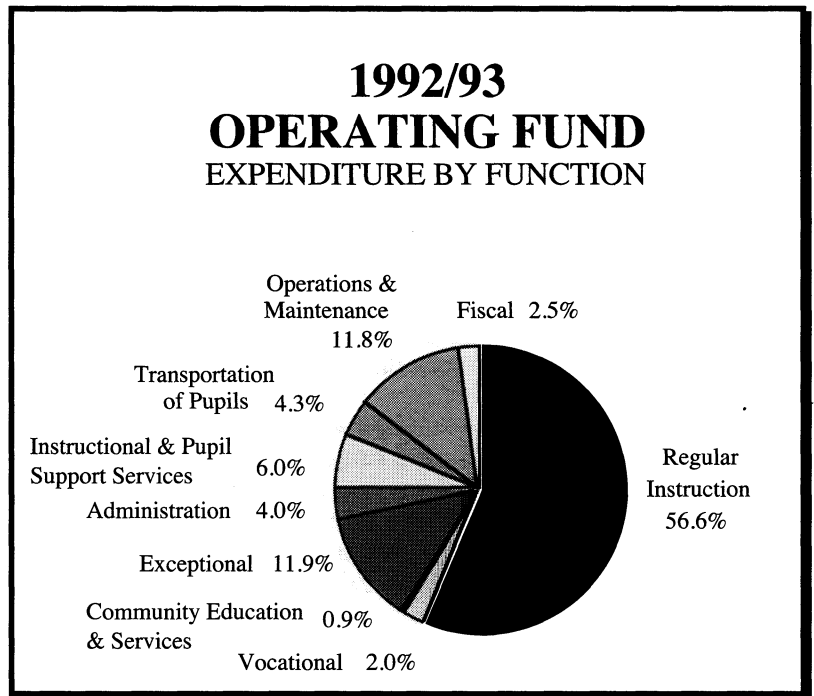


Figure 26

Source: FRAME reports, Schools' Finance Branch

1992/93 ENROLLMENTS, EXPENDITURES AND SELECTED CATEGORIES

Division / District	F.T.E.*		1992/93		Regular		Transportation		Administration	
	Enrollment	K-12	Actual		Instruction		of Pupils			
			Total**	Per Pupil	%	Per Pupil	%	Per Pupil	%	Per Pupil
Winnipeg No. 1	31,262.0		204,182,623	6,531	52.2	3,677	1.6	105	3.4	222
St. James-Assiniboia No. 2	9,636.7		55,086,617	5,716	57.9	3,689	1.3	72	3.6	204
Assiniboine South No. 3	6,640.0		37,477,997	5,644	59.5	3,361	1.7	95	4.1	229
St. Boniface No. 4	5,830.5		33,225,700	5,699	61.1	3,542	2.2	124	4.5	258
Fort Garry No. 5	6,712.0		40,608,998	6,050	56.6	3,487	1.6	95	3.7	223
St. Vital No. 6	9,859.5		51,017,496	5,174	58.7	3,074	2.3	121	3.5	180
Norwood No. 8	1,329.5		8,308,844	6,250	60.6	3,821	2.0	125	5.5	344
River East No. 9	12,811.5		68,625,643	5,357	59.4	3,306	3.2	169	3.2	172
Seven Oaks No. 10	9,152.6		51,383,232	5,614	63.0	3,597	3.6	203	3.5	195
Lord Selkirk No. 11	4,537.0		24,768,039	5,459	55.7	3,397	6.2	336	3.4	185
Transcona-Springfield No. 12	8,139.0		42,763,558	5,254	59.4	3,240	4.6	244	3.2	168
Agassiz No. 13	2,806.7		15,188,908	5,412	64.9	3,542	8.2	446	3.8	205
Seine River No. 14	4,833.9		24,394,229	5,046	62.7	3,197	7.3	369	3.2	159
Hanover No. 15	5,388.9		22,421,175	4,161	62.0	2,869	6.1	255	3.2	133
Boundary No. 16	767.1		4,908,818	6,399	52.5	3,609	11.3	724	5.5	354
Red River No. 17	1,147.0		6,359,423	5,544	57.4	3,196	8.0	446	4.9	272
Rhineland No. 18	1,361.0		6,746,340	4,957	59.4	3,121	7.3	362	5.5	275
Morris-Macdonald No. 19	1,568.7		8,209,787	5,233	59.4	3,106	9.8	512	3.7	192
White Horse Plain No. 20	1,060.0		6,155,101	5,807	61.2	3,586	7.9	461	5.7	334
Interlake No. 21	3,383.0		15,652,682	4,627	62.3	2,884	8.8	407	3.4	158
Evergreen No. 22	1,816.0		9,885,889	5,444	58.0	3,203	8.0	435	4.4	240
Lakeshore No. 23	1,511.5		8,066,598	5,337	55.0	3,305	12.6	672	4.2	224
Portage la Prairie No. 24	3,669.9		18,584,062	5,064	61.8	3,223	3.9	200	3.1	157
Midland No. 25	1,629.5		8,547,721	5,246	63.4	3,370	8.8	459	4.2	223
Garden Valley No. 26	2,684.5		12,125,609	4,517	63.3	2,993	4.2	189	4.2	189
Pembina Valley No. 27	877.7		5,343,895	6,089	59.8	3,642	11.6	706	5.3	321
Mountain No. 28	1,150.5		6,992,537	6,078	66.5	4,042	8.2	499	3.7	225
Tiger Hills No. 29	1,195.5		7,494,514	6,269	60.2	3,775	9.3	582	4.8	298
Pine Creek No. 30	1,421.0		7,314,957	5,148	62.7	3,261	11.2	577	4.3	222
Beautiful Plains No. 31	1,692.0		8,458,829	4,999	62.9	3,231	7.5	375	4.4	221
Turtle River No. 32	1,175.5		7,032,487	5,983	59.6	3,588	10.2	612	5.2	309
Dauphin-Ochre No. 33	2,198.5		11,509,485	5,235	51.3	3,185	5.3	276	4.1	217
Duck Mountain No. 34	900.5		5,344,527	5,935	59.3	3,556	9.4	558	5.3	316
Swan Valley No. 35	2,053.5		12,159,654	5,921	55.0	3,711	9.0	531	4.3	255
Intermountain No. 36	1,331.5		6,938,787	5,211	57.8	3,011	11.2	583	4.8	251
Pelly Trail No. 37	1,104.5		6,304,999	5,708	59.9	3,422	13.4	764	4.6	264
Birdtail River No. 38	1,454.0		7,817,456	5,377	58.8	3,159	11.9	641	5.3	287
Rolling River No. 39	2,223.0		12,479,804	5,614	60.1	3,408	8.3	468	5.1	289
Brandon No. 40	7,727.0		35,962,066	4,654	60.3	3,067	2.6	121	3.4	158
Fort la Bosse No. 41	1,785.0		10,540,728	5,905	57.9	3,611	9.3	548	3.7	217
Souris Valley No. 42	1,130.5		6,248,897	5,528	61.0	3,373	9.1	505	5.9	324
Antler River No. 43	981.0		5,642,373	5,752	60.3	3,470	11.2	644	6.0	343
Turtle Mountain No. 44	1,231.0		7,101,990	5,769	58.1	3,382	9.2	531	5.1	295
Kelsey No. 45	1,935.2		10,169,668	5,255	62.7	3,354	3.6	191	5.5	288
Flin Flon No. 46	1,733.5		10,101,880	5,827	61.8	3,646	1.7	97	6.3	368
Western No. 47	1,334.5		6,649,141	4,982	61.1	3,093	4.7	235	5.2	261
Frontier No. 48	4,613.0		47,707,886	10,342	40.0	4,174	8.6	889	7.4	764
Churchill No. 2264	223.0		1,661,576	7,451	59.5	4,874	3.8	281	6.7	498
Snow Lake No. 2309	292.5		2,103,272	7,191	66.2	4,759	2.1	150	7.3	524
Lynn Lake No. 2312	223.2		1,604,156	7,348	59.9	4,402	0.4	26	7.8	570
Mystery Lake No. 2355	3,706.5		21,487,392	5,797	54.6	3,338	0.4	24	5.5	321
Sprague No. 2439	126.5		1,072,924	8,482	50.9	4,316	9.0	761	7.7	657
Leaf Rapids No. 2460	379.0		2,724,148	7,188	64.3	4,624	0.7	50	6.0	434
South Wpg Technical Institute	497.0		3,261,577	6,563	-	-	-	-	12.7	835
PROVINCE	186,233.2		1,063,962,693	5,713	56.6	3,422	4.3	248	4.0	232

Figure 27

*Note: Full-time equivalent enrollment is lower than opening enrollment since kindergarten students are counted as 0.5.

**Note: Excludes Community Education and Service costs

Source: FRAME Report 1992/93 Financials - Schools' Finance Branch with analysis by Boundaries Review Commission (Portions of tables have been combined for display purposes).

SCHOOL DIVISION/DISTRICT ADMINISTRATION COSTS
1992/93 ACTUAL

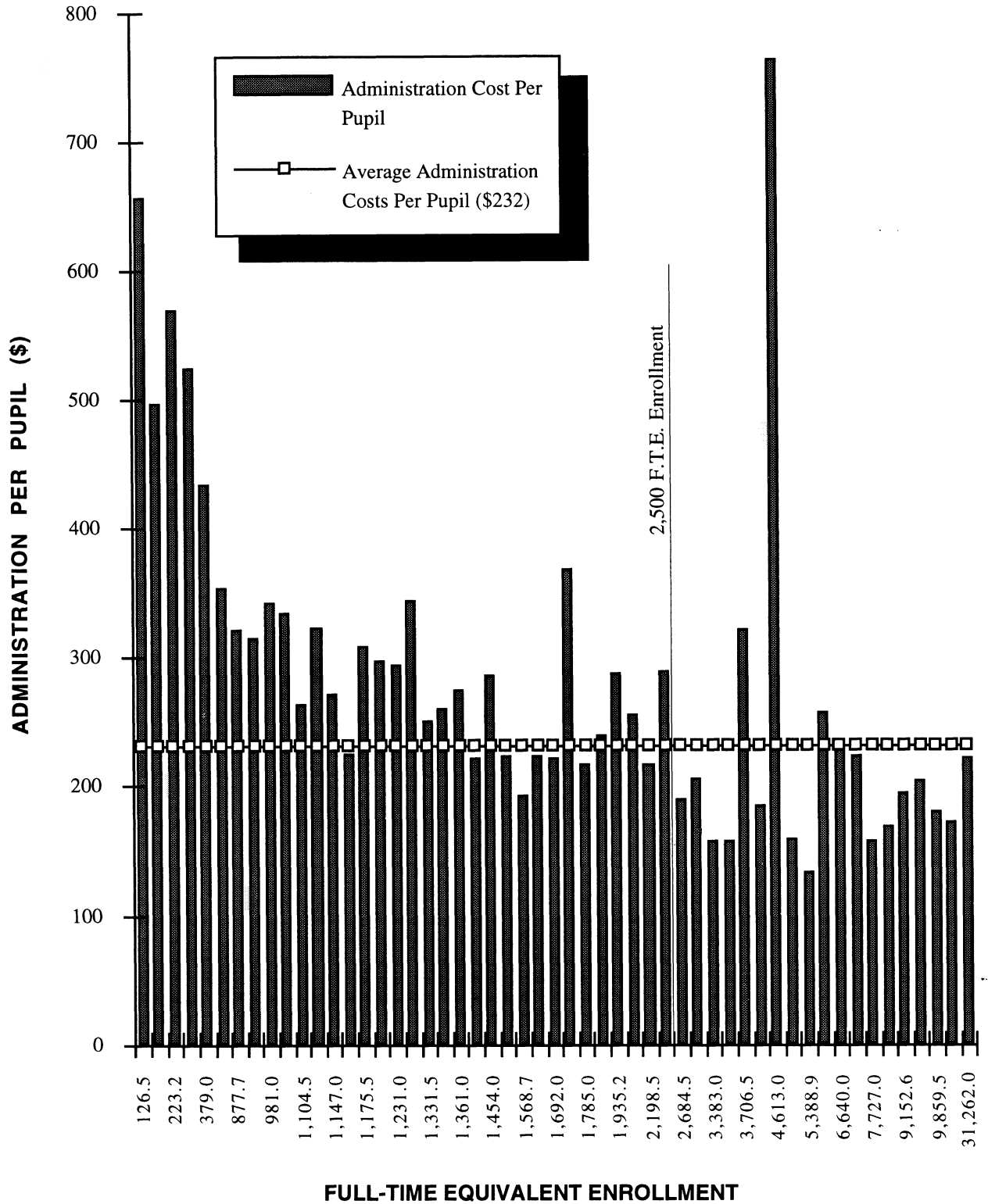


Figure 28

Source: Frame 1992/93 Financials with analysis by Boundaries Review Commission

OBSERVATIONS ON COST OF OPERATION

Based on 1992/93 school division/district actual expenditures and Figures 27 and 28 on the two preceding pages:

- School division/district budgets total approximately \$1.1 billion.
- 82.3% of total budgets were personnel costs (salaries and benefits).
- 56.6% of total budgets were directed to regular instruction.
- 4.0% of total budgets were expended on administration.
- 4.3% of total budgets were used for transportation.
- Total per pupil costs ranged from a low of \$4,161 in Hanover School Division No. 15 to \$6,531 in Winnipeg School Division No. 1 in divisions south of 53°.
- Total per pupil costs for divisions/districts north of 53°, remote districts and Frontier School Division No. 48 ranged from \$5,255 in Kelsey School Division No. 45 to \$10,342 in Frontier School Division.
- Administration costs averaged 4.0% of budgets and ranged from 3.1% in Portage la Prairie School Division No. 24 to 7.8% in Lynn Lake School District No. 2312.
- Transportation costs averaged 4.3% of budgets and ranged from 0.4% in Lynn Lake and Mystery Lake No. 2355 (Thompson) school districts to 13.4% in Pelly Trail School Division No. 37.

The desire to avoid further reductions in services causes many people to focus on administration costs in any review of public service organizations. Many in the private sector chose to rationalize management levels during the last recession. The public service including the school system, has not been immune to this process although it has appeared later in the schedule of introspection.

The Commission heard often from proponents within the system that administration accounts for less than 4% of the budget so one should not look for economies in this area. However, 4.0% of \$1.1 billion amounts to nearly \$44 million in annual costs. When the service end of an organization is suffering from fiscal pressures, it is equally important to examine the administrative costs. The majority of "people" reductions that have already taken place in the education system, are at the classroom level. As this is the primary site at which education takes place, care must be taken to provide adequate financial and professional resources to meet the

needs. Although committed educational leadership will always be required at the administrative level, there must be a balanced approach to rationalization.

When evaluating the "Administration" component of the FRAME reporting system, one must be cognizant of the fact that this is an assimilation of individual reports from divisions and districts. There is definitely potential for variations in reporting methodology and in some cases other categories of the budget need to be examined for expenditures which could be seen as administration costs, in order to address the entire administration issue.

Figure 27 displays the relationship between size of school divisions/districts (full-time equivalent enrollment) and the cost per pupil for administration (listed as category 500 in the FRAME report). It is evident that the highest costs are most concentrated in the smallest divisions and districts. Most with less than 2,500 students are above average in administration costs and the scale tends to rise the smaller the student population.

Research reviews show that cost of operation alone, whether in total or expressed as a per pupil amount is not a good predictor of either educational outcome or fiscal efficiency. It is mandatory that research go beyond mere cost per pupil statistics in evaluating size of divisions or districts. Program offering, distance and density factors, political choices of school boards, amongst other factors all directly affect operating costs. Divisions such as Pelly Trail No. 37 that are forced to spend 13.4% of their budgets on transportation alone should not be compared directly to districts that spend 0.4% on bussing. Winnipeg School Division No. 1 with the highest cost per pupil in southern Manitoba must be evaluated in the context of the unique circumstances under which it operates.

CONCLUSIONS ON COST OF OPERATION

- Cost per pupil alone is not a good predictor of either fiscal efficiency or educational outcome.
- There is no consistent empirical relationship between the size of division in terms of enrollment and cost of operation. However the largest concentration of higher administration costs expressed on a per pupil basis is in divisions and districts with less than 2,500 students.
- Generally speaking, administration costs are higher in the smallest divisions and districts, but there are exceptions that require individual investigation.