

Declining Enrolments:  
An Annotated Bibliography

Research Branch  
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## I INTRODUCTION

The increasing effects declining enrolments are having on public education is reflected in the growing body of literature addressing this phenomenon. Although much of the information has concentrated on demographic projections and forecasting models, a variety of other issues have also been studied.

It was felt that an annotated bibliography would assist school administrators interested in the immediate and long-term effects of declining enrolments. Therefore, this bibliography was compiled by members of the Research Branch, Department of Education.

The bibliography includes not only demographic studies, but also literature on the effects of declining enrolments on educational planning, school staff and facilities, as well as on financial and policy decisions. Comprehensive studies concerning declining enrolments are also included.

This bibliography represents an attempt by the Research Branch to provide an overview of the diverse types of literature involved. This report should provide a starting point for anyone interested in gaining information on the phenomenon of declining school enrolments.

II AVAILABILITY OF MATERIALS

All items included in this bibliography are available on short-term loan from:

Department of Education Library  
Main Floor  
1181 Portage Ave.  
Winnipeg, Manitoba  
R3G 0T3

Also available in the Library are all ERIC and ONTERIS documents on microfiche. Paper or microfiche ERIC reports may be obtained directly from:

ERIC Document Reproduction Service (EDRS)  
P.O. Box 190  
Arlington, Virginia  
22210

Most ONTERIS documents may be borrowed through the Ontario Ministry of Education Regional Offices, or purchased from:

Government of Ontario Bookstore  
880 Bay Street  
Toronto, Ontario  
M5S 1Z8

Documents issued by the Commission on Declining School Enrolments in Ontario (CODE) are available on paper or microfiche from:

ONTERIS (Ontario Educational Research Information System)  
Ministry of Education, Ontario  
Mowat Block, 15th Floor  
Queen's Park  
Toronto, Ontario  
M7A 1L2

III DECLINING ENROLMENTS: Comprehensive Studies

Blaney, Jack P. "Opportunities in Declining Enrolment,"  
Education Canada, 18,3 (Fall 1978), 4-11.

When discussing enrolment declines the author argues that the elementary/secondary school organization can be revitalized by articulating a new and broader statement of identity and purpose. By implementing programs supporting the concept of "lifelong learning," (eg. literacy and senior citizen programs), schools may discover new options which could help to ensure the continuous renewal of the organization.

Berman, Arthur L. "Problems and Solutions of Declining Enrolment,"  
Planning and Changing, 7,4 (Winter 1977) 131-133.

This article deals with declining enrolments in Illinois and looks at decisions that have to be faced by local and school boards, teacher unions and teaching institutions.

Brunetti, Frank. "Enrolment Declining," CEEP Journal (1974) 10-12.

Issues such as factors influencing and indicators of declining enrolment are discussed. Components viewed as being part of a comprehensive educational planning process are presented along with factors which the author feels warrant attention throughout the decision making process.

Cronin, Joseph M. "The Decline of the School as an American Priority."  
39-42.

This article focuses upon factors which are having an effect upon education as a national priority. These realities include (a) a dramatic drop in the number of students and schools; (b) a surplus of teachers; (c) a student body transfixed by TV; (d) a citizenry whose leaders grow less convinced that more hours in school lead to more learning; and (e) a counterpressure to return handicapped children to conventional schools. In this context it is essential that the educational leadership style respond in the face of a declining in school enrolment and priority.

Declining Enrolment. National School Boards Association, 1976. 30 pp.

The research report examines the reasons behind declining enrolments and the severity of the problem. A number of suggestions for action by school boards are presented. These include long range planning, cushioning the effects, cutting costs, making use of surplus space, closing schools, and reductions in the teaching force. For each of the alternatives an explanation of the action, some criteria for making the decision to adopt the course of action and some consequences are discussed.

"Education in Transition," Bank of Montreal, Business Review  
(Oct. 1974) 1-4.

Using an economic perspective this review examines the prospects for the future of education in Canada during the latter 70's, the 80's and 90's. The analysis presents data on enrolment growth and decline, and educational expenditures. Expenditures are analyzed in terms of: (a) percentage of G.N.P.; (b) per enrolled student; and (c) educational sector. Comparative data is presented for 1950 and 1970 to show the revenue sources of funds for education and the expenditures by function. In concluding, the review speculates that since education has been through a frantic two decades of expansion, it now is in a quieter period of quality improvement and faces a revival of enrolment growth in the mid-eighties.  
- graphs

Final Report. Implications of Declining Enrolment for the Schools of Ontario: A Statement of Effects and Solutions: Toronto:  
Commission on Declining School Enrolments in Ontario. 1978. 331 pp.

This report focuses on the relationships between demographic developments as well as present and future challenges to the school system. School enrolment changes and the maintenance of an efficient system of transferring resources from the economy of the province to the publicly-supported school sector are emphasized. Economic, financial and demographic analyses are included as well as a list of 107 recommendations.  
- tables - charts

Florino, Albert. Historical Overview: 1) Economical, Political and Social Background of Contemporary Canada 2) Administrative History to 1969 3) Programs and Curricula Development. Commission on Declining School Enrolments in Ontario, 1978. 60 pp.

This report presents an overview of forces operating on contemporary society; discusses the administrative history of Ontario's educational system from 1807-1969; and, gives a brief history of the development of programs and curricula from 1937-1975. The overall picture is designed to provide historical background relevant to future trends in Ontario's educational system.

Florio, David H. Declining Enrolment. Colorado Springs, Colorado:  
National School Boards Association, Conference Report, 1976. 50 pp.

This report results from a National School Board Association conference on declining enrolments. Recommendations were presented with the view that declining enrolments could be considered as a local phenomenon to be dealt with in unique ways by each school district experiencing declines. It was felt that, based on national (U.S.) population data, enrolment would begin to increase in the 1980's.

Interim Report. The Missing Pupils in the Schools of Ontario Today and Tomorrow: A Statement of Conditions, Causes and Issues. Commission on Declining School Enrolments in Ontario, 1978. 361 pp. plus appendix.

This report assembles in a systematic fashion the material of a number of reports supplemented by results of studies conducted by or for the Commission. A wide spectrum of issues are covered, ranging from the "Context of Declining Enrolments" to "Schools and Building Sites." At the end of each of the eight chapters a listing of questions and issues arising out of the commission's investigations are presented.  
- tables - charts - maps - bibliography

Public Reactions to Declining Enrolments: A Compilation of Comments and Suggestions Received by the Commission in Briefs and at the Public Hearings held throughout the Province. Commission on Declining School Enrolments in Ontario, 1978. 106 pp.

This report consists of suggestions and recommendations received by the Commission on Declining School Enrolments at public hearings. Also included are proposals received through informed channels such as telephone calls or letters. The format of this report is such that it provides a listing of the proposals and suggestions the Commission had so far received.

Report of Task Force on Declining Enrolments. Manitoba Teachers' Society, 1975. 54 pp.

The emphasis of this report was on the effects of declining enrolments on the quality of education, working conditions of teachers and on educational finance. Also an attempt was made to identify alternate ways to cope with declining enrolments.  
- tables

Rideout, E. Brock et al. Educational, Social, and Financial Implications to School Boards of Declining Enrolments. Ministry of Education, Ontario, 1977. 212 pp.

This report discusses 4 major aspects of the problem of declining enrolments: (1) a survey of teachers, principals and supervisory officials to assess the relationships between elementary school size and quality of educational program; (2) a study of the relationships between elementary school size and cost per pupil; (3) a review of the literature on the advantages and disadvantages of small high schools and on ways to overcome the disadvantages; and (4) a review of 29 case studies to assess the social implications for school boards with declining enrolments as they relate to the relationship between the school and its community and to investigate alternative uses for vacant school space.  
- tables - bibliography

Rodekoehr, Mark. Adjustments of Colorado School Districts to Declining Enrolments. Academic Disciplines Committee of the Study Commission in Undergraduate Education and the Education of Teachers. 54 pp.

Colorado is a state in which considerable areas have been subject to a declining population and subsequently a declining school population. The report reviews (1) data collected related to staff, financial, and community characteristics, (2) results of a survey of school administrators regarding their perceptions of problems associated with decline, and (3) case studies of five declining school districts. Questions addressed here were how do school districts adjust to decline?, what are the constraints to efficient education imposed by decline? and what major problems will decline bring about in the future?  
- tables - graphs

Rodekoehr, Mark and Rodekoehr, Carol. "A Study of the Effects of Enrolment Decline," Phi Delta Kappan. (May 1976), 621-623.

This article is based on a doctoral dissertation, completed at the University of Colorado in 1974. It examines the effects of growth and decline in school enrolment from a sample of 181 school districts in Colorado from the use of a questionnaire.

Schwartz, Arthur M. and McGowan Patrick. Declining Enrolment: Implications for British Columbia's Public School System. Educational Research Institute of British Columbia, 1977. 61 pp.

This report addresses the impact enrolment declines will have on the B.C. public school system. Also implications these declines hold for policy, practice as well as school programs are presented. The report commences with a summary and recommendations for those not wishing to examine the more detailed information.  
- tables - bibliography

"Ways of Dealing with Enrolment Decline," Phi Delta Kappan, 60, 1 (Sept. 1978) 20-25.

Interviews with four U.S. school district superintendents and two demographers regarding enrolment decline, future enrolment projections, some of the problems that accompany decline and some ways of dealing with those problems are presented in this article.

Weinstock, Ruth. The Graying of the Campus. New York: Educational Laboratories, 1978. 159 pp.

This study looks at the facilities and physical environments of colleges and universities originally designed for a young clientele in order to determine their suitability for serving older clients. As well, the study incorporates attitudinal, programmatic, curricular, financial and managerial consideration.  
- bibliography

White, Roy et al. Think Tank on Declining Enrolments. A report prepared by a sub-committee for the Interorganizational Task Force on Declining Enrolments. 4 pp.

This report provides a brief overview of the concerns expressed by teachers, trustees and superintendents whose administrative jurisdictions are experiencing declining enrolments. The report concludes with a set of recommendations outlining how those responsible for education at the provincial and divisional levels should respond to this phenomenon.

IV THE CHANGING POPULATION: Population Statistics and Enrolment Projections

Barrett, Frank. The Decline of Canada's Farm Population. Ontario Association for Geographic and Environmental Education, 1974. 5 pp.

The author discusses the rural urban shift and the increased urbanization of Canada over the period 1941-1971. Census data is used as the basis for the analysis and charts and tables support the author's argument. No recommendations for action or examination of the consequences are provided.

- tables

Clark, W. et al. The Class of 2001: The School-Age Population-Trends and Implications - 1961 to 2001. Statistics Canada and the Canadian Teachers' Federation, 1979. 142 pp.

The data presented in this report refer to population as opposed to enrolment. An expansion of other population material provides provincial projections, by selected age groups (=school levels), to the year 2001. The report discusses enrolment trends relative to demographic and other influences (re: declines in enrolment). The main topics considered include national and provincial trends as well as the implications of these trends.

- graphs - tables - bibliography

Employment and Immigration Canada. Population Information Kit. Hull, Quebec: Supply and Services Canada, 1978.

The kit includes 1 covering booklet and 31 separate pages of charts. The booklet gives contents of kit, definitions and working formulas used in population calculations, and an extensive bibliography intended for guidance in any further or expanded study. A collection of a variety of line graphs, bar charts, and other forms of display, each with concise commentary on the reverse side of each of the 31 pages. Both world and Canadian population material are grouped in general categories of: 1) size and rate of growth; 2) spatial (physical land) distribution and 3) structural profiles. The kit material covers historical, current and projected periods.

- graphs - bibliography

Enrolment Forecasts for the Province of Newfoundland: 1974-75 to 1990-91.  
60 pp.

This report discusses the use of the "Student Flow Matrix" as a methodology for developing elementary-secondary school enrolments for Newfoundland. The background of the model is discussed and then three enrolment projections for the province are presented.  
- tables

Fenske, M.R. Annual Forecast of Alberta School Enrolments 1978-1987: A Summary. Alberta: Enrolment Projections Committee, Planning and Research, 1978. 9 pp.

In this summary report, enrolment projections are reported as province-wide totals by grade. The techniques employed include cohort progression and participation rates. The summary is an extension and refinement of Alberta Short-and-Medium Range Pupil Enrolment Projections 1977-86.  
- tables - graphs

Forrester, Glen C., Tsang, Tom and Schlegel Christie. British Columbia Public School System September Enrolment Projections 1979-1989. Vancouver: Educational Data Services, B.C. Ministry of Education, 1979. 330 pp.

This report presents enrolment projections for all B.C. school districts for the years 1979-1989. It provides pertinent definitions and explanations as well as discussing the limitations of the model utilized.  
- tables

Jackson, R.W.B. Implications for Education of Recent Trends in Live Births and International and Interprovincial Migration of Children. Toronto: The Canadian Education Association, 1977. 35 pp.

This short monograph discusses the implications for population size and composition arising from the two main factors: live births and migration. It includes material for Canada, with provincial details, and some additional specifics for Nova Scotia. Also found in the report are historical and actual data with projections to year 2000.  
- graphs - tables

Leggett, Stanton. "How to Forecast School Enrolments Accurately-and Years Ahead," The American School Board Journal (Jan. 1973) 25-31.

A brief description of how to forecast local school enrolments, based on local area population data is presented in this article. Warnings are included that special consideration must be considered with regard to the possible influence of certain important local variables, such as major changes in building patterns, community number age patterns and major road modifications.

Loken, G. "A Critical Examination of Enrolment Forecasts and Fiscal Projections in the Worth Report," The Journal of Educational Thought, 6, 3 (Dec. 1972) 144-149.

In summary, this discussion of the prospective enrolment and fiscal projections in the Worth Report emphasizes the unduly high projections for full-time enrolments in Alberta, with resulting fiscal projections much too high for both operating and capital expenditures. The paper also suggests a basis for calculating more "realistic" enrolments.

Loken, G. "Demographic Dimensions of Public Education," Comment on Education, 5, 2 (Dec. 1974) 9-12.

This article identifies and examines the effect of the major growth components in Canada's population change. Change in Canada's population growth is attributed to natural increase (births minus deaths) and net migration (immigration minus emigration). The effects of these components in individual provinces is illustrated by the drastic changes in live births and internal migration. The article concludes with a discussion of the effects these changes in demographic dimensions will have for public education.

- tables

Lyell, Edward H. and Toole, Patrick. "Student Flow Modelling and Enrolment Forecasting," Planning for Higher Education. 3, 6. (Dec. 1974) 2-5.

This article reviews current methods and problems found in forecasting enrolments at the state and institutional level, and suggests alternative future strategies and decisions. The paper states that enrolment forecasting techniques have not been well-applied and gives brief discussions of ratio, cohort survival, Markov models, regression, optimization, combination and guess-estimation methods.

- bibliography

MacLeod, Betty et al. The Development of Improved Bases for Forecasting School Age Population throughout Ontario: A Study of Demographic Components. Toronto: Ontario Ministry of Education, 1978. 350 pp.

The report is presented in three sections. Section One presents the results of research concerning trends in population throughout the various parts of Ontario and considers the implications for school age groups within the projections. The projections are constructed on a single year age basis aggregated on several bases. The second section outlines the assumptions and rationale behind the projections found in Section One. Section Three contains two sets of population projections.

- tables

Major, Dr. T.S. Forecasts for Demand and Enrolment at Manitoba Universities for the 1976/77, 1977/78 and 1978/79 Academic Years: Highlights. Presented to Post-Secondary Research Reference Committee, 1976. 20 pp.

Based on the results of a survey of grade 12 students in the province regarding their post-secondary intentions, forecasts for demand and enrolment at Manitoba universities for the period 1976/77-1978/79 are given. Historical data on background characteristics of students surveyed are also supplied.

- tables - graphs

Maki, W.R. et al. Population Projections for Manitoba Region and Town Size - Some Alternatives, 1971-1990. Winnipeg: Faculty of Agriculture, University of Manitoba, 1973. 297 pp.

This report presents Manitoba population material with projections to 1990. There are six different assumption sets presented with related projections. The assumption set most commonly used in projections displayed is one based on "medium or average" fertility, net migration levels and persisting mortality rates (of 1970 level).

- graphs - tables - bibliography

Manitoba Enrolment Projection Report for 1978-79 and 1980-84 Forecast. Manitoba Department of Education, 1978. 24 pp.

This report focuses on the summary of Manitoba school enrolments for 1967 to 1984. It includes estimates for both public and private school enrolments as well as predictions for secondary public school enrolment patterns to 1991.

- tables

Manitoba Teachers' Society. Divisional Data: 1971-1976. Winnipeg: 1977.

This report provides 1971-76 data that should assist all Manitoba School Divisions analyse trends regarding: student enrolment; number of teachers employed; pupil/teacher ratio; and percentage of teachers over grant.

- tables - charts

Marsden, Lorna R. and Harvey, Edward B. eds. Canadian Population Concerns. Toronto: Population Research Foundation, 1977. 153 pp.

The report contains the proceedings of a symposium on Canadian Population Concerns held in Toronto in 1976. Papers were presented by H. Iam MacDonald on "Frontiers in Population Thinking," Charles F. Westoff on "The U.S. Population Commission Report in Retrospect," Ray Affleck on "Town and Country Planning and Population Growth," W.H.C. Simmonds on "Subjective Dimensions in Population Thinking," Hon Robert Andras on "Population Goals for Canada," George Lindsey on "The Significance of Population in Future International Relations," and by Janet Besecker and P.S. Elder on "A Framework for Evaluation of Canadian Population Policies."

Martens, J. and Rajesky, A. A Study of Declining Student Population in Public Elementary and Secondary Schools in Manitoba in Manitoba School Year 1967/68 to 1983/84. Winnipeg: MAST, 1974.

This report examines provincial enrolments by school division and attempts to project both public school enrolments and the future of teacher supply in Manitoba. The report points out the implications of declining enrolments and recommends further research and long range planning be carried out to offset future problems.

- tables - bibliography

McInnis, R. Marvin. "Census Survival Ratio Estimates of Net Migration for Canadian Regions," Canadian Studies in Population, 1 (1974) 93-116.

This paper discusses, at length, the implications for error and bias in using the Census Survival Ratio (CSR) method for estimating internal net migration between different Regions of Canada. It compares net migration based on CSR as well as on Life Table Survival Ratio (LTR).

- tables - graphs - bibliography

Ontario Elementary and Secondary School Enrolment Projections 1974-1983. Ontario Ministry of Education, 1973. 10 pp.

This paper evaluates the validity of previous enrolment projections in Ontario. As well, it presents a revised set of projections for the ten year period 1974 to 1983.

- tables

Philippon, Donald J. "1973 Enrolment Flow Study," Saskatchewan Journal of Educational Research and Development, 4, 2 (Spring 1974) 31-38.

This short paper describes the survey of some 12,000 Saskatchewan students graduating from grade 12 in June 1973, as well as a follow-up study. The areas covered included the student flow to enrolment in post-secondary institutions; to migration to other provinces and to the labour force. Secondary objectives attempted to analyze relationships between student plans and variables such as sex, academic performance and school location. Analysis also considered the pattern of students' alternate plans and the pattern of student migration out of the province. One observation was 60% of students leaving the province for non-university institutions were taking programs offered in Saskatchewan. Similar surveys were held for 1972 and planned for 1974 and following years.

- tables - bibliography

Pool, D. Ian and Bracker, Michael. "Research Notes: A Note on Implications of Canadian Family Formation in the Near Future," Canadian Studies in Population, 1 (1974) 117-122.

This article discusses short term projected Canadian population estimates, (to 1981), based on varying fertility assumptions. It also provides Canadian population estimates, to the year 2005, based on two assumptions: "zero population growth now," and "exact replacement now."

- tables - bibliography

Post-Secondary Enrolment Trends and Forecast-PDEM II Report. Post-Secondary Research Reference Committee, 1978. 10 pp.

Based on the results of a survey of Manitoba grade 12 students regarding their post-secondary intentions, the report presents data on actual and projected grade 12 enrolments and graduates, 1972-1992; actual and projected university and community college enrolments, 1972-1981; high school sequential participation rates in post-secondary education and a comparison of actual full-time universities enrolments and PDEM results.  
- tables - graphs

Research Branch. Highlights: Projection of Elementary - Secondary School Enrolment for the Manitoba School System 1978-1984. Research Branch and Finance Branch, Manitoba Department of Education, 1978. 20 pp.

This report is a summary of the school enrolment projections for the Manitoba school system. It includes such things as: actual and projected public school enrolments; rural public school enrolments for elementary and secondary schools; and unicity public school enrolments for elementary and secondary schools.  
- tables - graphs

Scharf, Dr. M.P.A. Report on the Declining Rural Population and the Implications for Rural Education. Regina: Saskatchewan School Trustees Association, 1974. 206 pp.

This report studies the changes in the population base for rural Saskatchewan schools and the implications these changes have for school jurisdictions. It reports on regional shifts in population; population declines; agricultural and rural business trends; as well as the difficulties of providing education for a small and widely dispersed population.  
- tables - maps - appendices

Snowden, Barry L. "Enrolment Forecasting Through Analysis of Student Flow." Unpublished M.B.A. thesis, University of Alberta, Edmonton, Alberta, 1974. 82 pp.

This paper provides an analysis of alternative methods of forecasting enrolment for Alberta post-secondary institutions. Conceptual models of admissions, enrolment and student flow processes are presented and a general mathematical approach to building a system level model is proposed. Data requirements are addressed and questions of evaluation and validation of the model are discussed.  
- tables - graphs - bibliography

Stafford, Jim. "Canadian School Life Tables," Alberta Journal of Educational Research, XIX, 1 (March 1973) 55-65.

This paper discusses the development of the first set of school life tables for Canada in which a cohort of 100,000 births are followed through their school life span. School life tables show the relationship between age and school enrolment, provide a standardized format for depicting drop outs and allow for comparison of dropout patterns between geographic areas or between periods of time in one area. Comparisons are made between Canada, United States and India.  
- tables

Statistics Canada. Advance Statistics of Education. Feature: Future Trends in Canadian Education 1977-78. Catalogue #81-220. Ottawa: 1977. 52 pp.

Advance statistics of education assemble data on important variables at all levels of education. This edition presents a time series from 1975-76 to 1978-79 for provincial figures and to 1979-80 for most national figures. It contains actual statistics for 1975-76, preliminary statistics for 1976-77, estimates for 1977-78 and forecasts for 1978-79 and 1979-80.

- tables - charts

Statistics Canada. "Detailed Enrolment Statistics." Ottawa: 1978. 56 pp.

This document contains a series of tables showing Canadian historical data, up to 1975-76 and projected beyond to 1986-87. The tables cover areas of enrolment data by institutional level, data by single year of age, elementary-secondary information, non-university and university enrolment data as well as information on other post-secondary enrolment.

- tables

Statistics Canada. Elementary-Secondary School Enrolment 1976-77. Catalogue #81-210. Ottawa: 1977. 53 pp.

This catalogue deals with changing enrolments at the metropolitan, provincial and national levels. This includes historical and projected trends (1961-62 to 1986-87) allowing the reader to assess the importance of staff reduction in the issues of declining enrolments.

- tables - charts

Statistics Canada. Interprovincial and International Migration of Children in Canada 1975-76. Catalogue #81-216. Ottawa: 1977. 34 pp.

The publication analyzes the impact of migration on enrolment in elementary and secondary schools. It also outlines apparent trends in interprovincial and international migration, thereby permitting projections and approximate magnitude of future migration.

- tables - charts

Statistics Canada. International and Interprovincial Migration in Canada. 1961-1962 to 1975-1976. Catalogue #91-208. Ottawa: 1977. 112 pp.

This publication brings together international and interprovincial migration data for the period 1961-62 to 1975-76. One section deals with data sources and the methods used to produce estimates of international emigrants and interprovincial migrants. The second section covers the highlights of migration movements in Canada while the third consists of all the statistical tables.

- tables - charts

Statistics Canada. Population Projection 'D', "Population Projections for Canada and the Provinces". Catalogue #91-514. Ottawa: 1974. 25 pp.

The projections presented in this report provide information concerning population shifts in Manitoba. Figures are based on the 1971 census.  
- tables

Statistics Canada. Population Projections for Canada and the Provinces: 1976-2001. Catalogue #91-520. Ottawa: 1979. 472 pp.

This Statistics Canada report discusses fertility, mortality, migration and overall population projections for all Canadian provinces from 1976-2001. It also presents the methodology and limitations of the study. Projection results are provided by both geographic and age/sex distribution.  
- tables

Tsang, Tom, Forrester, G.C. and Schlegel, Christa. Organization of Secondary Schools 1978-79. Victoria: Educational Data Services, B.C. Ministry of Education, 1979. 102 pp.

The enrolment projections report includes B.C. public secondary schools with information on: total course enrolments 1978-79; school organization and teacher activities; teachers by subject area and by school district; course enrolments by level and by school district; teachers by level and by school district. The report also has B.C. public secondary school teachers with information on: percent of time per school week devoted to each secondary subject area (1978-79) and percent of teaching in school week by level and by school district (1978-79).  
- tables - charts - maps

Zsigmond, Zoltan. Impact of Projected Population Trends on Post-Secondary Education 1961-2001. Paper presented to Statistical Science Association of Canada, 1975. 38 pp.

A discussion of historical demographic data for Canada's future population projections, post-secondary enrolment projections and implications of these population changes for post-secondary education for administrators, teachers, students, finance and government.  
- graphs

Zsigmond, Zoltan. Patterns of Demographic Change Affecting Education 1961-2001. Paper presented to Conference on Financing Education, 1975. 37 pp.

A review of trends in Canadian education from 1961 to 1974 with projections to the year 2001. This report discusses population changes in Canada, based on fertility rate changes, with resultant changes in elementary-secondary and post-secondary enrolments.  
- graphs

V SURPLUS STAFF: Teacher Supply/Demand and Professional Development

Allan, Rodger G. "Declining Enrolment: How Can Systems Adjust."  
Education Canada. (Dec. 1974), 16-17.

A few ideas are brought out on how to deal with surplus teachers. One recommendation listed in this two page report is: "Legislation, structures and programs should be devised to facilitate the return to learning opportunities for professionals, salaried employees, wage earners and all other persons residing in Ontario."

Brazil, Phil. "The Instructional Challenge of Declining Enrolment,"  
California School Boards. (March 1976), 10-11, 23.

In this brief article the author contends that instructional regidity will set in as a result of declining enrolments. To avoid this situation the author suggests that school districts undertake to develop and implement on-going programs of staff development.

Brown, Alan F., O'Toole, Padraig, and De Four, Reginald. The Impact of Declining Enrolment Upon the Principal and Vice-Principal in Ontario with Implications and Alternatives. Commission on Declining School Enrolments in Ontario, 1978.

This report is the result of a study which examined the effects of declining enrolments on the roles of principals and vice-principals in Ontario. The traditional roles of principals and vice-principals as discussed in the current literature are reviewed and the report notes how their roles must change in a time of declining enrolments. Principals and vice-principals were surveyed to see how declining enrolments were affecting them in their relationships with staff, students, community, etc.  
- bibliography

Fiorino, Albert. Teacher Education in Ontario: A History, 1843-1976.  
Commission on Declining School Enrolments in Ontario, 1978. 179 pp.

This report presents an overview of teacher education in Ontario from the mid-nineteenth century to the present. It discusses changes in admission and certification requirements, teacher supply and demand, as well as developments in government policy. The report concludes by addressing the implications of declining enrolments to future trends in teacher education.

- tables - bibliography

Forrester, Glen C., Lee, Jackie, S. and Hamaura, Roy. B.C. Teacher Demand and Supply Projections 1979-1988. Victoria: Education Data Services, B.C. Ministry of Education, 1979. 126 pp.

The basic objective of this study was to develop a means of forecasting teacher requirements in each British Columbia school district over the next ten years. The report presents a model for projection as well as projection information for both elementary and secondary teacher supply/demand.

- tables - appendices

Girhiny, John. Professional Development and Declining Enrolment in Ontario. Commission on Declining School Enrolments in Ontario, 1978. 52 pp.

This paper focuses on the effects declining enrolments have on professional development. Professional development in its current situation is looked at as well as pro and con arguments, situations throughout the world and alternatives in Ontario. The paper concludes by presenting a proposal which includes a modifiable working model.

- bibliography

Girhiny, John. The Mathematics Program and Declining Enrolment in Ontario. Commission on Declining School Enrolments in Ontario, 1978. 56 pp.

The author attempts to project the effect declining enrolment will have upon the mathematics program in Ontario's education system. Although it is not clear what problems will be created by the phenomenon the author anticipates that the main impact will be an accentualization of existing problems. To deal with these problems a pedagogical approach is presented enabling teachers to cope with individual students in different learning phases. The proposed approach, referred to as the "Modified Appointment Scheduling," is a methodology involving a combination of a minimal amount of Socratic teaching and a generous amount of group activity.

- bibliography

Graybeal, William S. "Teacher Surplus and Teacher Shortage," Phi Delta Kappan (Oct. 1971) 82-85.

This article discusses the author's perception of teacher supply and demand as they exist in the United States. Comparisons of estimated supply and demand and their impact on the quality of education are presented.

Hunt, David E. and Hunt, Janice S. On the Psychology of Declining Enrolment: With a Brief Review of Attempts to Cushion the Negative Effects of Professional Unemployment. Commission on Declining School Enrolments in Ontario, 1978. 25 pp.

This paper presents a discussion of the psychological effects of unemployment. A perceived increase in personal expectations furnishes the background against which the discussion is presented.  
- bibliography

Kervin, John B. Declining Enrolments and Teacher-Board Negotiations: Bargaining Conditions of Employment. Commission on Declining School Enrolments in Ontario, 1978. 40 pp.

The report examines the relationship between education costs and the working conditions and staffing clauses in collective agreements in the context of declining enrolments. Rather than making projections on the effects, the paper focuses on explaining how the provisions affect costs and the flexibility that boards have in dealing with staffing needs as enrolments decrease. Specific clauses that are examined include pupil-teacher ratio, class size, instructional load, sabbatical/training leave, surplus-redundancy, and management rights.  
- tables - bibliography

Lawton, Stephen B. and Boodeo, Gwyneth M. The Impact of Declining School Enrolments on Non-Certified Staff in Ontario. Commission on Declining School Enrolments in Ontario, 1978. 124 pp. plus appendices.

This study examines the effects of declining enrolments on non-certified support staff. Data was collected on students, certified and non-certified staff in a sample of twelve Ontario school board areas. Conclusions were drawn concerning staffing standards, present and future teacher supply/demand of non-certified staff, and the possible impact of support staff reductions. The study presents a number of recommendations dealing with legislative grants, financial policies, collective agreements and further research.  
- tables - questionnaires - bibliography

Padro, Susan. Survey of Staff Development and Curriculum Services for Quality Education. Commission on Declining School Enrolments in Ontario, 1978. 62 pp.

This report investigates the effect of declining enrolments on educational programs in the areas of intensiveness of curriculum services and staff development. Two Ontario school boards, Peel and Dufferin, are considered. The Delphi technique was used to provide information on the views of educators relating to (a) curriculum services and (b) to conditions under which "quality" programs can be maintained.  
- questionnaires - references

Partlow, H.R. et al. Patterns of Teacher Mobility in Ontario. Ministry of Education, Ontario, 1978. 192 pp.

This study examines a number of factors related to teacher mobility, such as the extent of teacher mobility, characteristics and reasons for those leaving and returning to the profession, effects of declining enrolments, policies and procedures, and teacher education. 2000 teachers and school officials were surveyed; an extensive review of the literature is included as well as conclusions and recommendations.  
- bibliography

Peruniak, W.S., Waktstrom, M.W. and Weinstein, E.L. Selection of Applicants to a Faculty of Education: A Case Study. Commission on Declining School Enrolments in Ontario, 1978. 81 pp. plus appendices.

This study examines applicants to the Faculty of Education, Queen's University, 640 of whom graduated in 1972. A follow-up of graduates was undertaken to determine the number certified and their employment status. Data from interviews conducted at the time of admission to teacher training was compared to later performance ratings during both practice and full-time teaching. The report suggests that measures to assess teaching quality need further development. With staffing decisions often made on the basis of seniority during a time of teacher cutbacks and declining enrolments the authors argue that this becomes particularly meaningful.  
- tables - interview forms - bibliography

Price, J.T. and Cash, Larry M. Teachers Without Classrooms: A Career Planning Guide for Teachers Leaving the Profession. Toronto: Faculty of Education, University of Toronto, 1979. 21 pp.

The report was written as a reference for teachers who may find themselves unable to teach because of circumstances beyond their control. The report explores alternatives for teachers and the attitudinal adjustments required as well as provides a "how to do it" approach to job search.

Research Branch. An Aging Teaching Force: Some Implications. A paper prepared for the Manitoba Department of Education, 1975. 6 pp.

This report presents an analysis of the changes which occurred in the age profile of Manitoba's teaching force between 1970 and 1974. Based on the profile changes reflected by the age cohort retention pattern between 1970 and 1974 the author forecasts the age profile of the teaching force for 1979. Subsequently the paper discusses the implications of an aging teaching force upon policy, programme, instruction, innovation and system adaptiveness.

Stager, David. Elementary and Secondary School Teachers' Salaries in Ontario, 1900 to 1975. Commission on Declining School Enrolments in Ontario, 1978. 50 pp.

The study seeks out answers to the following questions: How have teachers' salaries changed relative to those of other occupations?; How have teachers' salaries changed relative to the cost of hiring?; and, How have the salaries of specific groups of teachers changed relative to each other? What apparent association is there between their various salary changes and the other major variables in the school system, notably the number of teachers and pupils? A conventional labour market model is used for the analysis.

- tables - bibliography

Watson, Cicely et al. Projection of Enrolment and Teacher Supply: Elementary and Secondary School Teacher Supply/Demand Projections. Toronto: OISE, 1978. 171 pp.

This Ontario study is composed of three sections. They are: 1) supply/demand forecasts for elementary teachers; 2) supply/demand forecasts for secondary teachers; and, 3) appendices which describe subject grouping details and show historical statistics of the Ontario teaching force.

- tables

Wright, Edgar N. et al. Effects of Class Size in the Junior Grades: A Study. Toronto: Minister of Education, Ontario, 1977. 130 pp.

This study examined differences between four class sizes of grade 4 and 5 students in Toronto schools. Teacher, parent and students attitudes were assessed by means of questionnaires, while student achievement and self-concept tests were also used. Other factors such as teacher-pupil interaction were assessed by using a specifically designed observational system. The report discusses the differences that were found to exist as well as areas in which few changes were observed. In a period of enrolment declines it is felt class size information may be important for determining pupil/teacher ratios.

- bibliography

VI SURPLUS SPACE: School Closure and Space Utilization Alternatives

Declining Enrolment: Community Options and Actions. Santa Barbara, California: Community Schools Office. 12 pp.

This paper examines school closings and the effect of these closings on the surrounding community. A number of case studies are given which illustrate the diverse ways various cities throughout the United States have coped with the problem.

- bibliography

Fewer Pupils/Surplus Space. New York: Educational Facilities Laboratory, 1974. 55 pp.

This American report discusses population projections, population mobility and the effects on school enrolments. This is followed by suggestions for alternate uses for school buildings which empty as a result of declining enrolments. The report also discusses school closing: the costs and savings and the process of dealing with this political issue.

- list of information sources

Henderson, Howard B. et al. School Facilities, the Community, and Declining Enrolment: A Handbook of Suggestions for Ontario Boards of Education. Commission on Declining School Enrolments in Ontario, 1978. 190 pp.

Using the case study approach the Task Force examined the effect of declining enrolments on school accommodation, such as: twinning, leasing or selling of surplus or underused school buildings; the closing of schools; the disposal of school sites; the transportation of pupils to other schools; the community use of schools; and, the impact of all these on the community. The report provides an in-depth report of the policies and/or guidelines already developed by several school boards in order to establish criteria for such practices as school closure, the process of closure, transportation, community involvement and participation, and alternative use of surplus space. Information is presented on day-time and after-hour community use of vacant school space and community schools. The report concludes with a set of guidelines for practices that could be implemented in the area of school facilities so as to alleviate or minimize the more serious effects of declining enrolment on school boards in Ontario.

- tables - bibliography

Rideout, E. Brock et al. Meeting Problems of Declining Enrolment. Ontario Ministry of Education, 1975. 104 pp.

The investigators describe a research study which examined the educational, social, and financial implications to school boards of declining enrolments. The study focuses on school closure as a sensitive problem resulting from declining enrolments and traces a series of nine cases where this problem was actually experienced. This analysis of nine cases provided insights into common problems and the appropriateness of various solutions. On the basis of these the authors provide some suggested guidelines on the question: To close or not to close schools?

- bibliography

Sullivan, Keith. Community Schools: A Solution to Declining Enrolment.  
Commission on Declining School Enrolments in Ontario, 1978. 25 pp.

This paper presents the hypothesis that the concept of community schools becomes increasingly appealing, both politically and economically, during a period of enrolment decline. The author argues that community schools solve problems of under utilization of school facilities and declines in program offerings. Ultimately, community schools help to reduce fiscal restraints placed on education during a time of enrolment decline by utilizing community involvement and support.

#### VII FINANCIAL IMPLICATIONS OF DECLINING ENROLMENTS

Atherton, Peter J. Financing Education in a Time of Declining Enrolments.  
A paper presented at the Annual Meeting of the Canadian Association for the Study of Educational Administration, University of New Brunswick, Fredericton, N.B., June 7, 1977. 22 pp.

In this paper the author examines the problems of financing education during a time of declining enrolments. Atherton contends that to some extent these financial difficulties during the period of the decline are influenced by administrative and political decisions on cost factors taken a number of years ago. The cost factors include: (a) the price level for increased level of teacher qualifications; (b) reduction of pupil-teacher ratios; and (c) increase in average experience of teachers as the cessation of growth and the consequent reduction in new entrants to the profession occurs. To minimize the effect of declining enrolments the author contends that two structures, the salary grid and the per pupil basis of resource allocation, must be modified in order to alleviate severe problems in educational finance whether enrolments be increasing or decreasing.  
- bibliography

Bird, Richard M. Financing Education in Ontario: Issues and Choices.  
Commission on Declining School Enrolments in Ontario, 1978. 37 pp.

This paper focuses in a provocative way on the issues and choices facing Ontario's education finance situation. The author contends that these issues must be considered in the context of the evolving provincial - municipal system as a whole. If the forecast reduction in provincial financing of education occurs there will be a need to rely more heavily on property tax finance. In response to this situation the author puts forward several alternatives. First, measures that do not basically challenge the relative autonomy and priority status of the present system of education finance are considered; however, so are some more radical alternatives, which call into question some of the fundamental principles upon which that system is based. A brief conclusion indicates two possible policy choices which warrant more detailed consideration if the arguments advanced in this paper are accepted. The first of these, the provincial take-over of education, is basically within the system, though rather drastic. The other, some experimentation with education vouchers, is considerably more radical and calls into question some of the fundamental premises of the present educational system. Some combination of these two policies may also be considered, perhaps together with some reallocation of resources within the education sector.  
- bibliography

Dawson, D.A. Economics of Scale and Cost-Quality Relationships in Elementary and Secondary Schools: A Survey. Commission on Declining School Enrolments in Ontario, 1978. 31 pp.

This research report examines three areas of concern in a situation where enrolment is declining in the primary and secondary sectors of education in Ontario. The areas include: (a) economics of scale; (b) cost-quality interrelationships; and (c) potential system rigidities which might arise in reaction to declining enrolments. In examining these factors the study concludes that: 1) there is evidence indicating the existence of a minimum efficient scale at the school level; hence, school closures are, in fact, economically but perhaps not politically viable; 2) there is no clear evidence to support the contention that quality goes up as pupil/teacher ratio are reduced; and 3) freedom of information, coupled with good research, is sufficient to provide an adequate malleability in the educational process.

- tables - bibliography

Foot, David K. Resources and Constraints: Public Education and the Economic Environment in Ontario, 1978 - 1987. Commission on Declining School Enrolments in Ontario, 1978. 32 pp.

This paper develops a projection of the financial resources and constraints likely to be faced by school boards in Ontario over the next decade. The analysis is "macroeconomic" in that it provides an overview of the national and provincial economic environments for the next decade and then presents consistent projections for provincial governments and agencies, including school boards, in Ontario over the same period. The findings of the paper suggest that, while Canadians and Ontarians will have to adjust to somewhat lower (but not negative) growth in their standard of living, the education sector in Ontario should be planning for negative "real" growth in their receipts from the provincial government. This reflects both declining school enrolments and anticipated continued restraint in provincial government spending. Competition from municipalities and local agencies from provincial funds and possible policy adjustments at the provincial level, suggest that the outlook for school boards in the province over the next decade is unlikely to be encouraging.

- tables - bibliography

Odden, A., and Vincent, P.E. The Fiscal Impacts of Declining Enrolments: A Study of Declining Enrolments in Four States. Denver, Colorado: Education Finance Center, Education Commission, 1976. 48 pp.

The study investigates the fiscal impacts of declining enrolments from the point of view of state-level policy makers. No analysis of the situation in individual divisions has been performed. The following aspects have been examined: magnitude of the problem, type of school district affected, wealth characteristics, expenditure and personnel effects and the minority factor. From the foregoing analysis implications are drawn and discussed.

- tables

Rideout, E. Brock. Abstracts of Reports on Costs of Education, Financial Aspects of Declining Enrolment and of Current Research into Problems of Declining Enrolment. Commission on Declining School Enrolments in Ontario, 1978. 131 pp.

The report contains three sections. The first provides abstracts and comments on the report entitled "Educational, Social, and Financial Implications to School Boards of Declining Enrolment". The second section contains abstracts of the seven interim reports of the Committee on "Costs of Education in Ontario." The third section contains an annotated bibliography re: Financial Aspect of Declining Enrolment.

Rideout, E.B. et al. Educational, Social, and Financial Implications to School Boards of Declining Enrolments. Toronto: Ontario Ministry of Education, 1977. 212 pp.

The study deals with four major areas within the educational, social, and financial implications of declining enrolments. These are: adequacy of small secondary schools (a review of research findings); minimum acceptable size of elementary school (findings of a professional opinion survey); relationships between elementary school size and cost per pupil; and, alternative daytime use of vacant school space.  
- tables - bibliography

Wentzal, J. and Stock, J. "Declining Enrolments Will Bankrupt Us," California School Boards (Oct. 1974) 11-13, 26.

The authors explore the problem of lost revenues as it pertains to declining enrolments. Because of organizational rigidities that do not allow full adjustment to declining enrolments the authors argue that cost per student will increase. As revenues are based on student count these will decline resulting in an unbalance in revenues and expenditures. They argue that funding arrangements must change.

#### VII EDUCATIONAL MANAGEMENT: Strategies and Planning

Busch, W.T.J. "Population in Decline: The Planner as Rationalizer," Educational Planning. 1, 3 (Jan. 1975), 102-103.

The article discusses the impact of enrolment decline on a large Ontario school district. It mentions problems of planning, financial and staff cut-backs, as well as support to specialized programs. However, the author also sees advantages, such as more personal schools, as being associated with declining enrolments.

Coleman, Peter. School Division Planning in an Era of Declining Enrolments. Winnipeg: Manitoba Association of School Trustees, 1973. 11 pp.

The problems of educational planners in dealing with declining enrolments are examined in terms of school organization, staff utilization and utilization of facilities. Models are developed which challenge the traditional bases for classroom grouping in elementary schools, namely age, ability, program, and handicap. Two types of models allow for either facility modification or no facility modification. The author believes that implementation of his proposals might improve the quality of education in areas of declining enrolment while maintaining a lid on costs.

Eisenberger, Katherine E. and Keough, William F. Declining Enrolment: What to Do. Arlington, Virginia: American Association of School Administrators, 1974. 57 pp.

This publication was designed as a guide for school administrators. It discusses the methods which should be considered when attempting to rationalize the situation of a school closing. Methods of enrolment prediction and the implications of school closing are presented.

Lauwerys, Joseph. "Urgent Problems Facing School Administrators," Education Canada. (June 1972) 23-29.

The author describes the nature and magnitude of enrolment growth and enrolment change. He contends that the education boom is petering out and educational administrators will face many problems. In view of the changed context and new needs it is suggested that administrators carefully invest the resources rationed to them and undertake careful planning of development. The author maps out a general planning strategy that fits the future. This planning strategy comprizes two things: (a) forecasting what is likely to happen and plotting the best course; and (b) apportioning resources carefully.

Peruniak, W.S. A Non-Heroic Strategy for the Management of Decline: An Examination of the American Approach to Educational Retrenchment. Commission on Declining School Enrolments in Ontario, 1978.

This paper examines the American experience in dealing with declining enrolments, assesses the merits or shortcomings of the strategies used in dealing with declining enrolments and then discusses some alternative approach that might be used in Ontario.

- bibliography

Ricker, H.O. "The Student Flow Model - A Flexible Aid to Education Planning," The Alberta Journal of Educational Research, xx, 4 (Dec. 1974) 342-347.

This article presents a short discussion of the pros and cons of an alternative approach to the study of the area of student population. The student-flow model has informative advantages where greater detail is of interest (for example, where numbers are related to a particular subject area such as industrial arts). The article argues that although there is a lack of suitable data in readily available form, it could be available if planners made their needs known to educational authorities.  
- bibliography

Scott, J.G. et al. The Impact of Declining Enrolments on School Governance and Administration in Ontario. Commission on Declining School Enrolments in Ontario, 1978. 153 pp.

The purpose of the report is to analyze the effects of declining enrolment on the governing and administrative structures of school jurisdictions in Ontario. Four primary objectives are identified, namely: to identify and analyze current policies that are in use by Ontario school boards that deal with the administrative organization and structure in a period of declining enrolments; to identify and analyze strategies employed, or being developed by school boards that hold the possibility of a rational approach to the fact of decline as it impacts on administrative organization and structure; to develop alternative policies and strategies that would assist boards in responding to the new context; and, to identify and examine issues relating to the demand for and the training of administrators in a period of retrenchment. The data was collected through a structured interview with trustees and senior officials from a sample of eleven school boards.  
- interview guide

Taylor, Peter A. "A Probability Model for Mobility." Manitoba Journal of Education, 8, 1 (November 1971) 27-30.

In this article the author describes a spatial needs forecast model which school administrators may use to forecast building requirements affected by parental mobility, enforced migration and seasonal influx. The model requires proportion determination as a mathematical skill.

IX BIBLIOGRAPHIES

Corman, Linda, ed. Declining Enrolments - Issues and Responses: An Annotated Bibliography. Toronto: OISE, 1979. 82 pp.

"Declining Enrolment - Selected References." Board of Education for the Borough of North York, 1978. 6 pp.

"Declining Enrolments." ERIC Abstracts. 1978, 1980."

These abstracts list a wide variety of unpublished material and journal articles.