School Choice

Policies and Effects

An international literature review

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SOCIETY FOR THE ADVANCEMENT OF Excellence in Education

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SOCIETY FOR THE ADVANCEMENT OF EXCELLENCE IN EDUCATION (SAEE)

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EXECUTIVE SUMMARY

This literature review examines what is known about the effects of school choice. It surveys significant research from a range of countries to examine its impact on public school systems. In particular the researchers attempted to discover outcomes regarding achievement, graduation and retention rates, employability skills, and student and parent satisfaction. Effects on the disadvantaged were examined in detail to shed light on who chooses and the consequences to social equity and academic opportunities for poor, minority and special-needs students. The influence of school choice on school productivity was noted where found.

Major findings include:

- Systems of choice vary widely and their outcomes depend on their context. Often the effects of choice cannot be isolated from those of other system reforms enacted concurrently.

- There are losers and winners. The losers are those who lack the resources and social capital to actively pursue better learning opportunities for their children. In the absence of clear information on school performance, income and race become proxies for 'good' schools. This suggests governments must ensure adequate provision of information and districts must make efforts to ensure adequate supply of choice and assist parents with selection.

- The effects on student achievement, where they can be measured, are generally more positive than negative.

- There is evidence that graduation and retention rates can be improved through alternative learning options, especially for at-risk students and those not challenged or succeeding in conventional classrooms.

- Parental and student satisfaction is higher in schools of choice.

- There is some evidence that provision of more choice increases performance in all schools. When alternative schools are provided at equivalent per-pupil funding, general productivity in the system is increased without additional cost.

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INTRODUCTION

The concept of parents choosing the public schools that their children will attend is a controversial one for pedagogical, sociological and economic reasons. With time and increased implementation, however, the option of school choice is becoming increasingly mainstream.

This study reviews what is known about school choice within public systems and its resulting impact on students. The researchers brought no ideological bent to their work; they focused, to the extent possible, on the available empirical evidence.

The review examined research evidence from Canada, the UK, New Zealand, USA, Sweden, and Australia. Results were construed broadly so as to capture a range of indicators such as academic performance, graduation rates, employability skills, retention, and student/parent satisfaction rates. Effects on lower income, disadvantaged and minority students were especially noted.

The report begins with a description of the methodology and brief background providing the Canadian context for school choice. Summaries of the findings of the literature review are then provided as tables by country in alphabetical order by first author. This is followed by analysis which summarizes and synthesizes the evidence across the six countries by the indicators examined. A final chapter offers conclusions based on the preponderance of evidence. A Glossary of terms describing the many differing school choice plans and options internationally is contained in the Appendix. The References list the choice studies reviewed.

Methodology

The literature review occurred between August 6 and 22, 2002. In conducting the review, library resources, the Internet, resource files, bibliographies, and current publications were systematically searched to develop a potential list of the most significant and rigorous studies of school choice in six countries. Researchers developed a set of criteria for the quality and nature of the studies to be included and a list of outcome indicators to be examined. Studies that met the inclusion criteria were carefully reviewed and summarized in table format for cross-comparison purposes.

The following effects of school choice were documented for this review: academic performance, graduation rates, employability skills, attendance and retention rates, and student/parent satisfaction rates. As well, access and equity indicators were noted. Efforts were made to disentangle the effects of site-based management and choice.

Assessing research quality is not easy and the selection of studies for inclusion in a meta-analysis process is open to criticism. In an attempt to avoid subjective appraisals of quality, each potential source was evaluated as to whether it had the attributes of a research study. Threats to validity included: (1) sampling bias, (2) sample attrition, (3) use of appropriate statistics, and (4) validity and reliability of instruments used to measure variables. There also had to be a well-described research methodology, a detailed study of population characteristics, and preference was given to larger sample sizes and, where possible, longer-term studies. Preference was also given to research designs that more closely approximated the experimental model and those that sought to eliminate the effects of irrelevant variables (i.e., multiple regression analysis, value-added, etc.).

Comparative studies were included in the following order of relevance: (1) alternative public options versus conventional public schools; (2) public versus public sectarian (Catholic): and, if required, (3) public education versus independent education.

Studies were examined from Canada, United States, United Kingdom, New Zealand, Australia and Sweden. During the review, it became apparent that due to the scarcity of rigorous and systematic research in Canada on this topic, the criteria for inclusion of Canadian data had to be relaxed. In most jurisdictions, there was a lack of longitudinal studies as many choice options are recent in their implementation. Also apparent, was that the precise design framework, policy and implementation of choice plans had substantial effects on intended and unintended outcomes. This will be addressed further in the Analysis chapter.

Background

Rising interest in education quality as a means for achieving both individual and societal success in a global economy has prompted closer scrutiny of school performance. In this section, we briefly outline the context for school choice in Canada.

The past decade has been marked by public anxiety about school achievement levels and the increased propensity of Canadian parents to select a school which they believe offers their children better preparation for the future. In addition, governments in every Canadian jurisdiction are paying attention to the question of equity as it pertains to the provision of an effective learning environment for all students, especially those from less advantaged homes.

School choice is supported by a majority of Canadians as demonstrated in a national poll completed in September 2001.[1] A strong majority of parents indicated greater confidence in the private system if funding were no obstacle. Seventy-four per cent believed that within the public system, parents should have the right to select their child's school. In the same poll 71% wanted the option of sending their child to a public charter school. As will be seen in the following discussion, opportunities for educational options within and apart from the public system vary considerably across Canada. We begin with an examination of enrolment trends in public and private schools.

[1] Conducted for the National Post in August 2001. 785 respondents. Findings considered accurate within 3.5% 19 times out of 20.

Trends in Public versus Private School Enrolment 1987/88 to 1998/99 [2]

Public schools are defined to include all elementary and secondary schools operated by public, separate, and linguistic school boards. They do not include schools directly administered by the federal government (overseas schools operated by the Department of Defence, and schools operated by Indian and Northern Affairs Canada) or provincially operated schools for the disabled (visually and hearing impaired students).

Private schools are schools operated and administered by private individuals or groups. They may be affiliated with a religious or linguistic group, or provide specialized education to the learning disabled or gifted. Home schooling and schools in institutions are not included in this definition.

In 1998/99, one out of every 18 children in Canada, or 5.6%, attended a private school. In total, 298,000 were enrolled in private schools; just under five-million students went to public schools.

Children from both ends of the income distribution attend private schools; 29% of children who attend private schools are from families with incomes below $50,000, while 26% are from families with at least twice as much income.

In contrast, about 43% of children (15 years of age or younger) attending public schools had family incomes of less than $50,000, and only 12% had family incomes over $100,000. The proportion of children from households with an annual income of $50,000 to $100,000 was 45%, about the same in the case of both private and public school. (In 1998, one-half of all children were from families with incomes less than $55,000.)

In Ontario, about 37% of all children attending private schools came from households with incomes of $100,000 or more, the highest proportion of any province. This is more than twice the percentage of children (16%) who attended public schools from this income group. Twenty-one percent of private school students came from families with less than $50,000 in income, while 37% of public school students came from this group.

Proportion of Students in Private Schools Rising

In 1998/99, 5.6% of all children in elementary and secondary schools in Canada were enrolled in private schools, up from 4.6% in 1987/88. Comparisons among provinces are problematic because of widely differing funding formulas for independent schools and differences in which type of schools qualify for full public funding:

> *Provincial funding models for private / independent schools vary as do the policies around school choice. Currently, provinces west of (and including) Quebec have policies that facilitate school choice. British Columbia, Alberta, Saskatchewan, Manitoba, and Quebec fund an average of 50% of per-pupil operating costs to accredited independent schools. These schools must meet criteria set out by the provincial*

[2] The information in this section is from Statistics Canada -The Daily July 04, 2001 retrieved from http://www.statcan.ca/Daily/English/010704/d010704b.htm except where noted.

governments (usually curriculum-related) in order to receive funding. Alberta increased its funding allocation to 60% in 2002. Provinces east of Quebec and the territories do not provide direct grant support to independent schools. Other educational choice policies in Canada include Alberta's funding of charter schools and Ontario's announcement of tax credits for private school tuition fees. [3]

Among the provinces (see Tables 1.1 and 1.2), Quebec, has the highest proportion of students (more than 9.2%) enrolled in a private elementary or secondary school in 1998/99. In British Columbia, 8.8% of all students were in private schools in that same year. BC appears to have double the proportion of private school students as Ontario, where Catholic schools serving 31% of the student population are treated as public schools. The lowest proportions of children in private schools were in the Atlantic provinces and Saskatchewan. Only 0.4% of all children in Newfoundland, 0.6% in New Brunswick, 1.0% in Prince Edward Island, 1.6% in Nova Scotia and 1.3% in Saskatchewan were enrolled in private schools.

Most provinces saw steady growth in the proportion of students enrolled in private schools between 1987/88 and 1998/99, while the proportion declined slightly in New Brunswick and Saskatchewan. Some researchers (Goddard, 2000)[4] attribute the rise to general population increases, rather than 'flight to private schools'.

Table 1.1 - Percentage of students enrolled in private elementary and secondary schools

Academic year	Canada	Nfld	PEI	NS	NB	Que,	Ont.	Man.	Sask.	AB	BC	Yukon	NWT
1987-/88	4.6	0.2	0.3	1.2	0.7	8.6	3.3	4.8	1.5	3.1	7.0	0.0	0.0
1988/89	4.6	0.2	0.3	1.1	0.7	8.7	3.3	4.8	1.5	3.1	7.0	0.0	0.0
1989/90	4.7	0.2	0.3	1.1	0.8	8.8	3.3	4.9	1.5	3.1	7.0	0.0	0.0
1990/91	4.7	0.2	0.4	1.1	0.8	8.8	3.3	5.1	1.6	3.2	7.3	0.0	0.0
1991/92	4.8	0.2	0.5	1.1	0.7	8.8	3.3	5.2	1.6	3.3	7.6	0.5	0.0
1992/3	4.9	0.2	0.7	1.2	0.7	8.9	3.6	5.5	1.7	3.5	7.6	0.4	0.0
1993/94	5.0	0.2	0.8	1.3	0.6	9.1	3.6	5.7	1.6	3.6	7.9	0.3	0.0
1994/95	5.1	0.3	0.9	1.3	0.6	9.2	3.6	6.1	1.7	4.1	8.0	0.7	0.0
1995/96	5.2	0.3	1.0	1.3	0.6	9.2	3.6	6.2	1.6	4.1	8.4	0.2	0.0
1996/97	5.2	0.2	0.9	1.3	0.6	9.2	3.7	6.4	1.6	4.1	8.4	0.1	0.0
1997/98	5.4	0.4	1.0	1.5	0.6	9.2	4.0	6.6	1.4	4.2	8.7	0.0	0.0
1998/99	5.6	0.4	1.0	1.6	0.6	9.2	4.3	6.8	1.3	4.5	8.8	0.0	0.0

[3] MacDonald, Terri (2001) School Choice: Is Privatization a Bad Thing? P.1 http://www.policy.ca/archive/20010810.php3

[4] Goddard, Tim .The Flight of the Middle Class from Public Schools: A Canadian Mirage.*Canadian Journal of educational Administration and Policy.* December 30, 2000)

Table 1.2 - Enrolment in private and public elementary and secondary schools 1998/99

Type of school	Canada	Nfld	PEI	NS	NB	Que,	Ont.
Public	4,999,348	97,649	24,146	158,967	129,129	1,014,971	2,022,437
Private	297,798	384	247	2,516	772	102,613	90,600

Type of school	Canada	Man.	Sask.	Alta.	BC	YK	NWT
Public	4,999,348	192,478	193,562	530,135	611,634	6,199	18,041
Private	297,798	14,099	2,565	24,715	59,287	0	0

Spending per Student

Spending for each student has varied widely from province to province for both private elementary and secondary schools and public schools.

For every $100 spent on each student by public school boards in 1987/88, private schools spent $88 per student for elementary and secondary education.

By 1997/98, spending per student by private schools was about the same as in public schools. For every $100 spent on each student by public school boards, private schools spent $101.

During most of this 11-year period, private elementary and secondary schools in Saskatchewan and Ontario spent more per student than did their public counterparts. In Saskatchewan in 1997/98, private schools were spending almost twice as much per student as public school boards.

Private schools spent nearly $2 billion on education in the 1997/98 academic year, the most recent data available at time of writing. This represented 5.5% of total elementary and secondary spending on education, public and private included.

Public School Choice in Canada

Publicly funded school choice options in Canada have historically revolved around religion, language and culture, and been limited to certain groups only. Religious choice varies from province to province as a result of the BNA Act of 1867, requiring provinces to support denominational schools where they existed. This resulted in some provinces giving the right to attend publicly funded denominational schools. In other provinces, religious schools receive no funding, while several provinces grant partial funding. Choice of language was entrenched in the official bilingualism of the 1970's, creating federal support for French immersion schools across the nation. Schooling as a cultural choice is illustrated through First Nations schools, permitted since 1973 to perpetuate Native traditions, languages and culture.

Today, a much broader range of choices is sought for Canadian public schools. This is due to two dominant trends, higher expectations for excellence in schooling in a changing economy, and society's growing diversity and complexity. This has fuelled a demand for public schools which offer a specific methodology, approach or a particular client focus. These may include single sex schools, rigorous academies, fine arts, technical schools, schools for street youth, schools for gay youth, Montessori, work experience, science and technology schools, virtual schools, Mandarin immersion, schools for gifted, music or sports schools. Among the most popular alternatives sought are 'traditional back-to-basics schools'. Around the country, whenever a school district opens up such a school, waiting lists are long, and parents camp out for weeks to secure a place in the registration line-up.

The increased availability of information on school performance has accelerated the pressure for school choice. Quebec has published high school exam standings for both public and private schools since 1993 to assist parents in school selection. A growing number of provinces require school districts to release this information, and in six provinces annual comparisons among schools are provided by external agencies.

Access to Choice

Even armed with information, parental access to public school options varies widely. Manitoba and Alberta have the most generous school choice legislation in Canada, where parents may select any publicly funded school in the province, provided there is enrollment space and the parent assumes transportation responsibilities. In Quebec, where the right of parents to select schools in keeping with their educational values was recognized in the early 1980's, school boards responded to intense competition from private schools by offering a proliferation of special purpose public schools. In other provinces, access to alternative public schools varies widely.

In some urban districts, open enrollment is standard practice, provided space is available. In other districts, choice is restricted to the neighbourhood school through attendance boundaries and a deliberately onerous transfer process. Edmonton Public School Board (EPSB) is a notable exception. About 40% of EPSB elementary students, 50% of junior high students, and 60% of senior secondary students now attend other than their neighbourhood school. The Toronto Board of Education offers more than 28 alternative schools. Rural settings offer parents limited options, but additional choice is increasingly available through virtual schooling. An estimated 80,000 Canadian families now educate their children at home, and technology is opening up new avenues of choice through virtual schooling.

Canadian school boards, with some notable exceptions, have not welcomed the pressure for more choice. Requests for alternative learning environments for students are commonly viewed as criticism of the neighbourhood school, and many boards lack policy and procedures with clear and objective criteria to deal with requests for alternative programs.

For every alternative public school established, there are many stories of failure to act. In British Columbia, despite a provincial mandate to *provide parents and students with a choice of programs to accommodate varying parent and student expectations*, strongly supported community-driven proposals were often turned down by school boards.

Between 1994-96, 11 BC school districts rejected proposed 'traditional schools' (rigorous, uniformed academies).[5] Between 1998 and 2001, five of nine further proposals were rejected.
Teacher unions have also demonstrated a discomfort with allowing parents to choose among public schools. The Canadian Teachers' Federation mounted a multi-million dollar campaign in 1996 to defend the neighbourhood school against expansion of choice alternatives. The BC Teachers' Federation (BCTF) allocated $1.6 million for anti-choice television and newspaper ads, conferences and public forums, and brochures sent home through the schools. One BCTF local boycotted two alternative public schools, a traditional school and a virtual school. The BCTF president, in urging passage of choice-restricting policies, suggested '*school choice will destroy public education'*. [6]

The charter school option is available to a limited number of parents only in the province of Alberta. These autonomous publicly funded schools operate under five-year performance contracts or *charters* with Alberta Learning. The 12 charter schools approved offer a range of program emphases and target differing student populations. They must have an open admissions policy and teach the mandated curriculum; they may not charge tuition or offer religious instruction. Alberta's charter legislation is very limited and caps the number of such schools at 15, despite lengthy waiting lists and generally strong performance results.[7] No other Canadian province has yet enacted charter school legislation.

With this debate about increasing the availability and the potential effects of school choice as a backdrop, we now examine the research evidence from six countries, including Canada. The reader is reminded these tables are presented in alphabetical order, first by country and then by first author.

[5] Coleman, Peter. The Pressure for Choice: An Analysis of Proposals Made to School Boards in B.C. 1998.

[6] *Teachers urged to take a stand*. BCTF President, Alice McQuade, quoted in Vancouver Sun, March 18,1996

[7] Peters, Frank and Jose da Costa. (2002). Achievement in Alberta's Charter Schools. Society for the Advancement of Excellence in Education. Kelowna, BC

2

SCHOOL CHOICE BY COUNTRY

Australia

STUDY	METHODOLOGY
National Report on Schooling in Australia, 2000 Australia State, Territory and Commonwealth Ministers of Education *http://online.curriculum.edu.au/anr2000/*	Large amount of data collected and presented to form a snaphot of Australian education in the year 2000. Provides data for analysis and context for discussion of choice policies in Australia.
FINDINGS	
Choice is largely between government schools, non-government schools and Catholic Schools.	See note below for most current enrolment numbers in each category.
NOTES	
Australian Bureau of Statistics - February 2002 In August 2001 there were 9,596 schools in Australia: 6,942 government schools 2,654 non-government schools. In August 2001, the 3,268,141 full time students attending school were distributed as: 2,248,219 government school students (68.8%) 1,019,922 non-government school students (31.2%) Over the previous year, enrolment in non-	government schools increased by 20,784 (2.1%) Enrolment in government schools remained basically the same (slight decrease of 68 students). A recent new program of choice for Australian students: **Technical and Further Education (TAFE**) http://www.tafensw.edu.au/welcome.htm http://www.tafe.net/ TAFE offers career and work skill courses on campuses and on-line. They bridge high school and post compulsory education - divided into programs that 1) have no formal pre-requisites 2) require grade 10 3) require grade 12. Many of the courses can form part of the high school requirements.

STUDY	METHODOLOGY
Policy Priorities for the Transformation of Australia's Schools Caldwell, Brian J. 2002	Literature Review, policy analysis

FINDINGS	
On the question: Are competition and choice helpful or harmful in efforts to improve learning outcomes for students?	"There is no research on this issue in Australia, but recent studies in Britain and the United States suggest that there are benefits for students in communities where there is competition among schools…Most states in Australia have allowed out-of-catchment enrolments since the 1980's."

STUDY	METHODOLOGY
Choice, Diversity and the Role of Government in Education Crump, Stephen University of Sydney & Walker, Jim University of Canberra November 1994 Paper presented to the Annual Conference of the Australian Association for Research in Education, University of Newcastle *http://www.aare.edu.au/94pap/crums94.332*	Historical context, literature review, policy analysis
FINDINGS	
Builds a case that the pressure for choice is based on pre-existing inequalities where advantaged parents can "choose" schools by moving into the	neighborhood etc and that choice policies in NSW ultimately do not actually provide the choice they promise within the government school structure.
NOTES	
"{C}hoice of educational program as a value and as a goal for policy, however, is not based solely on a theory of democratic rights in education. For diversity is important, equally, from epistemological, pedagogical, curricular and organizational points of view. This is because educational improvement depends, as Dewey pointed out some time ago, on experiment and discovery. Educational experiment, to have realistic application, needs to occur in real life situations. A strong case can be made that "choice of school" policy has failed in NSW (Crump, 1995). Whatever the intentions of the policy shift towards dezoning, the subsequent history suggests that the reform was followed through by the government and its instrumentalities in an equivocal and ambiguous way. Either subsequent decision-makers did not foresee the consequences of partial and poorly resourced implementation or were self-deceived, believing that what was being done was appropriate. Alternatively, it is possible to argue that there was insincerity on the part of politicians who,	seeking popular support without risk, were rhetorically in favour of choice but had no intention of radically altering school enrolment processes, fearing the same backlash as produced by other recent reforms. Likewise education department and union bureaucrats, more used to cumulative, incremental reform, not wanting to lose control over centralized processes and structures, may have impeded the move to better outcomes. They have not, indeed, lost control. "Choice policy is deceptive because the NSW government, the NSW Department of School Education (NSWDSE) and the major unions continue to define and dominate the construction of the education market imposing legal and political constraints. At the school level, while formally there has been dezoning, admission to schools is limited in other ways. Many schools have waiting lists once out-of-zone places are filled, often well before the academic year begins. Principals are known to ask for two forms of identification to verify local address for families seeking entry and the old school zone maps, officially non-existent, can be seen on office

	walls and are often used more rigorously than before. The lack of broader reform to school resourcing (more flexible staffing arrangements, the supply of additional resources and so on) can force school executives into this unjust gate-keeping…Thus "choice" in NSW is highly curtailed and inhibitively structured. As a result, the options for choice are just as firmly as ever reliant upon the affordability of housing." (Crump, 1994)

STUDY	**METHODOLOGY**
Educational Attainment in Australia: A cohort analysis Le, Anh T. & Miller, Paul W. January 2002 http://www.acer.edu.au/research/vocational/lsay/reports/lsay25.pdf *Australian Council for Educational Research*	Comparative cohort longitudinal study, using multiple regression analysis. Compared students from 1961 and 1970 and analyzed factors that contribute to achievement. Sample size: 1961 Cohort – 1432 1970 Cohort – 925
FINDINGS	
After taking into account differences in family circumstances and the attitudes of students, non-government school students achieved significantly better academic results than state school students. The average Equivalent National Tertiary Entrance Ranks in independent schools, Catholic schools and state schools were 78.2, 72.8 and 66.7%, respectively. The type of school attended by students has a large influence on their chances of school completion.	Students enrolled in Catholic or Independent schools were much more likely to complete Year 12 and less likely to drop out before year 10. The success of independent schools has more to do with their ability to 'markedly improve the performance of students who performed poorly in Year 9'. Independent schools seemed to achieve high averages not by just pushing the most talented students to the extremes of their ability, but also by lifting the performance of less able students.
NOTES	
After taking into account differences in family circumstances and the attitudes of students, non-government school students achieved significantly better academic results than state school students.	That is, non-government schools, particularly independent schools, do something for their students that goes above and beyond any advantage conferred by parents' income, occupation and education.

Canada

STUDY	METHODOLOGY
Student Achievement and Performance Levels in On-Line Education Alberta Online Consortium (2001) Virtual Schools in Alberta http://www.albertaonline.ab.ca/pdfs/AOC-Full_report.pdf	Survey Study *Sample Size:* 908 students, 557 parents and 177 teachers conducted Nov-Dec. 2000; *Notes:* Also administered separate survey for 14 program administrators and examined data from Provincial Achievement Tests (grade 3,6,9) and Grade 12 Diploma examinations.
FINDINGS	
Virtual student scores in mathematics at all levels tested are lower than non-virtual students. Performance in the sciences was also weaker in Grades 6,9,12. Achievement in Language arts and social studies is comparable to that of conventional schools, with exception of Grade 9 social studies and Socials studies 30. 95% of students and 95% parents are satisfied or very satisfied with the quality of on-line education delivered.	69% of students and 81% of parents felt online education was somewhat or much more effective than conventional schooling. 95% of students and 97% of parents feel students are learning to become independent lifelong learners. 80% of parents felt students were being prepared for entry to post- secondary training. Retention rates in on-line education are approximately 50%.

STUDY	METHODOLOGY
E-Learning: Studying Canada's Virtual Secondary Schools Barker, Kathryn & Wendel, T. (2001) A two year study of on-line secondary schools in Ontario, BC and Alberta http://www.saee.ca/Elearning.pdf	Comparative Study 1998-2000 Utilizing surveys, interviews, focus groups, and achievement and financial data *Sample Size:* 9 schools (3 conventional and 6 virtual schools) N=1332 Completed Questionnaires: 356 (students), 151 (parents), 134 (teachers) Interviews-191 Limitations: Ontario schools dropped from Year 2 of study. Small sample size and limited time frame means conclusions may not be generalizable although generally consistent with evaluations conducted on behalf of governments of BC and Alberta.

FINDINGS	
Enrollment and demand for virtual schooling is growing rapidly. Cumulative growth in Alberta enrollments was 125%. Parents in virtual schools were more satisfied overall with quality of education (91%) than parents in conventional schools (84%) Parent satisfaction with student preparation for higher education was higher in virtual schools (86% versus 76%) 91% of virtual students were very satisfied with overall quality of education; the most common reason for selection of virtual program was dissatisfaction with conventional schooling.	Course completion rates (data available for Alberta only) were similar in virtual and conventional schools. Achievement data suggest VS students perform equally well as conventional students. They are inclined to experience greater growth in critical thinking, problem-solving decision-making and time management. Virtual schooling attracts two types of students: self-directed and highly motivated, who chose it as a first option, and students at risk in conventional schooling choosing vs as a last resort. VS is seldom successful for the latter group of students.

STUDY	METHODOLOGY
Canadian Charter Schools at the Crossroads Bosetti, B.L, et al (2000, 1998) Alberta Charter Schools http://www.saee.ca/CCSatXroads.pdf	Surveys and interviews; multi-method case study approach followed by cross-site analysis *Sample Size:* 8 charter schools 1997-1999 *Notes*: This study produced 2 reports (one for each year) and data reported here is combined)
FINDINGS	
50% of the charter schools focus on at risk or special populations Parental satisfaction rates are very high.	The primary reasons given for selecting a charter school were (in order); Mastery of basic skills Academic standards Quality of instruction Small class sizes Individual attention

STUDY	METHODOLOGY
The Impact of Parental Choice on Three Canadian Public Schools Brown, Daniel J. (1999) http://www.caee.ca/Brown.ParentImp.pdf	Qualitative and Quantitative Study over 2 years *Sample Size:* 3 open-enrollment elementary BC schools with distinctive pedagogical approaches (1040 students in total) Questionnaires, interviews (70), and observations were compiled using the matrix method and integrated with comprehensive document review. Indexing was applied to four sets of background factors: achievement data, parent and student satisfaction surveys, and socioeconomic

	characteristics to enable comparisons between schools and their district and provincial means. The academic achievement measures used were district and provincial tests in language arts, mathematics, social studies and science.
FINDINGS	
Aggregate student achievement exceeded district and provincial averages. (70.1%, 68.5%, and 65.2% versus 61% and 62% respectively.) Parental levels of satisfaction are above district averages. (92.7%, 90% and 83.5% versus 81.6%.) Student satisfaction rates are above district averages: (82.7%, 82.3% and 69.7% versus 65.6%)	The creaming hypothesis was not evident. Two of the three schools served students from families whose socioeconomic characteristics were below district and provincial means, while the third was very slightly above. The schools benefited from a high level of parental involvement.

STUDY	**METHODOLOGY**
The Pressure For Choice Coleman, Peter (1998) An analysis of a series of 'traditional school' proposals to schools boards in BC establishing schools of choice in the public system.	Interpretive Study Analysis of 14 community proposals submitted to school boards 1994-96. *Notes*: Content analysis performed using Hyperresearch to code and classify text to determine major and minor themes in the 14 proposals. Themes were analyzed for correlation with the effective schools literature. *Follow-up research (Raham, 2001) subsequent to this study indicated 9 additional traditional school proposals were presented to school boards in BC, of which 4 were approved.
FINDINGS	
Only 3 of the 14 similar proposals were approved by school boards. The proposals matched up well with the effective schools literature. The proposals fit within the 'academic press' theory of school effectiveness.	They had a strong connection between parental support and school quality supported by the literature. The linkage of parental involvement through the school governance council to instruction is a positive element in the proposals.

STUDY	METHODOLOGY
Secondary Schools in Canada: The National Report of the Exemplary Schools Study. Gaskell, Jane (1995)	Qualitative Study *Sample Size:* 21 schools selected from 260 schools nominated Questionnaire, interviews and observations
FINDINGS	
"Most of the schools in the set are schools of choice…". "Some are clearly labelled schools of choice. They frequently have a mission, a sense of	how they are different that provides energy and enthusiasm…these schools create or maintain a community."

STUDY	METHODOLOGY
The Availability of Choice for Alternative Programs in B.C. Public School Districts Kelsey, Graham, Neil Guppy, Martin Hyde, and John Uzelac (1998)	Survey questionnaire study *Sample Size:* Questionnaire sent to superintendents in all 59 B.C, school districts (73% return rate) *Notes*: Authors defined "alternative" programs or schools as those which met two conditions: (a) they are programs or schools to which all students or their parents can choose to apply as specially designed alternatives to the regularly offered programs, *and* (b) they are programs or schools which run for the full school year and offer the provincially approved curriculum for the grade level or levels they cover. *Special education, career preparation, or apprenticeship programs were excluded.*
FINDINGS	
In 43 districts there were over 300 alternative programs, (avg. 7 per district). These programs enrolled approximately 36,000 students, almost eight % of the total enrolment in those 43 districts. **Types of Programs:** 105 (39%) are programs of Selection and 164 (61%) are programs of Re-engagement. 98% of the programs have stable or growing enrolments; 2% are shrinking. 30% had controversy associated with their origins.20% had some controversy re. operation. Selection and Re-engagement programs are equally likely to be in the small controversial group. Most programs started since 1980. Rather more programs of Selection date from the 80s than from the 90s, while the reverse is true for programs of Re-engagement. Almost all the Re-engagement programs (91%)	originated as an initiative of the district's professional or administrative staff. Most selection programs (71%) originated in response to parent/community demand. Most Re-engagement programs (98%) started as a response to a specific problem or difficulty; most Selection programs (60%) did not. Selection programs are equally likely to be found in urban and non-urban areas. Re-engagement programs are more likely to be found in non-urban areas. Selection programs tend to be bigger. 80% enroll more than 40 students; only about half of the Re-engagement programs enroll this many. Selection programs are fairly evenly split between elementary and secondary grades, whereas 83% of the Re-engagement programs are in secondary grades only.

STUDY	METHODOLOGY
Achievement in Alberta's Charter Schools Peters, Frank & Jose da Costa (2002)	Longitudinal Comparative Achievement Study, statistical, value-added analysis 1997-2001 *Sample Size:* Compared 9 charter schools with provincial and host district means. *Notes*: Used raw scores on Provincial Achievement Tests (for Language and Mathematics (Grades 3,6 and 9) and Social Studies and Science (Grades 6,9 only) for year-on-year comparisons and value-added gains. School effects calculated for each charter school compared with provincial mean. *Limitations:* Small sample sizes in some schools. Value-added analysis could not confirm comparisons based on identical cohorts.
FINDINGS	
Children attending the majority of charter schools scored above the provincial average in all tested subjects at all grade levels. More surpassed the provincially set benchmarks	than their counterparts in the regular system. Effect sizes of charter schools were significantly higher in most cases.

New Zealand

STUDY	METHODOLOGY
When Schools Compete Fiske, Edward B. and Helen F. Ladd (2000) Effects of choice policies in New Zealand	Correlational study using multiple regression, supplemented with interviews and observations. *Sample Size:* Data from 635 urban primary and secondary schools in Wellington, Auckland and Christchurch between 1991-1996. Schools visited: 46. *Notes*: Data supplied by Ministry of Education for enrollment, funding, socioeconomic, achievement on school leaving exams for 1991-1996. The system of unregulated school choice introduced in 1991 studied here was modified in 1995 to assure students a place at the local school. Beyond this, schools certified by the Ministry as fully subscribed were permitted to develop their own admission polices (enrollment schemes). By 1998, Ministry approval of school enrollment schemes was required to ensure local attendance rights were protected. In 1995 schools were classified by decile ranking (1-10) based on socioeconomic and ethnic characteristics of students and the educational challenges of the school. Effects of school choice cannot be entirely isolated from school management and curricular changes introduced during same period. New Zealand has no mandatory national assessments at any level. The school leaving age was changed in 1993, making dropout figures difficult to compare over time. These make system and school performance difficult to assess in any standardized way.
FINDINGS	
Parents enthusiastically availed themselves of school choice opportunities. Decile rankings highly influenced parental perceptions of schools in the absence of school performance information. Enrollment patterns showed that parents gravitated to higher decile schools which had fewer minority students and reflected higher socioeconomic status: Student rolls fell in deciles 1-3 schools, and grew in deciles 5-10 schools. Lower decile schools with double the concentrations of minorities (52% versus 26% in typical school) experienced 2% lower annual growth rates than middle class schools).	"The most systematic problem relating to academic quality facing low decile schools is difficulty attracting good teachers and administrators. " Higher decile secondary schools employ higher concentrations of high-quality teachers. Lower decile schools attracted the greatest proportion of minorities, low-income and hard to educate students. 51% of suspended students moved to a lower-decile school. Disparity in average achievement on the school certificate exam between successful and unsuccessful secondary schools increased over time.

NOTES	
"The existence of peer effects is not sufficient by itself to reach the conclusion that the polarized system generated by market forces reduces overall student achievement. Although students who remain in low-decile schools maybe worse off and achieve at lower levels, those who move to higher decile schools will be better off and may achieve at higher levels than they otherwise would. The net effect is unclear." (p. 241). "Returning to a system of school attendance zones would eliminate parents' right to choose, a right that most New Zealanders…would be loath to surrender. Moreover, given the segregation of residential areas, most educational gains from such a policy change in low-income areas would come at the expense of those families who would otherwise have exercised their choice and moved their children to other schools." (p.291) "Although some minority and low-income families clearly benefit from having choice, parental choice nonetheless increases the concentration of minority and disadvantaged students by more than can be explained by changes in residential patterns alone…(This) leads to a situation in which the benefits to the schools serving advantaged students are intensified and the problems of schools serving disadvantaged students are exacerbated."	Despite the strong incentives imposed by competition for schools at the bottom to improve, the NZ experience documents that it is very difficult for them to do so on their own." (p. 250) "That some schools will inevitably be unsuccessful in a system designed around the principles of self-governance and competition need not require the rejection of those organizing principles. The challenge is how to ensure the educational need of students in unsuccessful schools are met, while at the same time preserving the benefits of self-governance and choice for others." (p.307) "Initially New Zealand's approach was to do little or nothing for failing schools…. By mid-1999 some of these troubled schools received favorable reports from the Education Review Office, and it appears that they may be working their way back to viability." (p.289) "The problems (of schools serving concentrations of disadvantaged students) need to be confronted head-on by major interventions in teaching and learning. Policies to address the problems such schools face in recruiting and retaining teachers, as called for by the Education Review Office, provide one example of the types of interventions that may be required." (p.291)

STUDY	METHODOLOGY
Self-Managing Schools: Seven Years On Wylie, Cathy (1997) *http://www.nzcer.org.nz*	Longitudinal Survey Study *Sample Size:* 239 primary and intermediate schools surveyed 6 times between 1989 and 1999. This sample represents 10.5% of schools. 1997 results reported here. See below for 1999 data. Survey questionnaires were completed by principals, teachers, trustees and (at 26 primary schools only) parents. Cross-tabulations were done using SAS and results tested for significance using chi-squares reported a the $p<0.05$ level. *Notes:* *School choice was introduced simultaneously with school-based management, financial and curricular changes, and effects noted cannot be solely attributed to a single factor.*

FINDINGS	
85% of parents are able to access their first choice of school, while 11% of schools are oversubscribed. 37% of parents who had chosen a school perceived an obstacle to enrollment; mainly money (21%), transportation (13%) or admission policies (20%). Only 21% of principals described their relations with other local schools as competitive. Seven years after the reform, competition is neither prevalent or pronounced in primary schools.	62% of principals identified the reforms as having a positive impact on the quality of children's learning. Rising steadily from the earlier surveys, a substantive proportion now report a positive impact on learning and teaching, and on relations between principals, teachers and parents. The major changes in school practices over time due to the reforms were: student assessment (66 % of schools), staff appraisal (61%), internal monitoring of school/class programs (55%) and staff development (44%). These aspects are key elements of school improvement.

STUDY	METHODOLOGY
Ten Years On: How Schools View Educational Reforms Wylie, Cathy (1999) *http://www.nzcer.org.nz*	See above
FINDINGS	
Schools in low-decile communities (1-3) were twice as likely to have significant enrollment decrease than high decile (8-10) schools. 31% of principals felt changes in their enrollment were due to parental choice (up from 19% in 1996). Larger proportions of principals (31%) felt their school competed with others (a 10% increase over the decade), although the majority described this as friendly competition. 40% of principals reported an increase in prospective parents seeking information about the school.	83% of parents could access their first choice of school. Parents who were unable to so, were less satisfied with the quality of education and more likely to want to change something at the school. Schools which had lost students or experienced more competition were more likely to have made major changes to promotion, staffing, and staff appraisal and offer after-school programs. Satisfaction rates among Maori (minority) parents increased for first time in the decade.
NOTES	
"Schools which lost students or found themselves competing with other local schools appeared to be as open to change and willingness to be responsive as others, if not more so. More than others they had increased their school promotion and marketing	at additional budget cost. They had also endeavored to meet family needs by providing after-school programs. They were more likely to have made major changes to their performance management." (Executive Summary).

Sweden

STUDY	METHODOLOGY
Tuition-Free Non-Municipal Schools Association of Independent Schools in Sweden *various documents* http://www.friskola.se	Surveys, data collection, and analysis 1992-2001 Sample size: Approximately 800 schools Telephone survey of 1400 parents conducted in 2001 *Notes*: *Describes data for public (tuition free) non-municipally managed schools in Sweden*
FINDINGS	
Academically, among the top 20 secondary schools in Sweden, 13 are non-municipal public schools. Non-municipal schools have a higher percentage rate of graduation to upper secondary education and higher scores on Grade 9 Swedish, English and Math exams than municipal schools. Non-municipal school parents believe they have more opportunity to be involved in their child's education (77% vs. 51%) and more of them use opportunity to be involved (45% vs. 37%) than those in municipal school settings. Swedish parents chose non-municipal schools for educational reasons (i.e. program, safe environment, or class size, etc.). Municipal school parents chose their neighborhood school for its proximity and classmates/friends. Parent satisfaction rates are significantly higher in alternative schools. i.e.: Nacka municipality 2000 survey reports 99%	mean in non-municipal schools vs. 87% in municipal schools. While early alternative schools attracted mostly well-educated parents, recent statistics show non-municipal schools have a higher percentage of single parent and immigrant families than municipal schools and a higher percentage of students identified as having special needs. Sweden's 800 alternative public schools are distributed by type as: Special pedagogy - 36% General - 35% Confessional - 14% Other, including ethnic - 15% The vast majority of alternative schools are in urban centres, but a growing number are being created to offset municipal school closures in rural areas with declining populations.
NOTES	
"The alternative public schools provide benefits to the municipal system, including: ▪ competition, which encourages all schools to be responsive to parents ▪ greater attention to results and more openness of results information ▪ more innovation and more options for students and teachers ▪ cost-effectiveness where better results are achieved for the same dollars"	Lotte Edholm, Office of the Vice Mayor of Stockholm, June 2002 "The non-municipal (alternative public) schools have been a net benefit to district education. They provide more diversity, more opportunities for learners who need different environments, and stimulate more research and experimentation." Mats Gerdau, Nacka City Councilor, (June 2002)

STUDY	METHODOLOGY
Effects of competition from independent public schools on the performance of municipal schools Bergstrom, Fredrik and F. Mikael Sandstrom (2000) *Competition and the Quality of Public Schools*	Longitudinal correlational study using multiple models and regressions *Sample Size:* 30,000 students in Grade 9, over five years *Notes*: Achievement data used was national examinations for Math, English and Swedish by individual student and mean grades. *Statistical models controlled for selection bias, SES, and other factors.*
FINDINGS	
Performance in municipal schools rises with the proportion of alternative non-municipal public schools in the municipality. The presence of schools of choice significantly improves both test results, grades, and graduation rates in municipal schools.	

STUDY	METHODOLOGY
Attitudes and Expectations in Relation to Schools: Swedish Findings and some International Comparisons Soderberg, Sten (2001) What Schools for the Future? *(Chapter 9)*	Interpretive Study A review of surveys of parents through the 1990's
FINDINGS	
Surveys reveal a steadily growing desire among parents to choose a school more actively. By 1997, 70% of parents surveyed expressed a strong interest in schools of choice. More parents than teachers supported more tests,	more homework and the awarding of grades at an earlier age. (This corroborates the growth of back to basic and academic focus alternative schools, which were dubbed the 'third wave' of non-municipally managed public schools in Sweden.)

United Kingdom

STUDY	METHODOLOGY
School choice impacts: What do we know? Gorard, S., Fitz, J., & Taylor, C. (2001) *Educational Researcher* http://www.aera.net/pubs/er/pdf/vol30_07/AERA300704.pdf	A summary of the findings of what so far is the largest study of school choice in publicly funded schools, and the first analysis of changes over time in the characteristics and performance of students in an entire national school system (that of England and Wales). *Sample Size:* Eight million students in 25,000 schools over a 12-year period (1989-2000). *Notes*: Many working papers and articles have been written about different aspects of this study. Indicators of stratification used included FSM, ethnicity, first language, and statements of special educational need. *The researchers were unable simply to attribute this raw-score improvement to market forces for there were many policy changes all taking place at the same time.*
FINDINGS	
The socio-economic stratification of school students declined after the introduction of choice policies. The data also shows that standards in publicly funded schools rose relative to those of private schools over the same period. **Stratification** The degree of socio-economic stratification in all secondary schools in England (those catering to children aged 11 and above), using the most reliable and complete indicator of disadvantage (eligibility for free school meals [FSM]), declined from a high of 35% in 1989/90 to around 30% in 1996 before rising to 32% by 1999/2000. Therefore, around one third of students would have to change schools in order for there to be an even spread of "poor" children between schools. Only in very recent years has this begun to rise, subsequent to, among other things, a change of government in the U.K. and the introduction of the School Standards and Frame-work Act 1998 which weakened the market in education by, for example, allowing local authorities to revert to residential catchment area systems. **Academic Achievement** The most commonly used measure of school outcomes in the U.K.is the General Certificate of Secondary Education (GCSE) and its equivalents. At least one GCSE is taken by around 95% of the 15-year-old age cohort each year. Around 90% of the cohort obtain at least one GCSE at the lowest grade (G), and around 50% obtain five or more passes (grade A*OC). All such indicators have risen since the introduction of ERA88. The percentage obtaining five good passes has increased from 22.6% in 1975 to46.4% in 1998 with larger increases evident from the late 1980's when school choice was implemented. Differences in attainment between several identifiable social groups are declining. Differences in attainment have declined as measured between the highest and lowest achievers, ethnic groups, boys and girls, economic regions, and school sectors. Market reforms have worked insofar as they have allowed poor families to attend schools in areas they cannot afford to live in and encouraged schools to concentrate on improving examinations scores. Out-of-catchment (out-of-neighborhood) enrollment has increased among poor families.	

NOTES	
Additionally, we found no evidence that the process of school choice has led some schools into 'spirals of decline' in which they both lose market share and become increasingly stratified in terms of indicators of disadvantage (Gorard & Fitz, 1998). The number of children in secondary schools increased during the period 1989/99 while the number of schools decreased (to address under-enrollment). Therefore, most schools have increased their average number of students even where they are seen as less desirable in their local markets. In addition to considering schools in terms of simple loss of numbers we also considered schools threatened with closure and those declared to be failing. Of the few schools ending the period in question with smaller numbers on roll the vast majority had an improved (i.e., nearer even) socio-economic composition. From our database we have thus far been able to identify only one school that both lost market share and had a growing proportion of pupils from families in poverty (Taylor, Gorard, & Fitz, 2000a, p 20).	The school system in England and Wales is certainly fairer now than it was in 1989, but the most recent trend, long after the maturation of the school choice process, is once again towards unfairness. It would be preposterous to claim, as others have done, that either of these trends was the out-come solely of government policies of increasing parental choice. Such a claim would ignore the important role of changes in population characteristics and residential segregation, for example. However, our second conclusion would be that market forces in education clearly do not lead, necessarily, to the kind of increase that we had feared. The local variation in implementing national policy and the lack of diversity or even, in some regions, of alternative schools show the simple market-outcomes model to be invalid. This leads to our third conclusion. The stratifying effect of market forces in schools depends, to a large extent, on the status ante. What we have shown is not that choice is SES-free, but that it is certainly no worse, and probably a great deal better, than simply assigning children to their nearest school to be educated with similar children living in similar housing conditions.

STUDY	METHODOLOGY
The Comparative Evaluation of GCSE Value-Added Performance by Type of School and LEA Jesson, David. (2000) http://www.york.ac.uk/depts/econ/dp/0052.pdf	Study: Value Added analysis of GCSE/GNVQ performance *Sample Size:* 186 schools (157 comprehensive, 19 grammar, 10 "modern") *Notes*: *Value-added analysis controls for SES variables and compares progress over time.*
FINDINGS	
No support to the claim that selective educational systems provide better GCSE examination results than comprehensive systems. The evidence indicates clearly that comprehensive systems of educational organisation are now delivering performance that is at least as good if not better than that achieved by selective systems.	Selective systems of educational organization, with the majority of their pupils in secondary modern schools, appear to perform less well overall than similar pupils in fully comprehensive systems.

NOTES	
Selective grammar schools have typically been given a high ranking in published league tables of schools examination results, a fact which has led to claims that these schools offer the best education for pupils. The emergence of statistical techniques making more sophisticated comparisons between such schools and others has been the motivation of the present paper. It compares the performance of able pupils in grammar and other types of school using value-added techniques on a pupil-level basis using recently available national datasets. In addition it considers the performance of selective systems of educational provision for all the pupils in selective areas, compared with what occurs in fully comprehensive systems of educational provision. The paper finds no evidence for the superiority of either grammar schools nor selective systems of educational provision; indeed any advantages appear to lie with those schools and systems organised on non-selective lines. (p.2) National data and appropriate methodologies are, for the first time, available to help inform this debate with stronger statistical evidence. Under these circumstances it is regrettable that more information is not available from official sources to help inform the processes of parental choice. One very positive step would be to make Value-Added data available for all secondary schools and to publish this in a helpful form alongside other material in the annual Secondary School Performance Tables. The Department for Education and Employment (with OfSTED and QCA) already publish annually the very helpful Autumn Package which allows schools to make their own evaluations of their performance. What is needed is some more high profile publication of these evaluations along with guidance about what its findings show. Surely, this is the lead for which parents and others in the process of making decisions which can affect pupils' educational performance for years to come now have a right to expect from central government sources? In a period when the merits of 'selective' systems of educational organization are being debated more than at any time previously, it is important both to use the best sources of data available, and also the most relevant methodologies to carry out the appropriate comparisons between them. The time is now right for this. (p. 38-39)	

STUDY	METHODOLOGY
An analysis of Competition and its Impact on Secondary School Examination Performance in England, Occasional Paper No. 34 Levacic, R. (September.2001) http://www.ncspe.org/ocpap.op_pa.php.	A longitudinal study combining both quantitative and qualitative data. Data for the study (GCSE examination results, student annual intake and total roll, school budgets, and the percentage of students entitled to free school meals) were collected on over 3006 schools in 6 LEAs from 1990/91 to 1997/98. The LEAs were selected in order to provide a variety of local contexts. They included two metropolitan and four county (rural and semi-rural) LEAs and hence different social and geographical contexts, and differences in the proportion of selective and grant maintained (GM) schools. Headteachers of schools in the administrative database (response rate of 72%or N=226) were surveyed in 1997. *Seventeen headteachers, selected from the 314 schools, were personally interviewed in 1997/98.*

FINDINGS	
This study of competition among secondary schools in Britain found that schools perform better, as indicated by the proportion of students achieving high grades in the GCSE examinations, in communities where there are a number of perceived competitors. It appears that this outcome is not determined by unfair rivalrous conduct but by the greater stimulus to improve and maintain the school's position and by the taking up of opportunities for cooperation in matters that may improve outcomes for students.	The results are mixed on whether competition has an impact on school performance, being sensitive to the chosen measure of competition and the measure of performance. Schools respond positively to pressures to improve in relation to a particularly well publicized performance indicator, especially when these are reinforced by the presence of a greater number of perceived competitions.
NOTES	
A black box treatment of the school processes which produce learning outcomes and how these respond to changes in the degree of competition. This paper undertakes a more finely-grained study of the nature of competition and its impact on	school performance than would be possible by utilizing only secondary data sources. Data on head teachers' perceptions of competition were obtained by means of a postal survey and interviews.

UNITED STATES

STUDY	METHODOLOGY
Access to Magnet Schools in Chicago Allensworth, Elaine M. and Todd Rosenkranz (August 2000) http://www.consortium-chicago.org/publications/p0g02.html	Interpretation of data study *Sample Size:* 32 elementary magnet schools or academies that do not have an attendance zone out of 47 possible elementary magnet schools (17,840 students, slightly more than 6 percent of the elementary school students in the CPS) and 10 magnet schools or academies at secondary level *Notes*: A detailed presentation of data that gives a very clear picture of one district's student population and housing, transportation and racial factors that effect the registration at specific schools. *Achievement scores are influenced by the entrance requirements to some of the magnet schools.*
FINDINGS	
28 of the 32 elementary magnet schools posted scores on the Iowa Tests of Basic Skills (ITBS) that exceeded the national average of 50 percent of students at or above grade level. Those same 28 schools score among the top 20 percent of all Chicago Public Schools (CPS) elementary schools. Only two of the 32 magnet schools do not score among the top one-third of all CPS elementary	schools, and only four post results that are below the national average. While enrollment in both magnet schools and the CPS as a whole declined during the 1990s. The decrease in magnet elementary schools was steeper than in the overall population.

STUDY	METHODOLOGY
School Choice Policies in Michigan: The Rules Matter Arsen, David, David Plank, and Gary Sykes (2000) http://www.edtech.connect.msu.edu/policy/center/choice/default.asp	Study *Notes*: First report to study the combined impact of Michigan's two school choice policies, charter schools (officially known as Public School Academies, or PSAs) and inter-district student transfers.

FINDINGS	
Michigan's school choice policies have had limited impact on enrollments in most school districts. They have had a moderate impact in others, and a large impact in a small but vital few. Some high-impact districts have experienced major losses of students and revenues, while others have enjoyed substantial gains. The rate of participation in charter schools and inter-district choice has increased rapidly in Michigan. In 1998-99, about 34,000 students enrolled in 138 charter schools, and nearly 15,000 students enrolled in neighboring school districts, accounting for about 3 percent of Michigan students. Approximately 85 percent of Michigan's PSAs are located in metropolitan areas, with half of these schools located in central city school districts. PSAs	tend to locate in districts with relatively low MEAP scores, and in districts with relatively high numbers of poor and minority students. About half of all Michigan school districts are open to the enrollment of non-resident students under inter-district choice policies. Participating districts are located in both rural and urban settings. Many affluent or growing school districts remain closed to choice students. Students who transfer under inter-district choice policies are moving to districts with higher family incomes, higher MEAP scores, and lower concentrations of minority students than their home school districts. Student transfers reinforce longstanding patterns of community growth and decline that originate in the residential housing market.

STUDY	METHODOLOGY
Focus on Children. Pilot Schools in Boston Public Schools System Boston Public Schools (2002) Status report on alternative 'contract' schools in the Boston Public Schools system. http://www.boston.k12.ma.us/bps/BudegtFY02/pilot.asp	District Report *Sample Size:* 11 pilot schools, enrolling 2500 students out of a total district enrolment of 62,858. *Notes*: The pilot schools stemmed from an agreement in 1994 between Boston Public Schools and the Boston Teachers' Union to collaboratively develop schools that would *experiment with innovative ideas in quality instruction, and demonstrate replicable practices.* A request for proposals generated over 30 submissions, of which eleven have been approved and are operating. *Pilot schools are free from BPS and BTU regulations.*
FINDINGS	
Student achievement scores at pilot schools have shown consistent improvement.	Pilot schools send 78% of their graduates on to higher education vs. 67.4% for BPS. Two schools opted out of the pilot program to become charter schools. Three more pilot schools will open in September 2003.

STUDY	METHODOLOGY
What Really Happened? Minnesota's experience with statewide public school choice programs Boyd, William Lowe, Hare, Debra and Nathan, Joe (May 2002) This report examines what has happened since 1985 with four statewide Minnesota public school choice laws. These include open enrollment, Post-Secondary Enrollment Options, Second Chance options, and charter public schools.	Interviews and surveys over two years including: A) Fifty individuals associated with a range of organizations and stakeholder groups were interviewed, between May 2000 and May 2002, by the senior author, some on more than one occasion. The interviews generally lasted from forty-five minutes to an hour, during which time respondents were asked, in succession about each of the four choice options, to comment on what they saw as: (1) any positive and negative effects of each option, (2) any problems or issues that had arisen, (3) any change in opinion about the options over time, and (4) how school districts had responded to the options. Respondents were asked to give examples and point to evidence of any positive or negative effects they identified. B) Post-secondary Enrollment Options Survey was sent to 7,117 participants from all types of institutions (1,658 participants responded to the survey.) C) Seventeen Area Learning Centers (ALCs) representing the various geographic regions of the state (urban, suburban and rural) were selected to participate in the study. Each school distributed surveys to students and teachers.
FINDINGS	
Participation - The number of students participating in Minnesota's statewide public school options has increased substantially, to more than 150,000 students in 2001-2002. During the period from 1988-89 through 2000-01, the proportion of students participating in a statewide public school choice program during a school year increased from about 1% to 17 %. In 2000-01, 30% of secondary students participated in one of the four statewide options. **Second Chance Schools -** The greatest growth, from about 4,000 students in 1991, to more than 100,000 students in 2002, occurred in alternative schools serving students who are not succeeding in traditional secondary schools. While "Second Chance" choice programs serve the greatest number of students, they probably are the least examined of the options. **Acceptance of Choice -** Most stakeholders agree that public school choice options are now widely accepted and generally have had beneficial effects	Some district schools and districts have changed, at least in part, because of the effects of choice options. Participants in choice options express a very high desgree of satisfaction. **Academic Outcomes -** Preliminary studies suggest positive academic outcomes for students involved in public school choice options, but more research is needed. **Predictions -** Most of the negative predictions initially made by major education groups about the impact of statewide public school choice options have not been borne out. **Conclusions -** Minnesota's public school choice plans have produced many benefits for participating students, as well as for the overall public education system.

STUDY	METHODOLOGY
The Effects of Academic Career Magnet Schools Education on High Schools and Their Graduates Crain, L., Allen, Anna, Warren Little, Judith, Sullivan, Deborah, Thaler, Robert, Quigley, Denise, and Zellerman, Gail. (February 1999) (MDS-779). Berkeley: National Center for Research in Vocational Education, University of California. *http://ncrve.berkeley.edu/abstracts/MDS-779/*	Based on experimental model: Random assignment to treatment groups with outcome measures taken after treatment. Study #1 *Sample Size:* School records of 9,176 students attending 59 career magnet programs in 39 high schools in a large metropolitan area (New York) that includes a low-income city and a ring of older suburbs in a low and moderate income region. Six out of every seven students were African American or Hispanic; the remainder were white, Asian, or Native American. Used a survey in interviews with 110 students who had applied to 4 different career magnet high schools. Compared lottery winners (academic career magnet school attenders N=51) to those lottery losers (students who had applied but graduated from a comprehensive high school N=59). Comparison of students matched as to program chosen, reading ability grouping and income. All were between the ages of 19-22 years at the time they were interviewed. Respondents in this subsample: (46% African Americans, 3% Asian Americans, 37% Caribbean Americans, 12% Latino Americans, and 4% multiethnic). Study #2 *Sample Size:* Two and one-half hour interviews with 30, including 13 matched pairs, of career magnet program and comprehensive high school graduates. Study #3 *Sample Size:* Analysis of life history data plus four additional hours of interviews conducted over two days with 30 of the 110 graduates in the survey. *Note:* Admittance to career magnet schools in this area was determined by the programs using these guidelines:1/6 from above-grade-level reading scores and 1/6 from below-grade-level reading scores with the other two-thirds coming from those within one standard deviation of the area mean. 1/2 of students are selected by the school and 1/2 are admitted by lottery with separate lotteries conducted for each reading level group. Authors define further sub-sets of good-fit/ poor-fit high school experiences and provide data for these groups. They also comment on the implementation failure of a coherent academic-career program in about half of the programs studied and state that weaker students often received a program not much different from that of a comprehensive high school.

FINDINGS	
Study #1 Many programs had lower graduation rates than comprehensive schools. 26% of lottery winners graduated from high school at the end of the fourth year versus 31% of lottery losers. At end of third year 7% of lottery winners had dropped out from high school versus 6% of lottery losers. After the fourth year 14% of lottery winners had dropped out from high school versus 11% of lottery losers. Comprehensives graduate 4 students to every 3 students in magnet programs studied. Opposite results to what was expected but authors suggest the low graduation rate seems to be caused by: the career magnet schools were academically more demanding than the comprehensive high schools, especially true in those programs concerned with qualifying students for specific jobs. The career magnets enforce these high standards and thereby limit the number of students who may receive the "real program" to only a fraction of the students that they admit. Thus, they plan for a high program dropout rate, although most of those who drop from the program do not necessarily drop out of school. Identified three strategies that seemed to reduce the dropout rate: First is the creation of a safety net that can catch those students who are dropped from a program. Second, the dropout rate seems to be lower when students are involved in individual and group projects. Third, dropout rates seem to be lower in schools that devote more resources to career counseling. One problem with career magnet programs was that because of handpicking of 1/2 of students,	overall school performance can look good even while students have a lower chance of graduating. Compared to the comprehensive high schools, students in academic career magnet programs do not have higher or lower reading scores, do not take advanced graduation tests more or less often, and do not have higher or lower absenteeism. The career magnet students had slightly lower math scores, however, career magnets that gave students more time on computers raised student math scores. Authors state job placement programs that took students in the workplace and prepared students for job placement immediately after graduation instead of after further training had negative effects on academic performance due to time needed to reach level of performance required by employers.. Study #2 and 3 Graduates of the career magnets earn at least a third more college credits and are more likely to have chosen a college major in their first one or two years after graduation. Career magnet graduates report that they engage in less high-risk behaviors: They report that they smoke less, have fewer fights, drink alcohol much less often, and become pregnant or cause pregnancy less often. Career magnets: graduates say their parents volunteered help for college twice as often as parents of comprehensive graduates. The success of career magnet graduates seems to hinge on the schools' ability to help students through the process of adolescent identity development. The career magnet students were more likely to have developed a career identity and to report that their high school education enabled them to become "really good at something."

STUDY	METHODOLOGY
As cited in ***Small schools, Big Imaginations: A Creative Look at Urban Public schools.*** Ed by Michelle Fine and Janid I Somerville. Cross City Campaign for Urban school reform (May 1998). (Original source Chartering Urban School Reform: Reflections on Public High Schools in the Midst of Change ed. By Michelle Fine Teachers College Press, New York, NY 1994.) Fine, Michelle (1994)	Study: Comparative Interpretative study of high school data in Philadelphia

FINDINGS	
Overall charter students' daily attendance was 5.8% higher than for non-charter students. For ninth graders there was an average 8 percent difference between charter and non-charter students' daily attendance. (p. 120) Students attending charters passed science, math, English, and history courses 4-9% more often than other students. (cited on p 127)	Students who attended a charter full time or almost full time passed science, math, English, and history courses 7 to 20 % more often than students outside the charter at the same school.

STUDY	METHODOLOGY
Effects of Choice in District #4 (East Harlem), New York City Schools **Miracle in East Harlem** Fleigel, Seymour & James McGuire (1993)	Longitudinal Study historical account supplemented with achievement data. *Sample Size:* East Harlem District - 13,350 students Period: 1974 -1992 *Notes*: Student characteristics: 60% Hispanic, 35% black, 80% eligible for free lunch due to low-income status, 10% Limited English Proficiency, over 50% single female parent families, high drop-out and truancy rates. 26 alternative new public schools were created, each with a distinctive mission, and parents encouraged to choose schools to match student interests and learning needs.
FINDINGS	
Reading Achievement 1974 - East Harlem had lowest scores of 32 NY city districts, with 15% reading at grade level 1988 - 62.5% of EH students reading at or above grade level; 19th place among 32 NYC districts; performing at city average despite largest proportion of poor and minority students. Mathematics Achievement 1983 – 49% students performing above grade level (23/32 districts) 1988 – 19/32 districts	Dramatic decline in dropout and truancy rates. Admission to Selective Public High Schools (accepting only 8.9% of entire NYC graduates) 1975 - a "handful" of EH students 1987 - 22% EH students 1992 - 20% EH students Special Needs Students Achieved 30% declassification and successful mainstreaming of special ed students versus 5% in NYC system at large.

NOTES	
"By the early 1980's the strides taken began to show up clearly in the numbers. It was not merely an isolated success…but broad-based improvement that was breathtaking in its scope. Whereas in 1974, District #4 students had averaged twenty percentage points below the total New York City average on reading achievement, by 1980 the gap had closed to 10 percentage points and by 1984 the	margin was only three and still improving. Math scores, traditionally a weak link in the district were also improving as was English language acquisition….We were also beginning to see significant rises in the percentage of middle school graduates placed into the city's elite high schools." (p. 145)

STUDY	METHODOLOGY
Rhetoric Versus Reality: What We Know and What We Need to Know About Vouchers and Charter Schools Gill, Brian P., Timpane, P. Michael, Ross, Karen E. and Brewer, Dominic J. (2001) http://www.rand.org/publications/MR/MR1118/	Meta-analysis – Literature Review

FINDINGS	
None of the important empirical questions has been answered definitively. Even the strongest evidence is based on programs that have been operating for only a short period of time with a small number of participants, so serious questions about generalizability remain. Nevertheless, the evidence is converging in some areas. In particular: **Academic Achievement** Achievement results in charter schools are mixed, but they suggest that charter-school performance improves after the first year of operation. None of the studies suggests that charter-school achievement outcomes are dramatically better or worse on average than those of conventional public schools. **Choice** Parental satisfaction levels are high in virtually all voucher and charter programs studied, indicating that parents are happy with the school choices made available by the programs.	**Access** In most choice programs (whether voucher or charter), however, students with disabilities and students with poorly educated parents are somewhat underrepresented. **Integration** Limited evidence suggests that, across the nation, most charter schools have racial/ethnic distributions that probably fall within the range of distributions of local public schools. In some states, however, many charter schools serve racially homogeneous populations. Evidence from other school-choice contexts, both in the United States and abroad, suggests that large-scale unregulated-choice programs are likely to lead to some increase in stratification. **Civic Socialization** Virtually nothing is yet known empirically about the civic socialization effects of voucher and charter schools.

NOTES	
What is Not Known The brevity of our list of knowns should send a note of caution to policymakers and to supporters and opponents of choice. For most of the key questions, direct evaluations of charter schools have not yet provided clear answers, and the list of unknowns remains substantially longer than the list of knowns. In particular: Unknowns in the realm of academic achievement include, the academic effectiveness of charter schools must be examined in a larger number of states over a longer period of time. Long-term effects on academic skills and attainment in charter programs are as yet unexamined. Moreover, there is little information that would permit the effectiveness charters to be compared with other, more conventional reforms, such as class-size reduction, professional development, high-stakes accountability, and district-level interventions. Finally, the systemic effects of positive or negative of charter programs have yet to be clearly identified. Whether the introduction of vouchers/charters will help or harm the achievement of students who stay in conventional public schools remains for the moment entirely unknown. This is perhaps the most important achievement issue, because most students are likely to be nonchoosers and remain in conventional public schools.	**Choice** The most important unknown related to parental liberty concerns the quality and quantity of the schools made available by charter programs. The number of high-quality alternatives that different varieties of charter programs will produce is for the moment highly speculative. **Access** Critical unanswered questions about access to voucher and charter schools relate to the variability that would result from different kinds of programs. The characteristics of voucher students in existing programs differ from those of charter students, and the characteristics of charter students vary across states. Other programs might differ further still in the access they provide to different groups of students. Evidence on existing charter laws is harder to summarize, because variation across states is dramatic in terms of both the provisions of the laws and the observed empirical effects. Existing charter schools frequently satisfy a parental demand and are producing mixed but promising academic results. Other effects are ambiguous or unknown.

STUDY	METHODOLOGY
What Do We Know (and Need to Know) about the Impact of School Choice reforms on Disadvantaged Students? Goldhaber, Dan D. and Eric R. Eide (Summer 2002) *Harvard Educational Review*	Meta-analysis-Literature Review
FINDINGS	
1. Public pressure has yielded a tremendous expansion of choice options. 2. Relatively little evidence exists that these schools are having a clear cut positive or negative impact on the achievement of either the students who attend them or those who remain in traditional public schools.	

STUDY	METHODOLOGY
Navigating Newly Chartered Waters: An Analysis of Texas Charter School Performance Gronberg, Timothy J., and Dennis W. Jansen. (2001). http://www.tppf.org/education/nncw/toc.html	Fixed-effect model using regressions, cost function model, value-added model *Sample Size:* Charter school students (1997-2000) who participated in TAAS (sample sizes vary between 1100-9000 students.) *Notes*: This report summarizes the key findings of a study of charter schools in Texas over their first four years of existence, 1996-97 through 1999-2000. The study compiles information on the charter school market, including characteristics of students served. It also investigates student performance from a variety of perspectives, and evaluates the cost efficiency of charter school performance. Currently there are still relatively few students in charters compared to traditional public schools, although the number of charter students has grown significantly. This investigation of charters is an early look at this emerging market sector. As such, this investigation is preliminary, based on a relatively small number of observations of charter schools and charter students, based on a limited number of performance measures.
FINDINGS	
Texas Charter School Market The number of students enrolled in charters increased from 2,412 in 1997 to 25,687 in 2000. Growth in student population among existing charters was high - 23 percent in 1999 and 13 percent in 2000. The explosive growth in the charter market was driven by new entrants - 77 percent of the student population growth in 1999 and 87 percent of the growth in 2000 occurred due to the opening of new charters. **Student Population** Charter schools serve a markedly larger percentage of African American students than traditional public schools. Charter schools serve a far smaller percentage of Anglo students than traditional public schools. Charter schools as a whole serve a student body with a larger percentage of at-risk students than traditional public schools. However, this varies greatly among particular schools and is somewhat muddied by imperfect data reported to the Texas Education Agency (TEA).	**Effects on Student Performance** Estimates from a student fixed-effect model indicate that the average value added to TAAS test scores in at-risk charters is 0.76 higher than in traditional public schools. Adjusting for differences in student characteristics, a student in an at-risk charter scores an estimated 0.76 of a point higher on the TAAS Texas Learning Index (TLI) than a student in a traditional public school. The same regressions find the value added to test scores in non-at-risk charters is 1.56 lower than in traditional public schools. Estimates from these student fixed-effect type regressions indicate that the average value added to TAAS scores in a charter school, without conditioning on at-risk or non-at-risk classification of the charter school, is 0.91 lower than in a traditional public school. The average value added of continuing charters is better than the average of new charters, as measured by a district fixed effect model.

STUDY	METHODOLOGY
The Education Gap: Vouchers and Urban Schools Howell, William G. and Paul E. Peterson (2002)	Randomized field trial study in New York City, Dayton and Washington. Baseline data was collected through parent interviews and focus groups, and student testing and questionnaires. Students were subsequently tested every year of the study. These studies were supplemented by the CSF or Children's Scholarship Fund national evaluation.(p. 43-55) *Sample Size:* In the three cities 4,159 initially tested of which 2,756 were African American. In total, 3142 family questionnaires were completed, of which 2,152 were filled out by African American parents. Study was conducted between spring 1998 and May 2001 in Washington, spring 1997 and June 2000 in New York City and spring 1998 and May 2000 in Dayton. *Notes*: This book is primarily concerned with vouchers which are not included in the scope of this literature review, however, the authors' findings as to the effect of charter schools especially upon the Washington, D.C. component of this study is relevant.
FINDINGS	
Over time the percentage of students offered a voucher for private school but who instead attended public school gradually increased. The varying propensity of voucher students to return to public school differed between the three cities: New York 18% in Year I to 30% in Year III; Dayton 20% to 33% between years II and III; and, in Washington 29% in Year I and fully 46% in Year III. Moreover, many of those offered vouchers in Dayton and especially Washington attended publicly funded charter schools instead of remaining in the voucher program. In Dayton the percentage of students in charter schools increased only from 3 to 5% but in Washington, the percentage grew from 3% in Year I to 13% in Year II and to 17% in Year III. Variations in test score patterns in D.C. from year I to III are hypothesized by the authors to reflect the instability of the D.C. public school environment during this time where charter schools were established in Year I and by Year III enrolled fully 16% of the students in the district (the largest % by far for any charter school involvement in the	United States). They suggest that the decrease in public school test scores between baseline and Year II could have been due to difficulties of charter schools in their initial years. They suggest the recovery in Year III may have been caused by the institutionalization of and stabilization of the charter schools as well as renewed efforts by traditional D.C. schools to respond to what was becoming a major challenge to their fiscal well-being. The average, overall test-score performance of African American students who switched from public to private schools was, after one year, 3.3 NPR [national percentile ranking] points higher and, after two years, 6.3 NPR points higher...The school voucher intervention, after two years, erases about one-third of" the difference in black and white test scores. Continuing students in charter schools (students enrolled in a charter school in the previous year and continuing in that charter school in the current year) show greater improvement in their TAAS test scores. No positive or negative effects were observed for students from other ethnic groups who switched from public to private schools.

STUDY	METHODOLOGY
School Choice and School Productivity (or Could School Choice be a Tide that Lifts All Boats?) Hoxby, Caroline M. (April 2002) Working Paper 8873 http://www.nber.org/papers/w8873	Data on the effects of Arizona and Michigan charter schools on productivity was analyzed. Sample: Michigan School Districts and Arizona Municipalities where at least 6% of enrollment entered charter schools. *Data on districts with inter-district choice options were analyzed*
FINDINGS	
Overall, the picture that one draws from Michigan is that public schools that were subjected to charter competition raised their productivity and achievement in response, exceeding not only their own previous performance but also improving relative to other Michigan schools not subjected to charter competition. The improvements in productivity and achievement appear to occur once charter competition reaches a critical level that coincides with the enrollment at which charter schools' taking students would be easily discernible (not confused with regular fluctuations in enrollment). The increase in productivity and achievement is larger and more precisely estimated in fourth grade, probably because elementary schools faced more competition from charter schools than middle schools did. Overall, the evaluation of Arizona suggests conclusions broadly similar to those one draws from the Michigan evaluation. Charter competition focused on public schools that initially had	achievement and productivity growth that was below average, but charter competition induced public schools to improve their productivity and achievement. The improvements are relative to the schools' own past performance and also relative to gains made, over the same period, by schools that were not subjected to charter competition. The estimates show that inter-district choice has a positive, statistically significant effect on productivity. A metropolitan area with maximum inter-district choice (index approximately equal to one) has eighth grade reading scores that are 3.8 national percentile points higher, tenth grade math scores that 3.1 national percentile points higher, and twelfth grade reading scores that are 5.8 national percentile points higher.

STUDY	METHODOLOGY
Does Competition Among Public Schools Benefit Students and Taxpayers Hoxby, Caroline M. (October 2000) *http://post.economics.harvard.edu/faculty/hoxby/papers.html*	Study: Economic analysis of Tiebout effect on school choice and indexes (very detailed). *Sample Size:* 316 observations (metropolitan areas). *Notes*: Metropolitan areas with higher Tiebout have more productive public schooling and less private schooling. *"Tiebout is the process whereby households explicitly choose their place of residence based upon the availablity and costs of local public goods and other amenities."(p. 292)*

STUDY	METHODOLOGY
The Effects of School Choice on Curriculum and Atmosphere Hoxby, Caroline M. (1999) *http://post.economics.harvard.edu/faculty/hoxby/papers.html*	Linear Regression Study *Sample Size:* 769 observations from 4,555 school districts located in US metropolitan areas of NELS or National Education Longitudinal Study data.
FINDINGS	
Choice increases parent involvement. Choice increases student participation in AP courses. Choice increases probability of school's regular mathematics sequence culminates in a twelfth grade class that includes some calculus. .	Evidence is consistent with one of her earlier studies that students score better on achievement tests and are more likely to attend college if they attend schools that face more competition from other public schools. (p.301) Schools that face more choice are induced to deliver more strenuous curriculum to their students, who have higher achievement as a result.

STUDY	METHODOLOGY
Parents' Perspectives on School Choice ***Reasons for school transfer under open enrolment for students with learning disabilities in Minnesota*** Lange, Cheryl & James Yessekdyke (1997) *Smaller follow-up study by same authors on outcomes:*	Survey Study *Sample Size:* 2000 students 11% of nearly 19,000 students who transferred in 1994-95 school year had learning disabilities Minnesota, 1994-95 Questionnaire and interviews
FINDINGS	
Reasons for transfer to chosen school: ▪ Special needs better met (64%) ▪ More personal attention from teachers (41%) ▪ Unhappy with former school/district (40%) ▪ Better information about child's progress (38%) ▪ Better teachers (33%)	Outcomes: ▪ Decrease in disruptive behavior reported by students/teachers ▪ Retention: 50% of students reported they would not be attending school if they had not transferred ▪ On average, students who persisted completed credits for the year's work

STUDY	METHODOLOGY
Report Card on American Education: A State-by-State Analysis 1976-2000 LeFevre, Andrew T. and Rea S. Hederman (April 2001) American Legislative Exchange Council http://www.alec.org/meSWFiles/pdf/education2000.pdf	Presentation of data study *Sample Size:* Data about public elementary and secondary schools in the fifty states and the District of Columbia. The 2000 Report Card contains more than 90 tables and 25 figures that display, in various ways, more than 100 measures of educational resources and achievement. This review will concentrate on charter schools. Tables on charter schools are included in the report- # of schools; legislation; participation by minorities; etc.
FINDINGS	
Nearly 70 percent of charter schools have waiting lists equal to at least their current enrollment. Minority enrollment in charter schools varies widely from state to state. In the District of Columbia, 100 percent of students in charter schools are black. In Texas, 58.1 percent of students in charter schools	are Hispanic. And in Colorado, 77.9 percent of the students in charter schools are white. As Table 1.14 makes clear, however, nationwide the percentage enrollment by race in charter schools does not differ substantially from the percent enrollment by race in all public schools."(page 11-12)

STUDY	METHODOLOGY
What ís Public about Charter Schools? Miron, Gary & Christopher Nelson (2002) A Comparison of Michigan Charter and Regular Pubic Schools	Statistical Study 1995-1999 Examined finance, equity in distribution, achievement, satisfaction, and impacts on districts. *Sample Size:* charter school enrollment is 3.7% of total student population. Some analyses used all students and others used only a small sample of schools (4) in comparisons with district or entire state. *Notes*: Conclusions from small samples of schools cannot be generalized. Achievement data was for MEAP math and reading at grades 4 and 7, Science and writing at grades 5 and 8, weighted for school size and time period. Limitations: ▪ Not controlled for SES factors ▪ Did not track individual students or even cohorts of students, (no value-added assessment) ▪ data sets are two years apart due to state testing system

FINDINGS	
Year-to-year achievement trends are very inconsistent and variations high among charter schools. Math 4 was only place where charter schools outpaced host districts (.04%). Findings were negative in other areas for charter schools. The average charter school was outgained by host district by 5.8% in Writing 5 and 6.2% in Writing 8.	Charter schools with longer history generally posted stronger gains relative to newer charters. Charter schools have a lower % of students identified as having special needs, especially severe and costly disabilities. Nearly 90% of charter school parents used the highest rating (5) on a survey of satisfaction with curriculum and instruction.

STUDY	METHODOLOGY
Use of School Choice National Center for Educational Statistics (1995) http://nces.ed.gov/pubs/95742r.html	The National Household Education Survey 1993 (NHES:93), a survey of the National Center for Education Statistics (NCES), provided national data on school choice from public assigned, public chosen, and private school parents. *Sample Size:* 34,944 students Parents of children in grades 3-12 were asked whether their child attended a private school or a public school that was their "regularly assigned" school or a "chosen" school. *Notes*: 1.2 percent of parents volunteered that their assigned school was their school of choice. These parents, as well as those whose child attended a private school or a chosen public school, were considered to have chosen their child's school.

FINDINGS	
Characterstics of Students In 1993, 20 percent of children attended schools their families selected – 11 percent in chosen public schools and 9 percent in private schools. 80% attended assigned public schools. Black students (23 %) were more likely than white students (19 %) to have their families exercise the option to choose a school other than the assigned public school. Black & Hispanic students were more likely to be in a chosen public school and less likely to be in a private school. White students were more likely to be in a private school than a chosen public school. Children living in urbanized areas were twice as likely as those not in urbanized areas to be in a school chosen by their families (25 % to 12 %). Among those whose parents chose their school, students in urbanized areas were somewhat more	likely to be in public school than in private schools while students outside urbanized areas were about equally likely to be in either type of chosen school. Students from households with incomes over $50,000 were more likely to be in a chosen school. When household income was over $50,000, private schools were chosen more often than public schools; the reverse was true when household income was $30,000 or under. Children of parents with higher levels of education were more likely to be in a chosen school than other children. When at least one parent had any postsecondary education, 20 percent or more of students were in a chosen school compared to 16 percent of students whose parents had no postsecondary education. As parental education levels increased, students were more likely to be in a private school.

Parent's perception or satisfaction with schooling Overall, parents who chose schools were more likely than parents who did not to be satisfied with the school their children attended. This was particularly true for parents who chose private schools. Eighty-two percent of private-school parents and 61 percent of parents who chose a public school said they were "very satisfied" with the schools their child attended, compared with 52 percent for parents with a child in the assigned public school. Similar patterns were seen for parents' level of satisfaction with their child's teachers, the school's academic standards, and discipline policy. Over 80 percent of parents with children in the assigned public school and parents with children in chosen public schools had positive perceptions about various school attributes, parents with children in private schools were most likely to have positive perceptions (over 90 percent on each measure). Private school parents were most likely to agree that the student is challenged in school, the principal and teachers maintain discipline, and the students and	teachers respect each other. Parents who chose a public school generally agreed more often than those with children in an assigned school that their child enjoys school, teachers maintain discipline, and students and teachers respect each other **Reasons for parental choice (% refer to choosing parents only)** Overall, parents who chose public schools for their children did so for three reasons--a better academic environment (26 percent), special academic courses (23 percent), and school convenience (23 percent). Parents with lower socio-economic status were more likely to select schools for convenience than families with higher socio-economic status (28 percent compared to 16 percent). Similar proportions of both populations chose schools for the two academic reasons. Parents who enrolled their children in private schools did so for two reasons--a better academic environment (37 percent) and religious/moral reasons (30 percent).

STUDY	METHODOLOGY
Making the Grade: Comparing DC Charter Schools to Other DC Public Schools Schneider, Mark and Jack Buckley (2002) http://www.sinc.sunysb.edu/Stu/sbuckley/schbuck2002.pdf	Telephone interview study with randomized selection of sample population using 3 types of analysis: **Model 1:** The Naïve Model. In this simple model, the mean grades assigned to each of the four aspects of the schools are compared as measured by charter school parents and parents with children in the traditional public schools. This naïve model does not control for any factors that may affect observed differences. **Model 2:** A Standard Multivariate Model. The fact that parental evaluation of schools may be driven by both a host of individual level factors that have been shown to affect parent attitudes toward schools, such as parent education levels and race, and by school-related factors, such as the size of the school and the child's grade level are taken into account. Also taken into account is the fact that letter grades are not a continuous variable but an ordered ranking.

	Model 3: Controlling for the Effects of Self-Selection. One of the most important problems plaguing comparison of choosers and non-choosers in an option demand system of choice is the degree to which observed differences in outcomes are a function of the fact that certain types of parents may be more likely to become choosers. Concern was expressed with the extent to which the patterns we observe are robust to control for differences between parents who have chosen charter schools versus the rest of the public school parent population. Population propensity score matching was used. *Sample Size:* 510 DC households with children in D.C. schools.
FINDINGS	
Model 1: In the naïve simple comparison of means, the data confirm the pattern documented in other studies: charter school parents in DC, like parents in other choice programs, evaluate their child's schools more highly than do parents in traditional public schools. The differences across all four specific measures uniformly favor charter schools, ranging from one-quarter of a grade for charter school principals to half a grade for facilities. In each of the measures, the differences are significant at the .01 level. **Model 2:** Parents with children in charter schools rate their schools, their teachers, their principals and their school's facilities higher, even when controlling for a host of other factors such as charter school	enrollment, race, residential mobility, parent involvement with school activities, school size, etc. In fact, the differences between charter school parents and DCPS parents actually become somewhat larger than in the naïve model. **Model 3:** The differences between parents in the two sectors are even larger than in the other two models and, again, are statistically significant. In short, the higher evaluations assigned by charter school parents are not simply a function of choice. In terms of their overall evaluation of the child's school, charter school parents are also 16 times more likely to assign higher grades than other DC public school parents.

STUDY	METHODOLOGY
Achievement in California Charter Schools Slovacek, Simeon, Kunnan, Antony & Kin, Hae-Jin (2002) *California Charter Schools Serving Low SES Students: an analysis of the academic performance index.* http://www.calstatela.edu/academic/ccoe/c_perc/announce.htm	Comparative longitudinal statistical study employing correlational and ANCOVA techniques. Time period: 1999-2001 Sample: All California schools (Non charter – 6520, Charter – 93) *Notes*: Achievement data from California Dept. of Education for Stanford 9 and the Achievement Performance Index. *Controls for SES factors*

FINDINGS	
California charter schools are doing a better job of improving the academic performance of low-income and at risk students than non-charter public schools. In schools with at least 50% enrollment qualifying for free lunch program, charter school students improved at a rate of 22% vs. 19% in non-charter schools.	Charter schools with 75% qualifying for free lunch program show 28% improvement vs. 24% in non-charter schools. Charter schools serve a greater proportion of low-income students (27.2% vs. 23% at the 75% poverty level).
NOTES	
"This study joins the growing number of national regional and state charter school studies. Of 65 studies, 61 show positive effects of charter schools. Two recent studies by the US Department of Education confirm the ripple effect charter	schools have on local districts by driving the schools to implement new educational programs, make systematic changes or create similar programs within traditional public schools." Press release for above study. March 11, 2002.

STUDY	METHODOLOGY
Does Charter School Attendance Improve Test Scores: The Arizona Results Solomon, Lewis, Kern Paark, & David Garcia (2001) Comparative achievement of charter and conventional public schools in Arizona http://www.goldwaterinstitute.org/article.php/111.html	Longitudinal co relational study using multi-variate statistical models and value added analysis. Statewide sample of Grade 3-12 students over 3 years: 1997 - 62,419 students 1998 - 62,419 students 1999 - 40,305 students 13.3 % were enrolled in charter schools in 1999. Achievement data in mathematics and reading obtained from Arizona Department of Education, Stanford Achievement Test (SAT9) scores. *Methodology* attempts to control for sample selection biases due to student ability, family characteristics, mobility, and attrition. It tracks individual student progress over time to compare similar cohorts of students in conventional and charter schools.
FINDINGS	
Charter schools students as a group performed significantly less well in Year One than their counterparts in non-charter public schools. Students remaining in charter schools for 2-3 years had a significant advantage in learning gains over those in conventional schools with increasing tendency of effects. Performance increased with the length of time in the charter school.	Charter schools do consistently better in improving reading achievement over time and generally somewhat better in mathematics. After three years, students attending charter schools gain effects of two points more on the Stanford 9 relative to similar students in traditional schools. Results suggest charter schools are attracting and meeting needs of at-risk learners who were unsuccessful in conventional schools.

STUDY	METHODOLOGY
City Schools: Lessons from New York Teske, P., Schneider, M. Roch, C., & Marshall, M. (1999) Choice and Achievement Results in East Harlem	Value-Added Study, using multi-variate analysis comparing East Harlem District to other districts in New York City in 1974-1992 *Sample Size:* *East Harlem District - 13,350 students*
FINDINGS	
Concluded that it was clearly choice itself which led to the improvements in East Harlem District	performance on a range of achievement indicators.

STUDY	METHODOLOGY
Difficult Choices: Do Magnet Schools Serve Children in Need? Yu, Corrine M., and William L. Taylor. eds (1997) Report of the Citizens' Commission on Civil Rights http://www.cccr.org/images/magnet.pdf	**2 Studies**: Interpretation of data and student and teacher questionnaires and qualitative case studies. *Sample size*: Main study examined magnet schools in three communities: St. Louis (10 magnets and 8 pair-matched integrated non-magnet elementary schools, 8 non-integrated schools), Cincinnati (10 magnets and 10 pair-matched non-magnet elementary schools), and Nashville. Minor study, the Vanderbilt Study, examined voluntary interdistrict transfer program under which 13,000 black students from the City of St. Louis attend public schools in 16 suburban districts in St. Louis County (2 of 16 districts in sample)

FINDINGS	
Student Participation In Cincinnati and Nashville, the percentage of black students enrolled in the magnet programs is roughly the same as the total percentage of black students in the district. In St. Louis, a combination of magnet schools, interdistrict transfers, and a small number of integrated neighborhood schools resulted in a high percentage of resident black public students attending desegregated schools. The parents of children in magnet schools have higher income and educational levels than those in non-magnets. Children in magnet schools are more likely than non-magnet children to live in two-parent households where at least one parent is employed. These findings also hold true when data from only minority parents are analyzed.	In both Cincinnati and Nashville, children in non-magnets are more likely to qualify for free lunch programs. In St. Louis, a significant number of children participating in the magnet program are eligible for the free and reduced lunch program. **Parental Reasons** Higher income parents are more likely to cite academic reputation as a reason for choosing their child's school. Lower income parents are more likely to list the availability of transportation or their child's need for individual or specialized help as factors in school choice. White parents choose a school citing teachers as one of the main factors. Minority parents are more likely to choose a school based on its racial/ethnic mix.

Academic Achievement Low-income students in magnet schools generally do better on measures of academic performance than their counterparts at non-magnet schools. Evidence in Cincinnati and St. Louis suggest this may be the case even when differences in socio-economic status are taken into account. Evidence in St. Louis also suggests that low-income students in the magnet program and the interdistrict transfer program are significantly more likely to complete high school than their counterparts in non-magnet schools.	**Access to Information** While districts use a variety of information sources to inform parents, higher income parents have a wider range of sources of information available to then as well as logistical aids such as a car and flexible work hours in order to visit schools before making a choice.

3

ANALYSIS OF THE EVIDENCE

The following analysis of the finding in the studies cited in the previous chapter is organized according to the various indicators which guided this review of the research.

A large opening section on student achievement is further sub-divided geographically and concludes with a review of achievement in two specific choice models, magnet and charter schools. The next section analyzes choice effects on student performance in terms of graduation and retention rates, as well as school attendance. The satisfaction levels of parents and students are analyzed in a third section. This is followed by a review of equity issues uncovered at the international and regional levels, as well as for at-risk students and for both magnet and charter schools. A concluding section analyzes some related additional effects of choice found in the studies.

ACHIEVEMENT

The effects of school choice on student attainment, as well as they can be disentangled from other system reforms and variables, are reported here by jurisdiction. This treatment enables brief consideration of the context for the findings related to achievement. Within the United States, where the greatest amount of data is available, the achievement effects have been further analyzed by the choice plan. Wherever available, we have referenced studies of significant sample size, which have attempted to control for socio-economic and other variables.

Australia

Australia has a larger percentage of students in private schools (31.2%) than other reviewed countries. The choices are confined mainly to government and non-government and Catholic schools. Although state-operated schools, which serve 68.8% of Australian students have officially eliminated ‘attendance zones’, school selection is still largely based on the ability to afford housing near the desired school, especially where schools are full. (Crump, 1994). The type of school attended has a large influence on chances of school completion and achievement results. Students in Catholic and independent schools achieve significantly better academic results than those in state schools and have higher graduation rates even when controlled for socio-economic status (SES) variables (Le and Miller, 2002). Brian Caldwell, Dean of Education at the University of

Melbourne, reports a scarcity of research in Australia on the effect of school choice on learning outcomes. [8]

Canada

The Canadian context for school choice has been described earlier in this report. Little evidence has been systematically collected in Canada to compare the academic performance of students in various pubic school options. Brown (1999) reports achievement in three alternative schools exceeded district means on provincial tests, although student SES was below average. Children attending the majority of Alberta's charter schools score above the provincial and district means in all subjects and all levels. Proportionally, more charter students than their counterparts surpassed the provincially set benchmarks. The effect sizes of charter schools were significantly larger than average (Peters & da Costa (2002). Barker's (2000) comparison of virtual and conventional school student performance found few differences. An Alberta On-Line Consortium study (2001) suggests mathematics and science performance is weaker for virtual school students, while language arts and social studies results are comparable. We were unable to find any published analysis of the performance of publicly funded Catholic separate school students with their counterparts in the regular public system.

New Zealand

The sweeping reforms begun in 1989 devolved decision-making powers to individual school councils, abolishing district-level school boards. At the same time, an unregulated system of open choice for parents was introduced, as well as curricular changes. No national benchmarks for student achievement were established prior to the reforms. New Zealand has no compulsory national testing system, and the voluntary nature of school - leaving exams and the change in calculation of graduation rates, make measurement of results, even at the upper end of the system, impossible to perform. Lacking an objective comparative evaluation of school performance across the system, the effects of school choice on student achievement in New Zealand cannot be reported with any certainty.

Sweden

School management was decentralized from the national government to the municipalities in 1991. At the same time, parents were granted the right to choose their child's school from other community providers encouraged to establish and manage alternative non-municipal schools. The municipalities were obliged to transfer funds on a per-pupil basis to all such schools approved by the government, which has the authority to inspect and monitor these schools. The percentage of non-municipal schools in Sweden has grown to five per cent of school enrollment since 1991, enrolling up to 17% of students in some urban areas

Achievement measures in Sweden are based on the Grade 9 national examinations in English, mathematics and Swedish. Some municipalities also take measures of attainment at Grade 5, but this is not universal, rendering comparisons at lower levels of schooling difficult. Non-municipal schools have a higher rate of graduation to senior secondary schools and higher scores on Grade 9 national exams, and are over-

[8] Private correspondence to Helen Raham, July 2002

represented in Sweden's top senior secondary schools. The presence of schools of choice was found to significantly improve test results, grades and graduation results. The performance in municipal schools rises with the proportion of non-municipal schools in the district (Bergstrom and Sandstrom, 2000).

United Kingdom

The British school system has undergone a series of reforms since 1988 to raise standards, increase school productivity and improve equity-of-learning opportunities. These include, but are not limited to, school-based management, a more rigorous curriculum, comprehensive national literacy and numeracy initiatives, annual publication of exam results by school, enrollment-based budgets, and the identification of beacon and failing schools, the latter of which may be closed down after three years of weak performance. Parents are encouraged to choose among schools and have become accustomed to doing so. The effects on achievement are not easy to separate out from those of other reforms.

The standards in public schools rose relative to private schools over this period. Using the General Certificate of Secondary Education (GCSE) taken by the 15-year-old cohort each year as an indicator, performance has risen since the introduction of the education Reform Act in 1988. The percentage of students obtaining five good GCSE passes has increased to 46.6% from 22.6% in 1975, and the attainment gap between population groups has decreased. Market reforms have encouraged schools to focus on improving results (Gorard, 2001). Jesson's value-added analysis (2000) found that selective schools perform less well than comprehensive schools when progress of similar cohorts is compared over time. Levicic (2001) found positive results of competition and choice on secondary schools, in that higher proportions of students achieving high grades in GCSE examinations occur in communities where more choice is available. The effects of competition on school performance, however, are sensitive to the chosen measure and how it is evaluated.

United States

Preliminary studies in Minnesota suggest positive academic outcomes for students involved in public school choice options, but more research is needed (Boyd, 2002). Goldhaber (2002) states that while public pressure has yielded a tremendous explosion of choice options, relatively little evidence exists that these schools are having a clear-cut positive or negative impact on the achievement of either the students who attend them or those who remain in traditional public schools. Hoxby (1999) however found that choice increases student participation in Advanced Placement (AP) courses and also increases the probability that a school's regular mathematics sequence would culminate in a 12th grade class that includes calculus. Student achievement scores at pilot schools have shown consistent improvement (Boston Public Schools, 2002).

In East Harlem scores have improved dramatically. In 1974 East Harlem had the lowest scores of 32 New York City districts, with 15% reading at grade level. By 1988, 62.5% of East Harlem students were reading at, or above, grade level and the district was in 19th place among the 32 districts despite containing the largest proportion of poor and minority students (Fleigel, 1993). In mathematics in 1983, 49% were performing above grade level (23rd place of 32 districts) and this increased to 19th place by 1988. Student

achievement in East Harlem was recognized by the admission to selective public high schools that accept only 8.9% of the total New York City students. In 1975 a “handful” of East Harlem students were admitted, but by 1987 22%, and by 1992 20%, of East Harlem students gained admission. Teske (1999) concluded that it was clearly choice itself which led to the improvements in East Harlem district performance on a range of achievement indicators.

Magnet Schools

Compared to students from New York's comprehensive high schools, students in the academic career-magnet programs do not have higher or lower reading scores, do not take advanced graduation tests more or less often, and do not have higher or lower absenteeism (Crain, 1999). These career-magnet students had slightly lower math scores; however, career-magnet schools that gave students more time on computers raised student math scores. However, low-income students in magnet schools generally do better on measures of academic performance than their counterparts at non-magnet schools (Yu, 1997). Evidence in Cincinnati and St. Louis suggests this may be the case even when differences in socio-economic status are taken into account.

Charter Schools

For valid comparisons (similar to Crain’s 1999 matched-pair analysis of magnet schools) charter schools that cater to disadvantaged students need to be compared to similar schools. Likewise, if charter schools have selection criteria, they should be compared to those with similar admission policies. An important caveat to note is that these distinctions have not always been accounted for in comparative research on charter school effects.

In Arizona, first year charter school students as a group performed significantly less well than their counterparts in non-charter public schools (Solomon, 2001). However, students remaining in charter schools for two to three years had a significant advantage in learning gains over those in conventional schools with an increasing tendency of effects, i.e. performance improved with length of time in the charter school. Charter schools did consistently better in improving reading achievement over time and generally somewhat better in mathematics. Solomon (1999) found that after three years, students attending charter schools gain effects of two points on the Stanford 9 relative to similar students in other schools.

In Michigan, Miron (2002) found that year-to-year trends are very inconsistent and variations high among charter schools. Math 4 was the only place where charter schools outpaced host districts (.04%). Findings were negative in other subjects assessed for charter schools. The average charter school was outgained by its host district by 5.8% in Writing 5 and 6.2% in Writing 6. Charter schools with a longer history generally posted stronger gains relative to new schools.

In California, charter schools are doing a better job of improving the academic performance of low-income and at-risk students than non-charter public schools (Slovacek, 2002). In schools with at least 50% enrolment qualifying for the free lunch program, charter school students improved at a rate of 22% versus 19% in non-charter schools. Charter schools with 75% qualifying for free lunch showed 28% improvement

versus 24% in non-charter schools.

In Texas, Gronberg (2001) in each of the four years of his study, found that continuing students in charter schools show greater improvement on the Texas Assessment of Academic Skills (TAAS) test scores in both reading and math than do continuing students in traditional public schools. The overall improvement in test scores of a matched cohort of continuing charter school students is greater than that for a relevant comparison cohort of traditional public school students. There is a consistent negative first-year charter school effect in both math and reading TAAS score in both at-risk and non-at-risk charter populations followed by a consistent positive second year charter school effect. Estimates from a student fixed-effect model indicate that the average value added to TAAS test scores in at-risk charters is 0.76 higher than in traditional public schools. The same regressions find the value added to test scores in non-at-risk charters is 1.56 lower than in traditional public schools. Therefore, estimates from these regressions indicate that the average value added to TAAS scores in a charter school, without conditioning on at-risk or non-at-risk classification is 0.91 lower than in a traditional public school. The average value added by continuing charters is better than the average of new charters, as measured by a district fixed-effect model.

Hoxby (2002), in studying the effects of Arizona and Michigan charter schools, drew the picture that Michigan public schools subjected to charter competition raised their own productivity and achievement in response, exceeding not only their own previous performance, but also improving relative to other Michigan schools not subjected to charter competition. Broadly similar results were found in the Arizona component of the study. Her estimates show that inter-district choice has a positive, statistically significant effect on productivity. A metropolitan area with maximum inter-district choice has eighth grade reading scores that are 3.8 national percentile points higher, 10th grade math scores that are 3.1 national percentile points higher, and 12th grade reading scores that are 5.8 national percentile points higher.

Fine (1994) cites that Philadelphia students attending charters passed science, math, English, and history courses 4-9% more often than other students. Those who attended a charter school full-time or almost full-time passed science, math, English and history courses 7-20% more often than similar students in other schools.

In examining voucher effects in three urban cities, Howell (2002) hypothesized that major differences in his findings were caused by the influence of the introduction of charter schools into Washington, D.C. during the three years of his study. From year-one where 3% of Washington students attended charter schools to year-three where 16% were in charters, the growth was significant, especially in the numbers of students offered vouchers for private school who elected to attend public charter schools instead. Howell also found, as others have cited, the decrease in public school test scores between baseline and year-two due to the initial years of charter school implementation, but he suggests that the recovery in all public Washington schools (charter and non-charter) was due to the charter schools, as well as renewed efforts by traditional schools to respond to what was becoming a major challenge to their financial well-being.

Gill's meta-analysis (2001) concludes that achievement results in charter schools are mixed, but that performance improves after the first year of operation. He states that

none of the studies suggests that charter school achievement outcomes are dramatically better or worse on average than those of conventional public schools.

GRADUATION, RETENTION AND ATTENDANCE RATES

This was an area infrequently addressed in the studies reviewed. The following findings, however, are relevant to these success indicators:

Public schools of choice in East Harlem experienced a dramatic decline in dropout and truancy rates (Fleigel, 1993). Lange (1997), following special-needs students who took advantage of intra-district transfer opportunities, notes that 50% indicated they would have otherwise dropped out of school. Low-income and minority students in St. Louis who took magnet or intra-district school choice options were significantly more likely to complete high school (Yu, 1997). Daily attendance at charter schools was 5.8% higher than in non-charter schools (Fine, 1994). Minority and low SES students attending magnet schools had lower graduation and higher dropout rates (14%) than their counterparts in comprehensive schools that experienced 11% dropout rates. This outcome was largely attributed to the rigour of the magnet school programs (Crain, 1999). In the case of virtual school students, Alberta On-Line (2002) reports a 50% retention rate. Barker (2001) found similar completion rates in virtual and conventional schools. Independent public schools in Sweden graduate a higher percentage of students to senior secondary levels than the municipal schools. Australian students enrolled in Catholic or other independent schools were much more likely to complete year-12 and less likely to drop out before year-10. This holds true even when controlled for SES and other variables (Le & Miller, 2002). The greatest growth in Minnesota public choice programs was in 'second-chance' programs for at-risk secondary students, rising from 4,000 to 100,000 students (Boyd et al, 2002) which is predicted to improve graduation and retention rates over time.

POST-SECONDARY PARTICIPATION AND EMPLOYABILITY

Few of the reviewed studies offered longitudinal data related to the effects of choice options upon the aspirations or participation of students in either immediate employment after secondary school or enrolment in, and completion of, post-secondary education. This may be due to a variety of factors, but the most probable is that many of the choice options are relatively recent innovations. As well many of the charter schools and other options are primarily at the elementary level at this time. Students must have exited from the school system a few years before meaningful data can be collected as to their success rates in transitions to post-secondary training and employment.

The Alberta On-Line Consortium (2001) reports that 80% of surveyed parents felt students were being prepared for entry to post-secondary but no data were provided detailing what students did after high school. Parents in another virtual school study (Barker, 2001) reported an 86% satisfaction rate, compared to a 76% rate of other parents as to their child's preparation for post-secondary. A study of magnet schools reported that students who prepared for direct entry to jobs after high school, through a job placement program that sacrificed academic time for job preparation, experienced negative effects. However, other graduates in the same magnet school are more likely to earn at least a third more college credits and are more likely to have chosen a college

major in the first one or two years after graduation than graduates from regular schools. (Crain, 1999).

Boston's pilot schools found that 78% of their graduates continue on to higher education as compared to only 67.4% of other Boston public school graduates (Boston Public schools, 2002). Hoxby (1999) notes that students are more likely to attend college if they attend schools that face more competition from other public schools.

SATISFACTION RATES

There is strong evidence overall that school choice increases satisfaction rates, with virtually no negative findings regarding this effect. New Zealand parents enthusiastically availed themselves of choices made available by the elimination of attendance zones (Fiske and Ladd, 2000). Parents of students in non-municipal public schools in Sweden are more satisfied with their opportunity to be involved (77%) than their counterparts in municipal schools (51%). They report that they select their schools for sound educational reasons such as programs and orderly environment, versus proximity and friends. Brown (1999) reports higher satisfaction levels for parents and students in alternative schools studied than district averages, and BC's alternative programs have growing or stable enrollments (Kelsey 1998). Higher parental satisfaction rates on provincial or district annual surveys may be observed for many alternative public schools in Edmonton Public (1997-2001) and BC (2002). Alberta On-Line (2001) reports that 95% of students and parents are *satisfied* or *very satisfied* with the quality of virtual schooling, and 81% of parents surveyed rate it as more effective than conventional schooling. Barker (2001) notes the rapid growth of enrollments in virtual schooling in Alberta and that parents have higher satisfaction rates (91%) than conventional school parents (84%).

Lange (1997) reports that those Minnesota parents who exercised intra-district choice for their special-needs students experienced higher satisfaction with the new school in meeting their child's needs, providing information on progress, and providing more attention and teacher quality. Nearly 90% of Michigan charter school parents surveyed used the highest rating for their school in reference to curriculum and instruction. Gill (2001) found parental satisfaction to be "high in virtually all voucher and charter programs studied". Likewise, the review of statewide choice in Minnesota (Boyd et al, 2002) reports participants in choice options express a "very high degree of satisfaction." Parent satisfaction rates in Alberta's public charter schools are very high; reasons given for choosing charter schools include (in order): mastery of academics, quality of instruction, small classes and individual attention. (Bosetti et al, 2000).

The US National Center for Education Statistics (1995) found 82% of parents in private schools, 61% of parents in public school options, and 52% of parents at assigned public schools described themselves as very satisfied. Choosing-parents agreed more than non-choosers that their school provided a challenging, orderly and respectful environment.

EQUITY

Recent research has probed for detailed longitudinal evidence of the impact of school choice programs on equity of learning opportunities for disadvantaged populations. The

findings linking choice and equity in the public sector from both large-scale international studies and sectoral/regional analyses have been examined. Overall, this review suggests the findings are more positive than negative.

International

One international study concluded that large-scale unregulated choice is likely to lead to some stratification (Gill, 2001). Gill found that in most voucher and charter programs, students with disabilities and poorly educated parents are somewhat under-represented, while charter schools have a similar racial/ethnic composition to regular public schools. The largest international study conducted to date (Gorard et al, 2001) concluded that the socio-economic stratification of school students declined after the introduction of choice policies, and the differences in attainment between identifiable social groups are declining.

Regional

Turning to more regional analyses, the US National Centre for Education Statistics reports that public school choice is more likely to be exercised by black families than white (23% vs. 19%), families in urban rather than rural areas (25% vs. 12%), and upper income (over $50,000) parents with some post-secondary education (20% vs. 16%). White, upper-income, and highly educated families are most likely to choose private schooling. Despite official de-zoning, district choice policies in Australia are still largely based on the ability to afford housing near the desired school (Crump, 1994). Early independent public schools in Sweden first attracted well-educated parents, but recent statistics show these non-municipal schools have a higher percentage of single parent and immigrant families and students with special needs. Under New Zealand's unregulated choice policies, 83% of families can access their preferred school. The lack of systematic state information on school achievement led to widespread enrollment pressures on 'upper decile' schools (high income & education, lower percent of ethnic minorities). Low-decile schools have the greatest concentration of minority, low-income and hard-to-educate students, and disparities in achievement on the school-leaving examinations have increased (Wylie, 1999; Ladd & Fiske, 2000).

At-Risk

The largest expansion of choice statewide in Minnesota was in 'second-chance' schools for at-risk students (Boyd et al, 2002). School choice in East Harlem District achieved declassification of 30% of special-needs students versus five per cent for the New York City system. Despite having the largest proportion of poor and minority students, East Harlem's reading results rose from last place to 19th place out of 32 New York City districts with the introduction of school choice (Fleigel, 1993). Barker (2000) found that at-risk students were no more likely to succeed in a virtual school than at their previous conventional school. In Minnesota, intra-district transfer by special-needs students produced greater satisfaction with the meeting of those students' needs, a decrease in disruptive behaviour, and an increase in retention and graduation rates (Lange, 1997).

Magnet Schools

Magnet schools in Cincinnati and Nashville have similar ethnic distribution as the larger systems and more students from higher-income and better-educated families. While the distribution was more equal in St. Louis, Cincinnati and Nashville, more black families than white and more rich than poor families exercise choice. In this category, black and Hispanic families were more likely to choose public schools, while white families chose private schools (Yu, 1997). This research also found about 50% of Michigan districts are open to non-resident enrollment; many more affluent districts are closed. Students exercising intra-district choice were from families moving to high-income and lower minority neighbourhoods. In BC, a small study of three alternative choice schools found the reverse of the creaming hypothesis, as the majority of children were from families whose income and education levels were below average.

Charter Schools

Much has been learned about the impact of US charter schools on equity. Overall, minority enrollment in charter schools generally reflects the composition of the public school system at large. However, in Washington, DC, 100% of charter students are black, in Texas, 58% are Hispanic and in Colorado 78% are white. (Lefevre, 2001) Miron (2002) found Michigan charter schools have more low-income students and a lower percentage of students identified as special-needs, especially costly and hard-to-educate pupils. Charter schools suggest they are mainstreaming many special-needs students successfully and hence have fewer classified as such. Bosetti (2000) reports about 50% of Alberta charter schools serve at-risk or special populations, while parental education and income is generally higher than average. Charter schools in Texas have significantly more black and fewer Anglo students that regular schools, and more at-risk students (Gronberg, 2001). The same study found that these at-risk students improved faster, especially at reading, than matched cohorts in other public schools.

OTHER INDICATORS

Choice options have caused ripple effects in how some schools conduct their business (Boyd, 2002; Levacic, 2001; Wylie; 1999). Gorard (2001) believes that market reforms have encouraged schools to concentrate on improving examination scores. Wylie (1997, 1999) states that schools which have lost students or experienced more competition were more likely to have made major changes to promotion, staffing and staff appraisal and to offer after-school programs. Sixty-two per cent of New Zealand principals identified the reforms as having a positive impact on the quality of children's learning, which is a higher percentage than earlier surveys. A substantive proportion now report a positive impact on learning and teaching, and on relations between teacher, principals and parents. Some of the major changes in school practices over time were in the following areas: student assessment (66%), staff appraisal (61%), internal monitoring of school/class programs (55%) and staff development (44%). These are key elements of school improvement (Wylie, 1997).

Schools of choice benefited from high levels of parental involvement (Brown, 1999). The linkage of parental involvement to instruction through school governing councils and the strong connection between parental support and school quality as supported by the literature were noted by Coleman (1998).

In Sweden, more parents than teachers supported more tests, more homework and the

awarding of grades at an earlier age (Soderberg, 2001). This corroborated the growth of back-to-basic and academic-focus alternate schools, the "third wave" of non-municipally managed public schools in that country.

In the United Kingdom, choice provided a greater stimulus to improve and maintain the school's position and to take up opportunities for cooperation that may improve matters for students (Levacic, 2001). Schools also responded positively to pressures to improve in relation to well-publicized performance indicators, especially when reinforced by the presence of a greater number of perceived competitors.

Alternative public schools of choice are used in rural Sweden and United States (charters) as a mechanism for preserving small community schools which were to be closed through by local education authorities due to declining enrolment. Allowing the local community to retain and assume control of such public schools appears to be a viable alternative to school closure.

4

CONCLUSIONS

It was clear from the literature review that many positive benefits resulted from expansions to school choice in the public sector. It was also obvious that some students lost out on opportunities gained by others. However, Ladd & Fiske, perhaps the harshest critics of school choice, acknowledge that the right to select schools is one that today's parents would be *loath to surrender.* The challenge for policy makers lies in how to make school choice plans work most effectively for the most students and families, and especially for the least advantaged.

Ladd & Fiske point out that some of the key lessons learned include:

- That some schools will inevitably be unsuccessful in a choice system need not require its rejection. The challenge is how to ensure that the educational needs of students in unsuccessful schools are met, while at the same time preserving the benefits of choice for others.

- Differing choice plans produce differing results, and the devil is in the details.

- The focus on choice has helped identify low-performing schools. What matters is what is done to intervene in poor schools being abandoned by parents.

- Choice is not a magic bullet. Equal efforts must be put into resourcing, monitoring, and building capacity in schools, especially where there are concentrations of disadvantaged students.

Potential Benefits to Education Stakeholders

The expansion of public school choice promises potential solutions for some perplexing challenges in delivering equitable and high performance school systems in Canada. It would recognize the demands for unique learning environments and needs, while preserving the government's right to set curriculum and standards and monitor outcomes, and permitting schools and local communities to develop the best way to deliver them. Based on the evidence, the adoption of a range of carefully constructed choice policies would be expected to benefit the system and stakeholders in a variety of ways.

Parents and Students

With a wider range of alternative public schools available, families will have equal opportunities regardless of income and education to select their schools, removing some inequities in our current system. Student engagement and progress should be maximized in settings that match their learning styles and interests. This should result in increased satisfaction rates and parental support for public education.

School Boards

Competition from new public schools should encourage a focus on high performance and satisfaction levels in district schools. As a consequence, school boards may put in place stronger systems to support school improvement and foster innovative attempts to meet unmet educational needs in the community. Choice may also provide a solution to the troublesome and contentious issue of school closures and amalgamations in areas experiencing declining enrollments. Enabling these small community schools to opt for alternative status may harness new resources and avert the long-term damage to rural communities entailed in local school closures.

Teachers

Professional opportunities will expand and diversify as schools specialize in delivery models. Labour relations may improve as teachers have stronger incentives to ensure their school is performing at optimum levels through expanded professional development, emphasis on successful teaching strategies, and collaboration on school goals. As school results on key indicators become important to sustain an enrollment base, a premium will be placed on good teachers. This should positively impact the professional pay scale and may lead to the development of reward systems for high-performance staff.

Community

Community groups may have increased opportunity to become active players in public education, bringing new resources. With fewer taxpayers having children in the school system than at any other time in our history, attracting broadened support for public education through new partnerships is essential. Cultural and religious groups could find ways to strengthen their heritage, values and traditions within the community through establishing schools, enhancing civil and social democracy in our society.

GLOSSARY

Alternative schools generally refer to a public school option which may deliver a customized program and target a specific sub-population of students (re. gifted or at risk).

Charter schools are publicly-sponsored autonomous schools. They are substantially free of direct administrative control by the government but are held accountable for achieving certain levels of student performance and other specified outcomes. Most charters are granted with a 5-year term and must be renewed, based upon success in meeting the terms of the charter. As public schools, they may not charge tuition.

Controlled choice is a student assignment plan which requires families to choose a school within a community, but choices can be restricted to ensure the racial, gender, and socio-economic balance of each school. Often such plans comprise a strategy to comply with court-ordered desegregation.

Independent schools usually refer to private schools which charge tuition. It is also used in Sweden to describe tuition-free non-municipal schools.

Intra-district choice is a plan which allows students to choose schools within one public school district. Depending on the specific plan, the range of choice may include a few to all schools in a district.

Inter-district choice is a plan which permits students to cross district lines to attend school. Tuition funds from the state follow the student and transportation costs are usually provided. Unlimited inter-district choice is equivalent to statewide open enrollment.

Magnet schools are public schools which offer specialized programs. They are generally designed and located so as to attract students to otherwise unpopular areas or schools, and are often created to promote racial balance.

Tuition tax credits constitute a system of funding choice which allows parents to receive credit against their income tax to subsidize non-public school tuition for their children.

Voucher plans constitute a system of certificate or cash payments by the government which enables public school students to attend schools of their choice, public or private. Vouchers have a fixed value and are redeemed at the time of enrollment.

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