School Choice in Vancouver: Implications and Policy Options

by

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Abstract

This paper examines the effects of school choice legislation introduced by the Provincial Government in 2002 on the Vancouver School Board (District 39) elementary and secondary schools. It employs qualitative and quantitative research methods to determine the changes in school enrollment and school performance post-choice policy. It found a correlation between average student test performance in a school and changes in the school enrollment, with the top performing schools increasing their enrollment and the worst performing schools undergoing a decline. Since average socio-economic status of a school’s students contributes to average student performance in a school, improving student performance in a choice system becomes a matter of compensating for the socio-economic inequalities within a school system. The paper analyzes and proposes policies that the Vancouver School Board can implement in order to deliver equitable student outcomes in a choice model.

Keywords: school choice; open enrollment; Vancouver School Board; spiral of decline; education policy;
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Executive Summary

This study analyses the effects of the introduction of school choice, on school enrollment and aggregate school performance on the Provincial Exam and Foundation Skills Assessment (FSA) in Vancouver (District 39), British Columbia, Canada. School choice facilitates students attending a school other than the one assigned by catchment area. In 2002, British Columbia’s Liberal government passed the School Amendment Act, allowing students to attend any school they want so long as the school has space. Students from within the catchment area retained the right to enroll at their neighbourhood school over non-catchment area students.

School choice remains an ideologically contested topic, with the political Left arguing it exacerbates inequality between students based on socio economic status and the Right arguing the competition it generates between schools improves school performance. Both the left and right agree that it stratifies schools (Gorard, Taylor and Fitz, 1992, Kelly, 2007). The Right argue the education market should operate on the same principles as a free economic market. As such, the stratification of schools and declining enrolment in low performing schools is efficient and therefore desirable (Hepburn, 1999, Merrifield, Dare and Hepburn, 2006). The Left maintain the stratification caused by school choice generates inequalities as the most privileged students are the ones most capable of exercising choice, leaving disadvantaged students worse off (Willms and Echols, 1992; Bosetti, 2004). As per the literature, the introduction of open enrollment should have precipitated a “spiral of decline” in schools with the lowest test scores, as the best performing students migrate out (Gorard, Taylor and Fitz, 2002). The loss of these students lowers the school’s test scores, prompting further school flight.

Combined analysis of enrolment, Foundation Skills Assessment, and Provincial exam data from the Ministry of Education, reveals Vancouver is only experiencing half the spiral of decline suggested by Gorard, Taylor and Fitz. The lowest performing schools did experience a decline in enrolment between 2002 and present, whereas the best performing schools maintained their population or expanded. However, schools’ test scores did not decline in the wake of decreasing enrolment. Consistent test scores discreditable proposal that it is the best performing students that are leaving. Alternatively,
even if the best performing students are exercising choice, the schools and the VSB have succeeded in preventing a decline in schools’ performance.

Complicating matters, Vancouver is currently experiencing a decline in student enrolment across the district. The Vancouver School Board (VSB) has classroom space for 59,585 Kindergarten to Grade 12 students, but currently enrolls only 50,387, leading to an 84.6% classroom capacity utilization rate across the district (VSB, 2016, p. 12). The decline in population has not been distributed evenly across the district. In 2014, the Ministry of Education stipulated that in order for the VSB to receive additional funding for the seismic upgrade program, the Board must consolidate enrolment to 95% of capacity district wide. In order to meet this target, the VSB intends to close 12 elementary schools and one high school between now and 2030 (VSB, 2016, p. 25). The VSB’s Interim Long Range Facilities Plan (ILRFP) attributes the low enrolment in schools east of Ontario Street to the greater density of schools in the area. High density leads to each school having a smaller catchment area relative to schools on the city’s west side, leading to fewer enrolling students (VSB, 2016, p. 21).

A comparison of demographic characteristics, such as average income, number of single parents, and level of university education, with schools’ test scores by local health area indicates that factors exogenous to the school influence test score results. Consequently, parents and students are receiving “incorrect signals” (Willms and Echols, 1992, p. 347) about school quality, as standardized tests are reflecting the effect of students’ socioeconomic status rather than the quality of instruction.

This paper puts forth four policy options available to the VSB to diminish the gap between schools and the stem the shrinking enrollment experienced by some schools in the wake of school choice. As cross-catchment enrollment is enshrined in provincial legislation, the VSB cannot simply ban out of catchment transfers. The four options are outlined below:

**Policy Option 1**: Equalize programming. Under this option, the VSB would introduce in-demand programs, such as French immersion, at schools facing declining enrolment in order to attract more students and enable more students to access them.
**Policy Option 2:** Expand programming to schools in low-income areas (Tier 1, 2, and 3 schools). This program currently targets funding at low socio-economic status schools in order to compensate for factors external to the school, by providing additional staff support, and a breakfast and lunch program. This option calls for the expansion of this program.

**Policy Option 3:** Increase administrator discretion. By allowing the school principal to have more control over hiring, he or she is better able to create a cohesive and effective staff that delivers improved student outcomes. This has the potential to increase student performance, changing perspectives of the school, thereby improving enrollment.

**Policy Option 4:** Accelerate the rate of School closure. As the VSB intends to close 12 elementary schools and one high school by 2030 in order to rationalize enrolment to 95% capacity and generate $16 million in savings, this timeline could be accelerated to reduce capacity and in so doing reduce the space students can transfer in and out of, and generate savings sooner. The closures would also move students from under-enrolled schools to new ones with more staff supports.
Chapter 1. Introduction

This capstone examines the effects of the BC Ministry of Education’s school choice policy on school enrollment in the City of Vancouver (District 39). In 2002, the Provincial government passed Bill 34, or the School Amendment Act, 2002, which codified students’ right to enrol at a school of their choice, even if they lived outside the catchment area, as long as the school had space. Evidence suggests that school choice has facilitated flight from schools perceived as “low performing” based on their provincial examination scores (Friesen, Harris and Woodcock, 2015, Belfield and Levin, 2009). It is expected that the top performing students and/or those students with the greatest resources leave low performing schools (Gorard, Taylor and Fitz, 2002). This potentially creates what Gorard, Taylor and Fitz (2002) dubbed a “spiral of decline” in schools with declining enrolment as more and more students exit. Students with fewer familial resources and less institutional knowledge are less able to transfer and remain at the lowest performing schools. The school’s low test scores caused by student flight further deters prospective students from attending the school. School choice presents a policy problem as it generates unequal educational opportunities for students, as students with a higher socioeconomic status are better able to take advantage of the opportunities generated by choice. This includes parents better able to navigate the system of inter-school choice, afford to live in areas with better schools, or ultimately leave the public system in order to attend the private system (Davies and Aurini, 2011).

Proponents of school choice claim that the increased competition between schools brought about by school choice has driven improvements in school quality, resulting in better student test scores (Friesen, Harris and Woodcock, 2015, Taylor and Woollard

1 The 2002 School Amendment Act also allowed for inter-district transfers, which may come into play in Metro Vancouver due to the proximity of other Districts (such as District 38 (Richmond), District 44 (North Vancouver), Burnaby (District 41). However, students from other districts are given lower priority for admission than students from within the district.
The theory behind the improvement goes that under school choice, schools are incentivized to start specialized programs and improve teaching methods and test scores in order to attract students. Simultaneously, school choice policy affords an opportunity to students to more easily attend a school with programming that better suits their educational needs (Hammer 2012, Friesen, Javdani and Woodcock, 2009). Under this model, declining enrolment indicates that the school offers less attractive programming or is simply perceived to be not as good, leading to the question of what is to be done about schools with declining enrolment.

The purpose of this study is twofold. The first is to determine the effects of school choice in Vancouver. The second is to explore potential policy options that could be adopted by the Vancouver School Board (VSB) to mitigate or address the negative effects, as they are unable to prevent school choice. The intent is to deliver informed, third party policy advice to the Vancouver School board to aid in their decision-making. School choice is a contentious and ideologically heated topic (see Bennet, 2013, and Anderssen 2012), making independent review valuable. Further, in light of the Vancouver Board of Education’s decision to shutter a total of 13 schools over the coming 14 years and Ernst and Young’s recommendation to shut 19 schools, school reform and understanding the role of choice in enrollment patterns is of significant value to the public.

This study employs three avenues of inquiry: (a) existing international and domestic school choice literature, (b) analysis of existing enrolment and test score data, and (c) original interviews with retired administrators. The literature on school choice provides an overview of the effects of school choice in other districts. Enrolment data and test score data help determine the effects of choice on students’ performance in Vancouver. Interviews with administrators provide insight to the day to day effects of the 2002 school choice policy.

1.1. Plan

Chapter Two provides a more thorough definition of the policy problem, a literature review, and background on education in Vancouver. Chapter Three outlines the methodology employed to analyze the policy problem. Chapter Four presents the results
from administrator interviews, and the analysis of enrollment, provincial exam score, and Foundation Skills Assessment data. Chapter Five outlines the policy options. Chapter Six contains the analysis of the policy options, and chapter 7 presents the conclusions and recommendation.
Chapter 2. Background

2.1. Institutional Information

This study focuses on the effects of school choice on the Vancouver School Board (VSB) since school choice has the greatest effects in areas where schools are in close proximity to one another, giving students meaningful choice (Friesen, Harris and Woodcock, 2015). Programs and policies in Vancouver are administered by the VSB, an independent board charged with managing the 126 schools in the district. The VSB is governed by a board of nine publicly elected trustees. The BC Ministry of education determines the curriculum, sets policy and allocates funding to all the schools in the province. In 2014/2015, the Ministry of Education allocated the VSB a budget of $468 million (Vancouver Board of Education, 2015, p. 2).

2.2. Current Policy Framework

In 2002 the BC Liberal Government passed Bill 34, the School Amendment Act, 2002, which included a provision that guarantees students a place in a school of their choice, so long as there is space available at that school. Catchment area children still have priority enrollment at their neighborhood school, making it their default school. As per the legislation:

If a board determines that space and facilities are available at the school in which the educational program is made available, a person whose application was received by the board by the date established under subsection (4) is entitled to enroll in that educational program in the following descending order of priority:

(a) a catchment area child who, in the previous school year, attended the school at which the educational program is made available;

(b) a catchment area child;

(c) a non-catchment area child;

(d) a non-school district child. (Bill-34, School Amendment Act, 2002)
This prioritization and guaranteed enrolment creates what Willms and Echols (1992) describe as “inert” clients in a choice model. Alert clients are those who take business elsewhere, signalling to a firm (in this case a school) to change their current service provision. Inert clients continue to frequent the business or school, providing it a time “cushion” in order to make the change (Willms and Echols, 1992, p. 341). In order for competition to spur improvement in services, there needs to be a “mixture of alert and inert customers.” As per their explanation: “Competition does not work if there are too many inert clients. Parents may fail to exercise their options if they feel they cannot adequately judge the quality of schools or cannot discern how different programs might contribute to their child’s progress” (Willms and Echols, 1992, p. 342). Simultaneously, “competition does not work either if there are too many alert clients. If a large proportion of parents exercise choice, the schooling system could become extremely unstable” (Willms and Echols, p. 342, 1992). The current policy framework that prioritizes enrollment by neighbourhood generates inertia by allowing a large number of students to stay at their current schools. This does not incentivize schools to improve performance in order to maintain enrollment. Simultaneously, this inertia has prevented the divergence in school performance as students are able to attend their neighbourhood school rather than being forced to attend wherever they are granted admission.

Currently, school funding and staff are allocated based on the number of students enrolled at a school in any given academic year. As enrollment declines, staff, and resource staff (such as teacher-librarians and language assistance staff in particular), decline with it. The inverse is also true: as schools grow, so do their staff, including administrators (the addition of a vice-Principal), a full time teacher-librarian, and other supports. This facilitates students’ access to services during instructional time. Furthermore, larger schools generate a sufficiently diverse body of staff members to enable the school to offer an enhanced range of extra-curricular activities and school athletic teams. Though extra-curricular activities are outside of instructional time, they change students’ school experiences, affecting both students’ and parents’ perception of the school, thereby influencing their decision whether or not to exercise choice.
2.3. Why school choice presents a policy problem

School choice presents a policy problem as it exacerbates the pre-existing socioeconomic inequities in student learning opportunities. Students with the greatest familial resources have a greater capacity engage in school choice, and do so more frequently (Willms and Echols, 1992, Bosetti, 2004). This leaves the least privileged students with fewer familial resources at under-enrolled, under-resourced neighbourhood schools. Evidence suggests school choice also leads to greater divisions along racial and linguistic lines in Vancouver, and changes the distribution of students across schools from being based on neighbourhood to choice based on performance (Yoon and Gulson, 2010). In a worst-case-scenario, the divide between school quality grows, creating a two tiered public education system. In short, choice poses an equity problem by creating a tiered education system that favours families who already have the greatest resources.

This study is premised upon Brian Barry’s position in Why Social Justice Matters (2005). According to Barry, “the entire system of social intervention, starting as early as is feasible, should be devoted to compensating, as far as possible, for environmental disadvantages,” such as poverty (p. 58). Barry illustrates how in the in the United States, “social disadvantage is compounded poor schooling, rather than compensated for by superior schooling” (p. 55). Under the status quo, economically disadvantaged students are done a disservice by the public education system as “it is simply regarded as normal that [poor students] will be ill disciplined and read poorly” and not receive significant assistance to overcome these barriers. Barry posits that choice exacerbates this disadvantage, as “choice mechanisms, if not limited by other policies, tend to have a clear tendency towards social stratification along socioeconomic lines, because of the way markets work for people with very different information, skills, resources.” (2005, p. 65). Furthermore,

wealthy parents are buying access to good schools by being able to afford the higher prices in the school’s local catchment area. One of the things that makes a school good is having middle class children in it, because of the personal resources they bring to it: middle class articulacy, middle-class ambitions and so on. (2005, p. 64)

These processes of choice and access undermine school systems’ ability to deliver equal
learning outcomes as some students are able to access a specialized enriched curriculum not available to the general population. This is exacerbated by affluent students having the greatest capacity to attend high performing schools and specialized alternative programs. Consequently, choice increases, rather than decreases, the existing gap in educational performance along socio-economic lines, running counter to the objective of compensating for pre-existing disadvantages. Based on Barry’s work, this paper posits universal, public, education should strive achieve the following two goals: (a) to generate high learning outcomes and (b) to generate equal learning outcomes between schools.

2.4. Literature Review

The literature on school choice tends to examine one of two major types of school choice: *intra* system choice (choosing between public schools) and the broader forms of *inter* system choice (choosing between public, private, charter and religious schools). This project focuses on *intra system* choice. The literature can be divided it into sub categories: international studies, Canadian studies and, British Columbia and Vancouver specific studies. The literature review also includes a discussion of the factors impacting student performance in order to better understand the options available for improving the outcomes of declining schools.

Anthony Kelly summarizes the debate over school choice as being “everywhere understood in the political shibboleths of both Left and Right. The Right says choice is of itself good; the Left says it disadvantages the already disadvantaged” (2007, p. xii-xiii). The political nature of the debate creates bias in the literature, leading to diametrically opposed answers to the questions at the centre of the debate over school choice: whether it diminishes or improves student outcomes, and if it increases or decreases social stratification between schools. However, Gorard, Taylor and Fitz argue:

both the advocates and the opponents of the greater use of market forces in compulsory education have predict[ed] that some schools will enter what is termed here a ‘spiral of decline’. This is a condition in which a school both loses pupil numbers and increases the proportion of socio-economic disadvantage in its intake. The spiral stems from the relationship between these two characteristics in a market driven by pupil-funding and raw-score performance indicators. (1992, p. 367)
This study focuses on the spiral of decline as it presents a single, measurable impact of school choice, agreed upon by the Left and the Right.

How to address the spiral of decline further differentiates the political Left and Right. Advocates of choice regard this process as a natural component of a free market, where less successful schools will close, and the competition drives improvements in quality across remaining schools (Fiske and Ladd, 2000, p. 10). Detractors counter that:

Creating a market in education does not necessarily grant parents more autonomy nor does it *ipso facto* improve school performance or broaden the curriculum. (Lauder et al., 1999). Rather, it pressurizes schools that are successful in market terms to focus on short termism and examination results. (Kelly, 2007, p. 6)

Furthermore, the critics of choice call into question “whether it is appropriate, practically as well as morally, to organize public education in such a way that, when the system is operating the way it is designed to function, there will be failures as well as success among both institutions and individuals” (Fiske and Ladd, 2000, p. 10). Regardless of the political biases, “if research has been inconclusive on the effects of greater school choice on existing stratifications in society, it is fairly clear that marketization of education has resulted in increased stratification of schools” (Kelly, 2007 p. 12). Both the left and right agree that education delivered on a competitive, free market model stratifies schools, as it is the *intention* of a market system to stratify schools in order to influence the choice of consumers (parents and students).

2.4.1. International Studies

New Zealand presents an illustrative international model of school reform with application in BC. The literature on New Zealand also illustrates the partisan nature of the school choice debate. In 1989, New Zealand transformed all public schools into individually administered charter schools. The Fraser Institute’s 1999 report *The Case for School Choice* praised the positive effects that these reforms had on student learning. The report states:

schools have become more innovative, focused, energetic, and responsive to the needs of students…Teachers and principals believe that the impact of the reforms
on teaching content, teaching style, and children’s learning has been overwhelmingly positive. (p. 3)

This praise clashes with Fiske and Ladd’s (2000) study of the effects New Zealand’s reform. Though they agree, “the new decentralized administrative structure is superior to the bureaucratic system that it replaced” (p. 7), Fiske and Ladd found the reforms:

fell far short of the ostensible goal of offering choice for all students. Many parents, especially those with low incomes, are not in a position to exercise choice either because no alternative options exist where they live or because they cannot afford the transportation, fees, and other costs of enrolling in a desirable school.” (p. 8)

They also found that schools had become more stratified by race and class, and the

most popular schools position themselves to serve primarily academically motivated students from families with high socioeconomic status…By contrast, a significant number of schools at the other end of the popularity spectrum must deal with increasing populations of difficult-to-teach students: those with learning or behavioural problems, those for whom English is a second language, or those living in poverty or in dysfunctional families. (p. 10)

Fiske and Ladd’s findings confirm the hypothesis that school choice creates a divergence in student outcomes and schools that are regarded as “failing” become home to low performing students, further deterring others from attending. The Fraser Institute attributes the existence of these failing schools to the government’s decision not to close schools or open new ones if there was still existing space in schools (Hepburn, 1999, p. 17). In a perfect market, these schools would close. This begs the question of where these “difficult-to-teach” students would go, as the “best” schools are oversubscribed, and in a competitive market, no school would want to take on these students without additional funding (Fiske and Ladd, 2000, p. 10). These contrasting analyses of the results of school choice in New Zealand capture the partisan essence of the debate, where two publications (published within a year of one another) can offer wildly differing interpretations of whether the policy ought to be considered a success.

International studies have also attempted to answer specific questions raised by school choice. In a 2009 paper, Patrick Walsh examined the extent to which school choice in the United States resulted in the top schools attracting the best performing students (which Walsh refers to as “cream skimming”). He argues the effect of cream skimming is less than predicted, largely due to “ex ante” sorting between schools, where “high-ability
families may have already left for private schools or wealthy districts” (p. 227). The level of *ex ante* sorting will be an important factor in terms of the effects of school choice in Vancouver, especially between the city’s more affluent west side and less affluent east side schools. Additionally, high performing students may not be exercising choice by transferring to a better school as per 2002 policy, but may exercising choice by enrolling in a specialized program such as French immersion.

International studies have attempted to explain the mechanism behind how school choice causes greater segregation. In their 1992 study of Scottish secondary schools based on interview analyses and a survey of school leavers (graduates), Willms and Echols found that, “parents of higher social class and with higher levels of education were more likely to exercise choice” (p. 340). These “parents disproportionately chose schools in higher socioeconomic areas, and schools of older foundation,” which can be interpreted as proxies for perceived quality (Willms and Echols, 1992, p. 340). Willms and Echols explain:

> [P]arents tend to choose high SES [socio-economic status] schools, then on average they will improve their child’s attainment...If predominantly high SES pupils are transferring from low to high SES schools, then between-school segregation will be increasing. (1992, p. 344)

Their finding would seem to confirm the latter half of the spiral of decline hypothesis, where the students with the greatest resources leave. Gorard, Taylor and Fitz (2002) offer multiple explanations for why parents with a greater SES standing enroll their children in choice programming at a greater rate than other parents, including their “knowledge of the system, confidence, leisure time and, above all, the ability to transport children to non-adjacent schools” (Gorard, Taylor and Fitz, 2002, p. 368). The loss of these high-capacity students with a greater socio-economic status then results in lower test scores on large-scale standardized testing, deterring future students, and thus setting in place Gorard, Taylor and Fitz’s afore-mentioned spiral of decline.

Gorard, Taylor and Fitz’s (2002) results contest the “spirals of decline” hypothesis, which they define as “a condition in which a school both loses pupil numbers and increases the proportion of socio-economic disadvantage in its intake” (p. 367). Gorard, Taylor and Fitz address the difficulty of defining the structural conditions that comprise a spiral of
decline in schools. They state:

it is difficult to find many schools that meet the requirements of our operational definition as being in a ‘spiral of decline’...There is also no reason to assume that such rare patterns of change have not always occurred, and, therefore, no reason to attribute it to an increase in market forces. (2002, p. 379)

They attribute this result in part to the pre-existing “residential segregation,” where the privileged students who are the most likely to exercise choice already attend a better performing school (Gorard, Taylor and Fitz, 2002, p. 370). Gorard, Taylor and Fitz’s findings clash with Fiske and Ladd’s conclusions, though they confirm the ex-ante sorting effect proposed by Walsh. This may indicate that the introduction of school choice precipitating a spiral of decline varies based on the school system, the level of ex ante sorting prior to the introduction of choice, and how schools are administered and even the socio-economic composition of the society as a whole.

2.4.2. Canadian Studies

The debate over school choice remains just as ideologically driven in Canada as abroad. In 2006, the Fraser Institute published a report entitled “Why Canadian Education Isn’t Improving,” where they argue “political control of schooling has significant, inherent deficiencies” and “assume[s] that politics should decide what children study, that incentives don’t influence educators, and that children either have identical learning styles and interests, or that differences don’t affect learning outcomes.” (Merrifield, Dare and Hepburn, 2006, p. 4). They place significant blame on teachers, unions and politicians for the shortcomings of the Canadian education system (Merrifield, Dare and Hepburn, 2006, p. 7). The Fraser Institute’s argument presumes that the lack of competition between schools causes their deficiencies. As stated in a 2006 report from the Fraser Institute: “the public sector is sheltered from competition, and thus public schools can resist change even when they are providing very poor service.” (Merrifield, Dare and Hepburn, 2006, p. 12). By way of solution, they call for the creation of a school system that relies on “choice and competition for accountability” where the “the government would manage and regulate its own schools, and subsidize independent school users and public school users equally.” (Merrifield, Dare and Hepburn, 2006, p. 3). This recommendation is effectively identical to New Zealand’s school reform discussed previously, which generated divergent educational outcomes and reinforced class divisions as described previously by Fiske and
Ladd (Fiske and Ladd, 2000, p. 10).

Studies of Canadian school districts have found socioeconomic status influences parents’ and students’ choices (Bosetti 2004, Taylor and Mackay 2008, Taylor and Woollard, 2003, Davies and Aurini, 2011). In short “parents with higher incomes and education tend to do more of the choosing. This is consistent with the notion that family resources, whether in the form of finances or education, facilitate the likelihood of engaging in school choice” (Davies & Aurini, 2011 p. 473). These findings are consistent with Willms and Echols 1992 study of Scottish parents discussed above. In a survey of Albertan parents, Bosetti concludes the increased use of choice amongst the middle class may be attributable to the fact “middle class families are concerned that their children obtain the educational qualifications necessary to preserve their present class position, or at least guard against downward mobility” (2004, p. 393). This is further reflected in the discourse amongst parents and students regarding school choice, where “their responses to perceived risks reinforce social divisions based on gender, race, and class” (Taylor and Woollard, 2003, p. 632). Though some parents acknowledge “the potential elitism created within the public school system through choice, they find themselves caught within the discourse,” as they too must choose what is best for their children (Taylor and Woollard, 2003, p. 632). Taylor and Woollard also characterized middle class parents as being able to “dr[a]w on their social and cultural capital to try to manage the risks to reduce uncertainty” posed by school choice, which less advantaged parents are unable to do, resulting in greater choice (2003, p. 632). Similar patterns of choice being performed along class lines (at the expense of non-choosers) are likely to be replicated in Vancouver.

Studies conducted in Alberta suggest school choice policy, though spurring the development of specialized programs for high-performing students does little for less privileged students (Taylor and Mackay, 2008, Taylor and Woollard 2003). Taylor and Woollard found “the range of alternatives favours the interests of more privileged parents and students as evidenced by the growth of elite academic programs at the high school level...meanwhile, there is little choice of programmes for non college bound youth” (2003, p. 632). This can be attributable to schools not wanting to “offer ‘behaviour’ programs or programs for ‘at risk’ students, and when programs are designed for these students, “additional resources are lacking,” making them ineffective (Taylor and Mackay 2008, p.
The pattern of targeting specialized programming at students who are already the best performing academically also occurs in Vancouver. Enrollment in enriched programs such as French Immersion, International Baccalaureate, TREK (112 students) (VSB 2016a), Byng Arts and SpArts, dwarf Vancouver’s alternative programs for “at risk” students, such as the Vinery (with 22 students) (VSB, 2016b) or Spectrum (with capacity for 110 students) (VSB 2016c).

How parents make a decision regarding what school to enroll their child in can also influence patterns of school choice. Bosetti’s (2004) survey of parents in Alberta found “79% of public school parents rely on their social networks of friends, neighbours, and other parents to inform their decision, followed by talks with teachers (59%) and school visits (43%)” (p. 395). Bosetti also proposes that “the social network of more highly educated parents is more likely to include professionals with knowledge of the educational system” (p. 395). This is corroborated by an American evaluation of charter schools presented to the Texas State Board of Education. The report found “The most frequently cited form of advertising mentioned by parents was word of mouth.” (Taebel et. al. 1997, p. 86). The review found concerns with word of mouth as “there is a danger of exclusion when recruitment is a function of whom you know. ‘Friend or relative’ communication networks also tend to be homogenous with respect to race and class,” which has the potential to reinforce divisions along racial and socioeconomic lines (Taebel et. al. 1997, p. 86).

A quantitative analysis of school enrolment in greater Vancouver compared to Fraser Institute rankings by Friesen, Javdani, Smith and Woodcock counter the argument that school choice is influenced by word of mouth. They found the publication of test scores has a significant impact on school choice. As per the study:

the public release of information about school-level achievement had a substantial effect on the inter-school mobility of some public school students in the Lower Mainland of B.C. A substantial proportion of parents appear to revise their beliefs about the relative quality of their child’s school in response to this information and ‘vote with their feet’ by moving their child to a preferred school. This response is observed primarily among parents who reside in low-income neighbourhoods and occurs the first time that school-level achievement measures are placed in the public domain. (Friesen, Javdani, Smith and Woodcock, 2012, p. 804)
These conflicting results would indicate that parents are using a combination of both Fraser Institute scores and word of mouth to inform their decision. It is also conceivable school rankings influence some parents, which then spreads through word of mouth. The competing theories as to whether published test results or word of mouth drive school enrollment can be reconciled by assuming that schools that perform well on standardized tests are the same ones being recommended by parents.

2.4.3. BC/Vancouver Specific Studies

The effects of school choice in Vancouver have been explored previously in Education Masters’ and PhD theses (e.g. Pritchard, 2003, Waithman, 2009, and Yoon 2013). These supplement published studies (Yoon and Gulson, 2010, Yoon 2011) and the think tank literature on school choice in Vancouver (Clemens 2012, Friesen, Harris, and Woodcock, 2015, Friesen, Javdani, Woodcock, 2009).

The C.D. Howe institute and the Fraser Institute have both published reports championing school choice in Vancouver. C.D. Howe found elementary student test scores improved after the introduction of open enrolment, particularly in high-density areas where students have a meaningful choice (Friesen, Harris and Woodcock, 2015). Second, the study observed a 5.8% increase in Kindergarten students being registered out of catchment area, meaning parents are taking advantage of school choice, in addition to French immersion and Private education (Friesen, Harris and Woodcock, 2015). Third, echoing Walsh, they found little evidence of increased “segregation or cream-skimming” (Friesen, Harris and Woodcock, 2015).

Choice is not limited to the public school system; private schools in BC’s Lower Mainland are reporting a 22% increase in enrolment between 1997/1998 and 2011/2012 (Clemens, 2012, p. 5). The study also noted that the private schools surveyed had wait lists, hinting both at the appetite for alternatives to the traditional public system and parents’ willingness to pay to send their kids to a school “superior” school (Clements, 2012). In order to increase the capacity of the private system, and foster greater choice, Clemens makes three recommendations “(1) Facilitate the use of idle public school facilities by independent schools, (2) Review policies on operating and capital funding and
on access to low-interest loans for independent schools (3) Undertake a broad review of legislation and guidelines for independent schools" (Clemens, 2012, p. 7-8). The effect of private schools in the context of school choice is important. If school choice leads to divergent test scores, more parents may feel compelled to send their children to private school to get out of public schools they perceive to be failing. Interviews hint at parents being willing to enrol their children in private school if they are unsuccessful in enrolling their child in a choice school or program. In Karvelo Gulson’s (2010) study, a parent comments how “it’s a lot cheaper to send her to private school than it is to sell my house and buy a house on the west side,” when discussing the choice of school for a child (p. 82). This speaks simultaneously to the east/west socio-economic divisions in Vancouver, and parental willingness to send their children to private school.

Vancouver specific studies have consistently found socioeconomic class plays a role in school choice, with parents with higher levels of education and higher incomes being more likely to enrol their children in a school other than their neighbourhood school (Yoon 2013, Waithman, 2009, and Pritchard 2003). Ee-Seul Yoon summarizes:

most of those who participate in school choice, regardless of their racial and ethnic backgrounds, view choice as a tool for gaining a competitive edge and preparing for university...By contrast, those who enrol at their assigned neighbourhood public schools experience a sense of relative demotion and a further element of symbolic domination... by producing ‘negatively marked differences’ (Bourdieu, 1998a, p. 118-119). Clearly, then, there are class dynamics among racial and ethnic minorities. (Yoon, 2013, p. 171)

Furthermore, Yoon and Gulson discovered school choice in Vancouver increased the divide between English second language (ESL) students and English-speaking students (Yoon and Gulson, 2010). Employing interviews with board members and parents, Yoon and Gulson found forms of school choice, such as placing children in French immersion, is a method for aspirational white, English-speaking parents, to separate their children from ESL students who they regard as “needy” and commanding more of teachers’ attention, thus detracting from their own children’s education (Yoon and Gulson, 2010, p. 707).

Similar to Yoon and Gulson’s findings on the effects of class on choice, Marilynne Waithman (2009), found school choice had “contradictory outcomes,” since it “provided
expanded educational opportunities for some students” while “they simultaneously exert a negative impact on other students living in low income homes and attending such under-resourced schools” (Waithman, 2009, p. 4-5). Janet Pritchard examined the choice of high school made by Grade 7 students, comparing both the east and west sides of Vancouver, focusing on the choice to attend “mini schools” instead of conventional secondary education. The study found extensive use of choice on both the east and west side. However, the east side parents who exercised choice generally had “higher levels of education... and more prestigious occupations” (Pritchard, 2003, p. ii). Taken together, these studies illustrate how rather than being a tool of desegregation, as claimed by proponents of school choice, choice in the context of Vancouver becomes a means of reinforcing race and class divisions.

Yoon, Pritchard, Gulson and Waithman present compelling conclusions about the forces driving and effects of school choice in Vancouver, focusing primarily on the student level effects of school choice. This study differs as it seeks to determine whether the introduction of choice policy in 2002 generated a spiral of decline. Previous Vancouver specific studies have primarily employed qualitative methods, such as case studies (Yoon 2011 & 2013, Waithman, 2009, Gulson 2010, Yoon and Gulson, 2010), interviews (Yoon 2011 & 2013) or surveys (Pritchard, 2003) to determine the effects of school choice, focusing on specific schools or programs. These studies consistently found school choice increases segregation between schools (Waithman 2009, Yoon and Gulson 2010, Yoon 2013). Friesen, Harris and Woodcock, (2015) have conducted a quantitative review of the effects of school choice at the school level. Though Friesen, Harris and Woodcock do examine test score data, they focus on the effects of test score by student, and do not focus on declining enrolment on a school by school basis. This study differs from previous works as it employs quantitative analysis of school enrolment figures and standardized test results to measure the impacts of the 2002 choice policy on school test scores and enrollment at a district wide level.

2.4.4. Factors Affecting School Performance

Factors influencing school performance can be divided in two: (a) those endogenous to the school (resources, teacher and administrator quality) and (b) those
exogenous to the school (student socio-economic status, peer effects and parental education levels). Peer effects are classified as exogenous as they are beyond the control of the school administration. Studies have found factors exogenous to the school have a significant effect on student performance (OECD, 2009, Willms, 2006, Perry and McConney, 2003). In its 2009 report on the Programme for International Student Assessment (PISA) results, the Organisation for Economic Co-operation and Development (OECD) found that, “11% of all variation in student reading performance can be attributed to differences across countries, while 34% arises from differences among schools and the remaining 55% can be attributed to differences among individual students.” (OECD, 2009, p. 27). A Canada-specific study of School Achievement Indicators Program (SAIP) data, which is administered by the Council of Ministers of Education Canada (CMEC), concluded “less than 20 per cent of variation in achievement measures was attributable to schools,” “meaning that over 80 per cent can be attributed to students and classes.” (Anderson et. al, 2006, p. 725, 727). These studies indicate exogenous factors affect school performance. This has implications for the debate on school choice, as performance is not exclusively about the schools themselves but about their student populations as well.

The socioeconomic status of students and the school present a significant exogenous effect on performance. The mechanisms by which high socioeconomic status affects educational outcomes are numerous, as discussed by the OECD below:

In general, more highly educated parents may decide to invest more of their time and energy into educating their children or they may choose to guide their daily interactions with their children in ways that help them succeed at school. Parents with more prestigious occupations may become role models for their children. The possibility of ultimately having one of these occupations, which are generally associated with better education, can be an incentive for children to devote more effort to their performance at school. Certain household possessions, such as a quiet place to study or a desk, may also provide an advantage for children. Wealthier families will generally be able either to provide more educational resources at home or to choose schools that will supply them with these resources (OECD, 2010, p. 30).

The advantages provided by a higher SES are amplified at the school level, as shown by Laura Perry and Andrew McConney. In an examination of 2003 PISA data, they found a positive peer effect: “the grouping of high-SES students into a school seems to create
conditions associated with even higher educational outcomes than would be expected from individual students’ SES alone” (2003, p. 1138). The inverse also appears to be true: “when students from low SES families attend schools with a low mean SES, they tend to have worse performance than they would have if they had attended schools with a high SES or heterogeneous intake” or a negative peer effect. (Willms, 2006, p. 63). This stymies parents’ ability to exercise choice effectively, as explained by Willms and Echols, as under an open enrollment model:

the moderate gains achieved by a minority of parents may have high costs for the schooling system as a whole. Schools serving pupils in disadvantaged areas will be receiving incorrect signals; many of them will lose pupils to higher SES schools despite effective teaching practices. Some high SES schools will also receive incorrect signals. Because many parents are choosing these schools even though their performance is mediocre or poor when compared with schools with similar social class intakes. (Wilms and Echols, 1992, p. 347)

Under a choice system, a student with low SES who transfers to a school with a higher SES will have improved educational outcomes. This is consistent with Willms and Echols (1992), who posited that parents’ decisions to send their children to a school with a higher SES, “are rational in the sense that they increase their children’s likelihood of success. By choosing schools that have high social-class intakes, and high unadjusted levels of attainment, they benefit from the contextual effect associated with school composition” (p. 347). If school performance is driven by the population, then improving school performance is dependent on the needs of that particular population. This is not intended to completely dismiss school effect but establish the premise that if both students’ and schools’ performance on standardized tests are driven by SES, then the low performance of some schools relative to others is being driven not solely by the schools themselves, but by their student intake.

2.5. Stakeholders

The BC Ministry of Education, the Vancouver School Board (VSB), the BC Teachers Federation, students and parents can be regarded as the primary stakeholders in regards to school choice. Students, parents, and teachers create stakeholder communities at the school level as well. The BC legislature, under the BC Liberals, changed the legislation concerning school enrolment, which the VSB had no control over.
The VSB only has the capacity to create policy changes in reaction to open enrolment. These policy changes are constrained by their mandate and funding, both of which they receive from the Ministry of Education. The secondary stakeholders, those who are affected by the change but had no agency in its implementation, are the schools themselves and students and parents. Administrators and teaching staff are affected by school choice as it affects school size and composition, directly impacting their employment, especially in light of the recommendation to close schools. The British Columbia Teachers Federation (BCTF) is the union representing teachers within the province, and has consistently been at odds with the provincial government. Based on the views expressed on their website, the BCTF would appear to oppose school choice. (Shaw, 2014, Clarke 1998, Kuehn, 2002, Gutstein, 2004). In terms of the VSB, VESTA, the Vancouver Elementary Teachers Association, and VSSTA, the Vancouver Secondary School Teachers Association, should also be considered as stakeholders. Students and their parents are stakeholders in as much as they are affected by and react to choice policies.

2.5.1. VSB vs. the Ministry of Education

The existing VSB policies concerning school closure, which are influenced by the existence of school choice as a provincial policy, are best understood as a series of political contests between the VSB’s elected trustees, the BC Teachers Federation and the BC Liberal Party, stemming from political and ideological differences, exacerbated by heated labour disputes between the BCTF and the provincial government. As part of their 2001 Election Platform, A New Era for British Columbia, the BC Liberals promised to “Support more flexibility and choice in public schooling,” which included the 2002 amendment to the school act that allowed for school choice. Furthermore, the election platform also included a promise to “restore” education as an essential service, in order to prevent the teachers’ union from striking. In 2001, the BC Liberal party passed Bill 18, which allowed the Minister to “designate as essential services those facilities, productions and services that the board considers necessary or essential to prevent immediate and serious disruption to the provision of educational programs” (Bill 18, Skills Development and Labour Statutes Amendment Act. 2001).
In 2010, the Board and the Ministry had a dispute over the cause of the board’s then $18.2 million budget deficit. Unions accused the province of underfunding education while downloading greater costs and responsibilities to the VSB (Stueck, 2010). Then Education Minister Margaret MacDiarmid commissioned the Comptroller General to report on the VSB’s finances. The report sided with the Ministry of Education, stating the Board of Trustees does not take a balanced approach to its accountabilities, focusing on advocacy at the expense of stewardship. The Majority of the Vancouver School Board trustees see their role relative to the Ministry of Education as one primarily related to advocacy, rather than “co-governors” of the education system. The effect of this extensive advocacy activity deflects the accountability of the trustees from the overall financial stewardship of the Vancouver School Board. (Office of the Comptroller General, 2010, p. 1)

Furthermore, the Comptroller’s report cites “consistent concerns about the ethical and organizational culture at the Vancouver School Board” and concludes “The Vancouver School Board’s current financial circumstances could have been avoided had the board appropriately managed the resources it had in delivering its educational program” (Office of the Comptroller General, 2010, p.7).

More recently, the Vancouver School Board and the Ministry were at loggerheads over the adoption of a Long-Range Facilities Plan, and specifically, the enrolment provisions contained within. The Ministry of Education refused to release funds for approved seismic upgrade projects until the board passed a Long-Range Facilities Plan (LRFP) that “rationalized” enrolment to 95% of capacity across the district, which would require closing schools (Lindsay, 2016). Consequently, the Board refused to pass a LRFP that contained provisions to close schools before unanimously approving a LRFP in January 2016 that includes the closure of 12 elementary and one secondary school between 2016 and 2030 (Vancouver Board of Education, 2016, p. 25). This decision to close schools goes against the political platforms of the two main parties governing the School Board, Vision Vancouver and the Non Partisan Alliance. Previous attempts to close schools had also been opposed by the board. During the aforementioned 2010 budget battle, when the topic of school closure was last broached, the board placed a moratorium on school closures from December 2010 to March 2012 (Vancouver School Board, 2010). In January 2015, Vision Vancouver attempted to pass a motion placing a further four-year moratorium on school closure, but the Green and NPA trustees voted against the motion
(Jackson, 2015). The consistent refusal to close schools as part of greater budgetary battles has led to the existing mismatch between capacity and enrolment, inadvertently contributing to the ability of students to transfer between schools as it generated excess capacity.
Chapter 3. Methodology

This study employs qualitative and quantitative methods to study the effects of school choice in Vancouver (District 39). The qualitative analysis includes a review of the existing literature from international and domestic think tanks and academic journals. Though not included in the literature review, this study relies on government documents, including provincial legislation and school board documents to further inform analysis. Newspapers and popular media were used to track the history of the relationship between the Vancouver School Board and the Provincial government. Further, interviews with recently retired Vancouver school administrators were employed to inform policy options and measure the “on the ground” effects of school choice.

In order to better understand the realities of school choice, semi structured interviews with four retired principals were conducted on the subject of school choice. They were all elementary principals who had retired within the last ten years. Their names have been withheld for their privacy. The interviews employed convenience sampling and were recorded as notes. The questions focused on whether administrators had noticed a change in enrollment or school composition after 2002, the causes of school choice along with technical questions that could not be answered by the literature pertaining to board policy.

The quantitative analysis used the publicly available datasets on school enrolment, Provincial Exam scores and Foundation Skills Assessment results from DataBC. Local Health area profiles (whose figures come from the 2006 census) and population figures were also used.
Chapter 4. Analysis of the Policy Problem

4.1. Interviews with Retired Administrators

Interviewees were of the opinion that the introduction of school choice legislation did not generate significant changes in Vancouver schools, as alternative programming and cross boundary transfers existed prior to the change in legislation in 2002. One remarked how “French immersion is the system within the system,” with the implication French immersion schools were akin to semi-private schools within the public system. Furthermore, particularly at its outset, they regarded French immersion as having generated segregation based on race, and it became a way for white, English speaking parents to get their children out of schools with growing populations of non-white, English second language students. This is consistent with Yoon and Gulson’s 2010 study where aspirational parents would send their children cross-boundary or to French immersion in order to avoid the local school. As choice mechanisms existed prior to 2002, the introduction of codified choice legislation did not significantly change patterns of enrollment observed by principals at the school level. Students from within a school’s catchment area receiving enrollment preference over non-catchment students puts a hard cap on the number of students that can transfer to a certain school in a single year, which is not significantly different than the cross boundary enrolment that existed previously.

One interviewee recounted how parents admitted to actively avoiding the school where they worked as it had a bad reputation in the neighbourhood. All interviewees believed that a school’s reputation and the parents’ perception of the school drove enrollment more than test score results. They did note that, from their own experiences, well educated new immigrants, put stock in the Fraser Institute Rankings. They attributed this to published rankings being the main source of information available to new immigrants without a community network to receive input from. This contradicts Friesen, Javdani, Smith and Woodcock’s 2012 study that found published school performance results drove school choice, but would confirm Bosetti’s finding that majority of parents relied on word of mouth and discussions with other parents for information regarding schools.
When discussing the effect of reputation on school choice, the administrators focused on the need to change the perception of public schools as a whole. In particular, they criticised the “adopt a school” language and the board’s own “inner city school” designation as unfairly generating a negative perception of certain schools. They believed the conflict between the BCTF and the Ministry of education “damaged the reputation of public education.” During the confrontation, the BCTF ran a campaign highlighting negative classroom conditions. But rather than rally parental support behind the BCTF to improve the system, they believed it simply drove parents to either exercise choice to avoid conventional classes or enrol their children in private school. This may have contributed to the 22% increase in private school enrollment noted by Clemens in his 2012 study. The Vancouver School Board has since stopped using the term “Inner City” school designation and now uses the terms Tier 1, 2 and 3 schools (Vancouver Board of Education Meeting, Thursday, February 27, 2014).

One interviewee countered the idea of school choice being an exclusively east to west phenomena, arguing cross boundary movement is much more complex, with students travelling east and west to attend a specialized program or schools with a particular reputation. Prior to 2002, parents from across the district had been sending their children to schools with unique teaching philosophies. Interviewees were also concerned that a policy that ended any inter-catchment mobility would have adverse effects on special needs students, such as those in wheelchairs, who often attended single-story schools, avoiding the need for ramps and elevators.

One participant hypothesized that Canada was witnessing the “lite” version of US education policy. School choice has been introduced in a more comprehensive fashion throughout the United States, as seen by the presence of school voucher programs, charter schools and tax credits. (Hepburn, 1999). By contrast, Canada and British Columbia in particular have a much less “rigorous” model of school choice; administrators have much less discretion than under a choice model. They attributed this to the power of the unions, school trustees, and the provincial ministries of education.

When asked about policy responses to school choice, an administrator mentioned the best way to counter school choice would be to do away with specialized programs,
and focus on improving the programming across the district. For example, rather than offering French immersion to some students, students would be better off with high quality second language programming at all schools. Another principal argued for increased administrator discretion over staff selection, as teachers and the administrator are the greatest determinant of a successful school. From their perspective, successful schools employ a consistent pedagogical approach and level of quality across all grades, in addition to teacher collaboration. This requires increased control over hiring, in order to select teachers capable of working together to make the staff an effective team.

Prompted about how to improve public education, interviewees believed teachers should be paid more while being more selective about credentialing, citing Finland as an example. Under the Finnish system, teachers are required to have a Master’s degree, and education programs only take in 10% of applicants (Finnish Ministry of Education and Culture, 2010, p. 24). Another mentioned that in order to make the teaching staff more professional, some teachers may have to be given early retirements, or change the system to enable teachers to leave the system without losing as much of their pension, as some may be staying due to the “golden handcuffs.”

4.2. Quantitative Evidence of Divergence in Secondary Schools

As per the literature review, the introduction of school choice policy in 2002 predicts a divergence in school test score performance as the best performing students with the greatest familial resources leave schools that are, or at least are perceived to be, underperforming. This would cause a decline in both enrolment and standardized test scores at low performing schools, while simultaneously increasing enrollment at high-performing schools (high and low are used relative to one another in the context of Vancouver schools). In order to measure whether school choice leads to a divergence in school performance at the secondary school level as predicted by the literature, the results from the English 12 Provincial Exam were compared with secondary schools’ enrolment figures. The English 12 exam was chosen as it is the only exam that has been administered prior to the implementation of choice policy (pre 2002) to the present. The exam is also mandatory for graduation, meaning writers are not self-selecting. The publicly
available data does not allow for the tracking of individual students. As such, the analysis focuses on changes in school enrollment and aggregate school performance to study the effects of school choice post 2002 on schools as a whole.

Charting the percent change in high school enrolment from 2002 to 2015 across all Vancouver high schools reveals a correlation between the English 12 exam score and school enrolment, with the lowest performing schools experiencing a decline in enrolment relative to the top performing schools (Figure 1). This would indicate students are transferring to higher performing schools. Alternatively, this implies that during an era of declining enrolment across the district, schools with high test scores are able to maintain or grow their population. To prevent the trend from being driven by a single year’s enrolment, five year averages enrolment figures were used. The average school population from 1997/1998 to 2001/2002 (pre choice years) was compared to the average population from 2011/2012 to 2014/2015 (the five most recent years) on the y axis. The school’s average English 12 test scores from 1997/1998 to 2001/2002 are on the x axis. These years were chosen as are same used for the average enrollment at the beginning of the study period. This is based on the assumption that perceptions of schools are slow to change, combined with students being unable to transfer immediately, creating a lag between the dissemination of test results and a change in enrollment. Each data point on the graph represents one school.
As per the spiral of decline hypothesis, the drop in school enrolment should be accompanied by a decline in school test score, as the “best” students leave. Table 1 contains each school’s five-year average provincial exam score pre choice (1997/1998 to 2001/2002 school years) compared to the most recent years (2010/2011 to 2014/2015 school years). Table 1 demonstrates that school exam scores have changed by 9% at most, pre and post choice. On average, test scores have improved 4% pre and post choice. Considering the magnitude of changes in enrolment (30% or more), improved test scores at all school except two (whose enrollment increased significantly), these findings do not align with the prediction the top performing students are leaving.
Table 1. 5 Year Average School Exam Score Pre and Post Choice

<table>
<thead>
<tr>
<th>School</th>
<th>5 year average percent on the English 12 exam Pre Choice</th>
<th>5 year average Percent on the English 12 Post Choice</th>
<th>Percent Change Pre and Post School Choice</th>
<th>Percent Change in Enrolment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Britannia Community Secondary</td>
<td>65.56</td>
<td>67.02</td>
<td>2%</td>
<td>-37%</td>
</tr>
<tr>
<td>David Thompson Secondary</td>
<td>66.04</td>
<td>69.26</td>
<td>5%</td>
<td>-7%</td>
</tr>
<tr>
<td>Eric Hamber Secondary</td>
<td>67.32</td>
<td>72.82</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>Gladstone Secondary</td>
<td>62.7</td>
<td>67.54</td>
<td>7%</td>
<td>-21%</td>
</tr>
<tr>
<td>John Oliver Secondary</td>
<td>61.34</td>
<td>67.32</td>
<td>9%</td>
<td>-27%</td>
</tr>
<tr>
<td>Killarney Secondary</td>
<td>66.4</td>
<td>68.92</td>
<td>4%</td>
<td>1%</td>
</tr>
<tr>
<td>King George Secondary</td>
<td>66.18</td>
<td>65.04</td>
<td>-2%</td>
<td>-4%</td>
</tr>
<tr>
<td>Kitsilano Secondary</td>
<td>71.12</td>
<td>73.94</td>
<td>4%</td>
<td>-4%</td>
</tr>
<tr>
<td>Lord Byng Secondary</td>
<td>71.4</td>
<td>76.46</td>
<td>7%</td>
<td>17%</td>
</tr>
<tr>
<td>Magee Secondary</td>
<td>68.78</td>
<td>70.42</td>
<td>2%</td>
<td>11%</td>
</tr>
<tr>
<td>Point Grey Secondary</td>
<td>72.54</td>
<td>72.48</td>
<td>0%</td>
<td>-8%</td>
</tr>
<tr>
<td>Prince of Wales Secondary</td>
<td>70</td>
<td>72.64</td>
<td>4%</td>
<td>-1%</td>
</tr>
<tr>
<td>Sir Charles Tupper Secondary</td>
<td>64.4</td>
<td>67.6</td>
<td>5%</td>
<td>-18%</td>
</tr>
<tr>
<td>Sir Winston Churchill Secondary</td>
<td>68.86</td>
<td>73.68</td>
<td>7%</td>
<td>3%</td>
</tr>
<tr>
<td>Templeton Secondary</td>
<td>64.34</td>
<td>67.86</td>
<td>5%</td>
<td>-28%</td>
</tr>
<tr>
<td>University Hill Secondary</td>
<td>75.08</td>
<td>72.68</td>
<td>-3%</td>
<td>32%</td>
</tr>
<tr>
<td>Vancouver Technical Secondary</td>
<td>65.8</td>
<td>70.84</td>
<td>7%</td>
<td>-14%</td>
</tr>
<tr>
<td>Windermere Community Secondary</td>
<td>63.94</td>
<td>67.32</td>
<td>5%</td>
<td>-12%</td>
</tr>
</tbody>
</table>

Source: Ministry of Education (2016c, 2016a)

Closer examination of Britannia Community Secondary, John Oliver Secondary and Templeton Secondary (the three schools that underwent the greatest drop in enrolment) demonstrates declining enrolment does not cause a corresponding decline in test scores. Had those schools lost their top performing students, their average Provincial Exam score should have declined as well. However, their scores increased between 2002 and 2015. Figure 2 shows the relationship between change in enrolment and change in
test scores. Percent change in enrolment is on the x axis and the percent change in exam score on the y axis. Though it generates a steep trend line, the r-square value of 0.154, indicating the trend line explains very little of data. Consequently, though exam scores are influencing enrollment, enrollment does not affect performance. Taken together, Figures 1 and 2, in addition to Table 1, demonstrate Vancouver is only experiencing half of the “spiral of decline”; the lowest performing schools underwent a drop in enrolment, but without the corresponding decline in test performance. Declining enrolment not accompanying a decline in average student test score indicates it is not exclusively the top performing students who are leaving. This would suggest factors other than choice are driving school population.

![Graph showing the correlation between English 12 Provincial Exam Score and Change in Enrollment from 1997/1998-2001/2002 average to 2010/2011-2014/2015 average.](image)

**Figure 2.** Correlation between English 12 Provincial Exam Score and Change in Enrollment from 1997/1998-2001/2002 average to 2010/2011-2014/2015 average

Source: Ministry of Education (2016c, 2016a)

The effect of choice on school performance may be being mitigated by a number of factors. First, students have a guaranteed spot in the school in the catchment which they reside, meaning there is a limit to the number of available spots in the most sought after schools. This creates a hard cap to the number of students who can leave schools
with weaker test scores. This may be keeping the scores of the lowest performing schools relatively constant while they undergo a decline in absolute numbers for demographic reasons. Second, the variety of programming at secondary schools, even ones with declining enrolment remains high, which keeps a cadre of high performing students in an otherwise low performing school. For example, Britannia Community Secondary, which experienced a significant decline in enrollment, continues to offer an International Baccalaureate program and a hockey program. Third, it is possible that the structure of teaching licencing and school funding in Vancouver is such that the discrepancies in the programming between schools may not be as great as perceived or portrayed by both the advocates and detractors of school choice.

The enrollment trends are complicated by Vancouver experiencing a district wide decline in enrolment, which the Vancouver School Board attributes to the city’s changing demographics. Across the district, Vancouver has classroom space for 59,585 elementary and secondary students, but currently only enrolls 50,387, leading to a district enrolment average of 84.6% of its total classroom capacity (Vancouver Board of Education, 2016, p.25, 3). According to the VSB’s Interim Long Range Facilities Plan, the decline in enrolment has not been distributed evenly across the district, with schools in East Vancouver suffering disproportionately from low enrolment. The Facilities plan notes how:

Generally, schools west of Ontario Street have a higher capacity utilization than schools east of Ontario Street. This is a result of the changing demographics within the district. There are a larger number of schools and a greater operating capacity on the east side of Vancouver than on the west side. Elementary schools in east Vancouver are also located in closer proximity to one another and as a result have smaller catchments than schools on the west side. (Vancouver Board of Education, 2016, 21).

As the the lowest performing schools are east of Ontario street, it is possible that demographics are contributing to the relationship between enrolment and provincial exam scores as displayed in Figure. 1. However, if the uneven capacity utilization was being driven exclusively by demographics, there should still be a number of high performing schools with low enrolment (excess capacity). This would generate a much weaker relationship between percent change in enrolment and performance on the provincial exam than is displayed in Figure 1.
The decline in Vancouver’s high school aged population is distributed unevenly across the city. Using population data at the Local Health Area (LHA) level, the percent change in population aged 13 to 18 in LHA was compared to the average percent change in enrollment for all secondary schools located in that LHA, using the same years as for change in school size (the average population from 1997/1998 to 2001/2002 was compared to the average from 2010/2011 to 2014/2015). Local Health Areas are subdivisions of cities or regions, and have publicly available census data. Percent change by local health area are displayed in Table 2. The high correlation between percent change in enrolment and percent change in population ($r=0.81$) indicates a close relationship between change in neighbourhood population and change in school enrolment. Consequently, choice affects schools’ enrolling population at the margin. The correlation between change in neighbourhood population 13 to 18 and change in enrollment in the schools in a particular Local Health Area areas explains why changes in enrolment did not cause a corresponding change in school test score, as it not the top performing students leaving, but rather a total decline in neighbourhood population.

Four factors compromise the conclusion that neighbourhood population is driving school population. First, that the LHA boundaries and school catchment areas may not align neatly, meaning the changes in enrollment and changes in LHA population may not correspond. Second, alternatives to public schools, such as private schools, distance education, and homeschooling may be influencing school enrollment as these students are not represented in the public school enrolment counts. Third, the change in LHA population estimates from BC Stats may not be perfectly accurate. The VSB’s Interim Long-Range Facilities Plan notes “in the past, Baragar Systems projections have proven to be a more reliable source for enrolment projections for the VBE than BC Stats projections” (Vancouver Board of Education, 2016 p. 11). Baragar Systems projections are derived from “Universal Child Care Benefit data provided by Canadian Revenue Agency” (Vancouver Board of Education, 2016, p. 9). Local Health Area data is based on the less accurate census data. Fourth without student-level data and knowing how many students are attending schools outside of their assigned catchment area, it is not possible to precisely determine the number of students exercising choice.
Table 2. Change in Average Enrollment by Local Health Area

<table>
<thead>
<tr>
<th>Local Health Area</th>
<th>Percent Change in Population 13-18</th>
<th>Percent Change in enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>City Centre</td>
<td>25%</td>
<td>4%</td>
</tr>
<tr>
<td>Downtown Eastside</td>
<td>-14%</td>
<td>-32%</td>
</tr>
<tr>
<td>North East</td>
<td>-2%</td>
<td>-15%</td>
</tr>
<tr>
<td>West Side</td>
<td>10%</td>
<td>6%</td>
</tr>
<tr>
<td>Midtown</td>
<td>-8%</td>
<td>-7%</td>
</tr>
<tr>
<td>South Vancouver</td>
<td>0%</td>
<td>-5%</td>
</tr>
</tbody>
</table>


Figure 3. Correlation Between Change in Local Health Area population aged 13 to 18 and Change in School Population


As discussed in the literature review, socio-economic status is a major driver of school performance and schools with the greatest number of high SES students perform better. Assuming that under a choice system students attend schools based on their actual or perceived academic performance, the socioeconomic composition of a school matters as it affects how a school performs on standardized tests. If parents and students are choosing schools based on SES, they are receiving “incorrect signals” about the
quality of instruction (Willms and Echols, 1992, p. 347). Furthermore, the literature concerning school choice consistently found that school choice further disadvantages students with a lower SES as they are less capable of exercising choice.

In order to examine the effect of SES on school performance, schools average English 12 Exam scores from 2005 to 2007 were calculated by local health area (LHA) and then compared to the average income in that particular LHA (Table 3). The average English 12 Provincial Exam scores from 2005 to 2007 were chosen as the most recent LHA level demographic profiles are from the 2006 census.

Table 3: Average Provincial Exam Score by Local Health Area

<table>
<thead>
<tr>
<th>Local Health Authority</th>
<th>Average Score on English 12 Exam 2005-2007</th>
<th>Average Income (2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LHA 161 Vancouver Centre</td>
<td>66.17</td>
<td>$88,485</td>
</tr>
<tr>
<td>LHA 162 DTES</td>
<td>68.77</td>
<td>$59,424</td>
</tr>
<tr>
<td>LHA 163 Vancouver North East</td>
<td>67.68</td>
<td>$67,271</td>
</tr>
<tr>
<td>LHA 164 Vancouver West Side</td>
<td>73.51</td>
<td>$143,288</td>
</tr>
<tr>
<td>LHA 165 Vancouver Midtown</td>
<td>67.87</td>
<td>$73,637</td>
</tr>
<tr>
<td>LHA 166 Vancouver South</td>
<td>69.49</td>
<td>$72,264</td>
</tr>
</tbody>
</table>


Table 3 presents interesting results, as though the Downtown East Side has the lowest income, it does not have the lowest average Provincial Exam Score. However, the West Side has the highest income and the highest test score, as predicted. The result for Vancouver Centre is less reliable as it only has one school. The correlation between income and average English 12 Provincial Exam is robust ($r=0.78$), indicating income has a positive effect on exam scores, as predicted. As such, parents, students and schools may all be receiving “incorrect signals” as described by Gorard, Taylor and Fitz.

Though there is not a big difference between average scores in absolute terms (a range of 7.34 percentage points), these differences become a concern for students when applying for university. The best performing school (Lord Byng) had an average score of 76.46% (Table 1), the equivalent of a B letter grade. By contrast, the lowest performing
school (King George) had an average score of 65.04%, which is a C letter grade. Both UBC and SFU require English 12 for entrance into all undergraduate programs. In 2016, the average grade range for acceptance into UBC was in the mid- to high-80s. Therefore, the “average” student at the top performing high schools, located in the Vancouver’s West Side are closer to meeting the requirements to go onto to post-secondary than an average student at the lowest performing schools, located either in the Vancouver North East or Downtown East Side.

4.3. Quantitative Examination of Elementary Schools

School choice has also had an impact on elementary schools as parents either vie to place their children into choice programs such as French immersion or apply out of catchment to avoid a local school with a poor reputation. This leads to a number of problems. First, elementary schools are smaller than secondary schools, meaning a decline in smaller absolute numbers has a much greater effect on the school than in secondary schools. In other words, it takes fewer “alert” clients to significantly drop a school’s enrolment, resulting in fewer resources available to the school. Second, elementary schools offer less specialized programming than secondary schools, giving them less opportunity to differentiate themselves and attract more students. Third, as elementary schools are smaller, they do not generate the critical mass required to maintain a basic level of services, such as a librarian. This is not the case at the secondary school level as there are fewer of them and are larger.

Elementary School Performance is measured by the provincial Foundation Skills Assessment (FSA), which is administered in Grades 4 and 7. There are some key differences between the FSA and the Provincial Exam. First, the datasets only extend back to 2007; at that time, the FSA changed significantly, preventing comparisons pre- and post-2007. Second, parents may excuse their children from writing the FSA, leading to a much lower participation rate, making the results less reliable. There have been years at certain schools where no students have written the FSA, and there have been occasions where as few as one student in either Grade 4 or 7 participated in the assessment (Ministry of Education, 2016b). Third, rather than reporting students scores, FSA results are released as number or percent of students “Not yet meeting"
expectations,” “Meeting expectations,” and “Exceeding expectations” meaning the scores are the percent of students in each category, not a score for the school. FSA data only going back to 2007 prevents using the same scatter used for high schools for elementary schools, (comparing percent change in enrolment to the percent of students meeting or exceeding expectations) and there are no years pre choice to use as a comparison.

As discussed in Section 2.2, school funding is allocated on a per student basis, and larger schools generate an economy of scale as they have more staff. One positive implication is that extra-curricular activities pose less of a burden to staff members, as there are more of them available to take on different activities. They also receive funding for specialized teaching staff, such as a teacher librarian, music, or art teachers. It is predicted that these additional resources lead to larger schools generating better educational outcomes than smaller schools, due to the increased potential for school programming that engages students. In a choice system, school flight should shrink the population of low performing schools, leaving them with fewer resources, further diminishing the outcomes for the remaining students. As per the spiral of decline hypothesis, the students with the greatest resources are the ones leaving, meaning the remaining population should be the most disadvantaged, and suffer the most from losing supplementary resources. Figures 4 and 5 demonstrate a trend where the schools with the greatest enrolment tend to perform better on the FSA at both the Grade 4 and 7 level. The results are consistent for the literacy and writing components of the FSA. Though a trend exists, it is very weak, with an r-square of 0.089, meaning the model only explains 9% of the points. Furthermore, the relationship could be taken as an effect of school choice as the top performing students transfer to certain schools making them larger and increasing performance, rather than the increase in resources at larger schools improving student outcomes.
Figure 4. Correlation between Grade 7 numeracy results on the FSA and School Population
Source: Ministry of Education (2016c, 2016b)

Figure 5. Correlation between Grade 4 numeracy Results on the FSA and School Population
Source: Ministry of Education (2016c, 2016b)
The lack of a conclusive link between FSA performance and school enrolment, can be explained two ways. One, as the FSA is optional, it gives an inaccurate depiction of the school’s performance. Two, parents are not making choice decisions based on FSA performance, but are rather relying on word of mouth, and are valuing factors such as pedagogical approach and school culture over FSA performance when selecting a school. It is perfectly plausible a desirable school has a low FSA score due to very low participation rates from parents excusing their children from writing. Just as with high schools, the lack of student level data prevents identifying with certainty whether a decline in population is attributable to choice or a declining school aged population in a particular catchment area.

As with secondary schools, Vancouver is experiencing a decline in enrolment at the elementary school level. The correlation between decline in LHA population aged 5 to 12 and decline in enrollment at neighbourhood schools is even stronger at the elementary school level ($r = 0.95$). This indicates that neighbourhood population is a greater determinant of elementary school enrollment than secondary school enrolment. This could indicate that fewer parents are exercising choice at the elementary level, as elementary schools have fewer means of differentiating themselves with specialized programming. Alternatively, elementary school parents could be continuing to exercise choice within the same local health area, and are choosing the best school within a closer geographic range than in high schools, masking average the percent change within the LHA.
Table 4. Change in Enrollment Compared to Change in Local Health Authority Population aged 5 to 12

<table>
<thead>
<tr>
<th>Local Health Authority</th>
<th>Average Change in Enrollment</th>
<th>Change in Population aged 5 to 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>LHA 161 Vancouver Centre</td>
<td>10%</td>
<td>34%</td>
</tr>
<tr>
<td>LHA 162 DTES</td>
<td>-25%</td>
<td>-19%</td>
</tr>
<tr>
<td>LHA 163 Vancouver North East</td>
<td>-25%</td>
<td>-15%</td>
</tr>
<tr>
<td>LHA 164 Vancouver West Side</td>
<td>7%</td>
<td>13%</td>
</tr>
<tr>
<td>LHA 165 Vancouver Midtown</td>
<td>-21%</td>
<td>-10%</td>
</tr>
<tr>
<td>LHA 166 Vancouver South</td>
<td>-16%</td>
<td>-4%</td>
</tr>
</tbody>
</table>


![Graph showing the relationship between average percent change in enrollment and percent change in population aged 5 to 12, 2002-2015.](image)

Figure 6. Percent Change in Elementary school Enrolment compared to percent change in Local Health Area Population Aged 5 to 12

Given the weak correlation between school size and performance, an alternative explanation is in order. Both the literature review and interviews with retired administrators found cases of parents enrolling their children in French immersion or applying cross boundary to schools in order to avoid schools regarded as less desirable by reason of their demographic make up. If that is the case, there should be a correlation between school performance and the school’s SES, as the parents with the greatest resources are leaving these schools. In order to test whether socio-economic status drives student performance, demographic data from each LHA were compared to the average percent of students meeting or exceeding expectations on the FSA in that LHA. Table 5 displays the correlation coefficients of variables negatively affecting FSA performance: (a) the percent of the population paying 30% or more of their income on housing costs, (b) the percent of lone parents, (c) the percent of the population that is a visible minority, (d) the percent of families in that LHA earning under $20,000 annually, and (e) the percent of immigrants without English or French. The percent of lone parents in the LHA has the strongest relationship, followed by the percent of immigrants without English or French.

Table 5. Partial Correlation Coefficients between FSA Results and Factors Negatively Affecting FSA Performance Results

<table>
<thead>
<tr>
<th>Grade</th>
<th>Subject</th>
<th>Percent Paying 30% or more on Housing Costs (Total)</th>
<th>Lone Parents Percent (2006)</th>
<th>Income Distribution Among Economic Families, Under $20,000</th>
<th>Percent of Immigrants without English and/or French</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Numeracy</td>
<td>-0.587</td>
<td>-0.740</td>
<td>-0.638</td>
<td>-0.769</td>
</tr>
<tr>
<td>4</td>
<td>Reading</td>
<td>-0.548</td>
<td>-0.713</td>
<td>-0.647</td>
<td>-0.826</td>
</tr>
<tr>
<td>4</td>
<td>Writing</td>
<td>-0.647</td>
<td>-0.771</td>
<td>-0.680</td>
<td>-0.731</td>
</tr>
<tr>
<td>7</td>
<td>Numeracy</td>
<td>-0.546</td>
<td>-0.701</td>
<td>-0.585</td>
<td>-0.719</td>
</tr>
<tr>
<td>7</td>
<td>Reading</td>
<td>-0.644</td>
<td>-0.795</td>
<td>-0.666</td>
<td>-0.722</td>
</tr>
<tr>
<td>7</td>
<td>Writing</td>
<td>-0.716</td>
<td>-0.830</td>
<td>-0.691</td>
<td>-0.624</td>
</tr>
</tbody>
</table>

Table 6: Partial Correlation Coefficients between FSA Results and Factors Positively Affecting FSA Performance Results

<table>
<thead>
<tr>
<th>Grade</th>
<th>Subject</th>
<th>Average Family Income, All Economic Families, 2005</th>
<th>% of Population 25-64 With Post Secondary Qualifications, % with university degree and above 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Numeracy</td>
<td>0.652</td>
<td>0.635</td>
</tr>
<tr>
<td>4</td>
<td>Reading</td>
<td>0.669</td>
<td>0.679</td>
</tr>
<tr>
<td>4</td>
<td>Writing</td>
<td>0.560</td>
<td>0.538</td>
</tr>
<tr>
<td>7</td>
<td>Numeracy</td>
<td>0.662</td>
<td>0.612</td>
</tr>
<tr>
<td>7</td>
<td>Reading</td>
<td>0.712</td>
<td>0.656</td>
</tr>
<tr>
<td>7</td>
<td>Writing</td>
<td>0.624</td>
<td>0.528</td>
</tr>
</tbody>
</table>


Table 6 displays the correlation values of the average FSA score for a local health area (LHA), compared with factors positively correlated with students’ performance. These figures demonstrate a positive relationship for both the percentage of the population with post-secondary education and average family income in a particular LHA with students’ performance on the FSA. Generally speaking, the greater family income, and the greater percent of the population with post-secondary qualifications, the better the students’ performance. The quantitative analysis depicts a scenario where school performance on the FSA does not dictate enrollment, and increasing school size does not correspond with improving test score performance, but SES and exogenous factors influence school performance on the FSA.

Tables 5 and 6 demonstrate factors beyond the control to the school or school board, such as average income in a particular area and other familial factors are affecting FSA performance. It is possible to assume a relatively consistent quality of instruction as teachers are drawn from a central pool, with minimal discretion over hiring at the school level. Currently, teachers are hired by the VSB and then are selected by principals, but with a strong seniority component. Furthermore, salaries are consistent as they are based on seniority as well, meaning a school cannot offer more than another. Under this scenario, the underlying factor driving choice isn’t the quality of instruction offered by the school, but rather the advantages brought by the students themselves, based on their SES. This complicates interventions aimed at improving school performance in order to
stem school flight and declining enrolment as improving FSA results may have little impact on parental perception and school reputation.
Chapter 5. Policy Options

5.1. Criteria and Measures

The following section outlines the evaluation framework for the proposed policy options. The options are divided into (a) societal objective criteria (i.e., the objectives policies are attempting to realize), and (b) government management criteria that dictate the feasibility of implementation. In this case, the societal objective should be to improve student performance, and decrease the gap in performance across schools. The practical considerations are elements affecting the feasibility of a particular policy being adopted, such as cost and stakeholder acceptability.

Table 7. Societal Objective Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Definition</th>
<th>Measure</th>
</tr>
</thead>
</table>
| Efficacy (projected impact on student performance) | The likelihood of a policy improving student performance, as measured by standardized examinations at schools impacted by the intervention. | The policy is likely to improve student performance (High)  
It is uncertain that the policy will improve student performance (Medium)  
It is unlikely the policy will improve student performance (Low) |
| Equity                           | The ability of a policy to compensate for the disadvantages caused by socioeconomic marginalization, with the intent of improving student outcomes. | Likely (High) The policy has been shown to increase student performance in comparable jurisdictions  
Uncertain (Medium) Similar policy interventions have been adopted in comparable jurisdictions with mixed results  
Unlikely (Low) The policy has been adopted in other jurisdictions with unknown results, or the policy has never been implemented before |
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Definition</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost</strong></td>
<td>The cost of implementation to the Vancouver School Board</td>
<td>Low (High) The policy presents an additional cost to the VSB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Medium (Medium) The policy presents no additional cost to the VSB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High (Low) The policy generates savings for the VSB</td>
</tr>
<tr>
<td><strong>Stakeholder Acceptability</strong></td>
<td>The likelihood of a policy being accepted by all stakeholder groups</td>
<td>Likely (High) Policy is likely to be accepted by all key stakeholders</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unknown (Medium) The policy may be accepted by some stakeholders and rejected by others.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unlikely (Low) The policy is unlikely to be accepted by all stakeholders.</td>
</tr>
<tr>
<td><strong>Political Feasibility</strong></td>
<td>The likelihood of a policy being accepted by Vancouver School Board Trustees, as composed in 2016</td>
<td>Likely (High) The policy is likely to be acceptable to 5 trustees</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unknown (Medium) It is too difficult to determine whether the policy would be accepted by trustees</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unlikely (Low) The policy is unlikely to be supported by 5 trustees</td>
</tr>
<tr>
<td><strong>Administrative Ease</strong></td>
<td>The ability of the Vancouver School Board to fully and successfully implement the policy without taking on additional resources</td>
<td>Easy (High) Board could implement policy without consultation with provincial government or public and no additional staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moderate (Medium) Board could implement after consultation with the Provincial government, may require additional staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Difficult (Low) Board may not be able to implement</td>
</tr>
</tbody>
</table>
after consultation with Provincial Government, would require significant new resources, overhaul of education system

5.2. Reasoning Behind Criteria

**Efficacy:** The efficacy criterion is designed to measure how effective a policy is at improving student outcomes at schools affected by the policy. The FSA and Provincial exams will be used as proxies for student performance. Test performance is not an end unto of itself, but is an indicator of student performance. Furthermore, improving school and student performance is key to enabling the social mobility of students, as it facilitates entrance to post-secondary education.

**Equity:** Equity describes a policy’s ability to compensate for the disadvantages caused by socioeconomic marginalization, with the intent of improving student outcomes. As the findings demonstrate a declining enrolment at low performing schools, it stands to reason improved student outcomes and improving parental perception of the school will lead to maintaining or increasing the student population. Furthermore, policies should attempt to improve the learning outcomes of the students who did not exercise choice, as studies have shown they are often the least advantaged (Bosetti, 2004, Willms and Echols 1992).

**Government Management Considerations**

**Cost:** The cost of a policy often dictates whether or not it will be adopted, and any policy must generate results proportional to their cost. As per the VSB March 31st 2016 Preliminary Budget Proposals, the budget shortfall for 2016/2017 has been projected to be $27.26 million (Vancouver Board of Education, 2016). This leaves very few funds for new programs, or the expansion of current programs, making policy options cost sensitive.

**Stakeholder acceptability:** In order for a policy to be adopted, it must be palatable to stakeholders or else resistance could prevent it from being adopted. The stakeholders in question are the Provincial Government, the Vancouver School Board trustees, the British Columbia Teachers Federation (BCTF), Vancouver Elementary School Teachers
Association (VESTA), and the Vancouver Secondary School Teachers Association (VSSTA), school administrators, in addition to parents and students.

**Political feasibility:** For a policy to be adopted, it must be passed by the Vancouver School Board Trustees. There are nine trustees, currently held by four Vision Vancouver members, four Non-Partisan Alliance Members and one Green Party member.

**Administrative ease:** Administrative ease refers to the Vancouver School Board’s capacity to implement a policy option. This includes whether an option is within the scope of the Board’s mandate, and if the Board has the administrative capacity to implement the option. Options beyond their mandate that would require lobbying the provincial government for permission or a change in funding may be considered, but will have a low administrative ease.

### 5.3. Policy Options

#### 5.3.1. Context for policy options

As stated in Chapter 2, school choice presents a policy problem as it exacerbates the pre-existing socioeconomic inequities in student learning opportunities. Policy interventions have been designed to directly address the situation as it currently stands in Vancouver, presented in detail in Chapter 4. The pertinent findings of the analysis as they relate to the policy options are as follows:

1) School performance at the secondary level is positively correlated with enrollment (top performing schools have more students), but changing enrolment has little effect on change in school performance (losing students doesn't decrease performance; gaining students doesn't significantly increase performance). Consequently, school choice only brought about half of the “spiral of decline.”

2) School size at the elementary school level has little correlation with school performance. The correlation between neighbourhood demographics and school performance on the FSA indicates performance is affected by neighbourhood
socio-economic composition. This may have led to parents and schools receiving “incorrect signals,” whereby schools are perceived to perform above average because of their SES rather than the quality of instruction (Willms and Echols, 1992, p. 347). This effect may have existed pre 2002, with enrollment in French immersion and cross-boundary.

3) Low enrolment and excess capacity in schools across the district facilitate transferring between schools due to the provision that a school needs to have space in order to accept new students.

Consequently, the Vancouver School Board has to design policy interventions to balance two intertwined policy problems, the first being the effects of school choice, and second is the declining enrolment across the city, with excess capacity at schools located in the less affluent parts of the city.

A UNESCO report by J Douglas Willms presents 3 categories of school interventions targeted at addressing the effects of students socio-economic status, which are informative in designing policy options. First, he defines “SES-targeted interventions,” which:

“aim to improve the educational performance of students with low socioeconomic status by providing a specialised curriculum or additional instructional resources...The important distinction is that these programmes select children based on the family’s SES or some other factor correlated with SES rather than on the cognitive ability of the child.” (Willms, 2006, p. 14)

Also aimed at improving the results of low-SES students, “Compensatory interventions [author’s italics] provide additional economic resources to students from low SES background” such as free lunches (Willms, 2006, p. 15). Third, “inclusive interventions [author’s italics] strive to include marginalized students into mainstream schools and classrooms.” Under this definition, Willms includes “reforms aimed at including any type of student who may be segregated, including students... from low SES families,” such as redrawing school catchment boundaries...bussing students, amalgamating schools or creating magnet schools in low SES areas,” (Willms, 2006, p. 18) as forms of inclusive interventions. From the perspective that SES determines school performance and school performance drives enrolment in a choice model, interventions should be designed to
improve performance by compensating for unequal SES factors.

Under the status quo, the Vancouver School board can be regarded as currently having a *choice lite* policy where students are free to attend schools with specialized programming at any school with space, but students within the catchment have priority. The term, *choice lite*, refers to the choice available to students and parents is less comprehensive than an open enrollment system without catchment provisions for schools or transforming public schools into charter schools. From the standpoint that the board cannot change the 2002 amendment to the School Act, there are four broad options available to the VSB: (a) equalize school programming, (b) increase resources to schools with low SES, (c) increase administrative discretion, or (d) accelerate the pace of school closures in order to bring about the benefits and generate savings sooner.

Contained within each option is the continued provision to *not further facilitate school choice*. This is a key element of each option given the divergence in school performance experienced in New Zealand after public schools were converted to charter schools, as noted in Fiske and Ladd’s 2000 study. The policy options outlined below were designed under the assumption the VSB would receive no additional funding for education from the Province. Policy options were also designed in consideration of existing VSB and Ministry of Education policies, including the ban on charter schools and school vouchers.

### 5.3.2. Policy Options

**Policy Option 1: Equalize programming across schools:** As the Vancouver School board does not have the authority to repeal the *School Amendment Act, 2002*, it cannot prevent students from transferring between schools. However, it can incentivize parents and students to stay at their local school. The introduction of high demand programs such as French immersion, the International Baccalaureate program Mini schools, arts-rich schools, and outdoor programming would attract new students to the school, and allow more students to access these sorts of enhanced programming. Furthermore, if expanded programming coincided with lowering barriers to program enrollment, by advertising in multiple languages, and easier to navigate enrollment, it would enable more students with lower levels of family income and education to participate. Alternatively, schools could
preferentially accept students into the program if they live in the school’s catchment area. Expanding specialized programs would increase enrollment, and diversify the school population, increase test scores and ideally incentivize parents to keep their children in the neighbourhood school.

**Policy Option 2: Expansion of the Tier 1, 2 and 3 School Funding:** Currently, the Vancouver School Board provides additional resources to schools with marginalized populations based on the Ministry of Education Social Services Index. Schools are allocated varying level of supplementary funding and staff based on whether they are considered Tier 1, 2 or 3 schools. Schools classified as either Tier 1 and 2 receive universal breakfast and lunch programs, a literacy specialist, and 2 CUPE workers to provide additional support. In addition, Tier 1 schools get a Special Education Assistant in every Kindergarten class whereas Tier 2 schools do not. Tier 3 schools have opt-in breakfast program, a literacy specialist and one CUPE position (Vancouver School Board, 2014). Targeting additional funding and resources at secondary schools in marginalized areas may would also be beneficial given the correlation between SES and provincial exam score.

Providing underprivileged schools with additional resources combines the two types of interventions outlined by Willms: SES targeted interventions and compensatory interventions. This approach fits the social justice model proposed by Barry (2005), wherein the school system is “devoted to compensating for, as far as possible, for environmental disadvantages” (p. 58). The additional funding would go to lowering the threshold to receive school supports at every tier. For example, Tier 2 schools would now be eligible for Tier 1 funding, some Tier 3 schools would be eligible for Tier 2 programming. This would include more schools in the program in order to provide resources to schools who are on the margin. The new threshold would be dictated by how many schools could be funded based on the savings from closing some schools already receiving Tiered funding.

**Policy Option 3: Status quo plus increased administrative discretion:** Under this model, individual administrators are given more discretion over staff selection in order to create a holistic educational vision throughout the school. This increased autonomy in
hiring staff members who align with each other, and that reflect the values and needs of the school community, may lead to further differentiation in schools, as they are able to adopt distinct pedagogical approaches. This may stabilize enrolment in schools in neighbourhoods that were previously in decline, as it could make them more attractive to parents and students outside the catchment area. This is not to be confused with schools differentiating themselves by offering specialized programming in art, drama or athletics. Simply, the administrator would have greater choice over staff in order to create a consistently engaged staff at schools that had previously received lower test scores, with the intent to improve their performance. This option is informed by primarily by interviews with administrators. While discussing this option, one interviewee did concede that this policy may be motivated by their experiences during an era when administrators had more authority and were capable of establishing a unique educational approach.

**Policy Option 4: Accelerated School closures:** The current ILRFP calls for the closure of 12 elementary and one high school over the next 14 years. Once all schools are closed, it is expected to generate $16 million annually in operational savings (VSB, 2016, p. 26). These closures have the potential to achieve economies of scale by closing smaller under enrolled, under resourced school by moving the students to new facilities. Closing and amalgamating multiple school at the same time as moving to a new seismically sound facility presents a window of opportunity overcome the stigma and parental bias associated with the previous school. For reasons of equity, student supports offered at the previous school, especially ones offered by current Tier 1 and 2 schools must be maintained to prevent students form students losing resources they currently rely on.
Chapter 6. Analysis

6.1. Analysis of Option 1: Equalized Programming

The expansion of choice programs (IB, French immersion, etc.) is likely to boost enrollment at under capacity schools and improve the school’s aggregate performance. However, the introduction of specialized programming in low performing school would do little to improve the outcomes for the least privileged students. As demonstrated in section 4.2 and 4.3, school performance is correlated with neighbourhood demographic factors. The introduction of enriched curriculum does not compensate for the disadvantages faced by low income or English second language students, meaning the, shortcomings on standardized tests are likely to persist for these students. The presence of specialized programming is likely to improve the school’s aggregate performance. However, it achieves this affect not by improving the scores of existing students, but rather by attracting academically strong out of catchment are students. This generates a bi-modal distribution of grades where there are a large number of A and B students and a large number of C- or F students. This poses an equity problem as rather than a tiered system between schools, it may simply generate a two-tiered system within the school between students within the program and students outside of the program. This inequity could be exacerbated by resources being focused on the best performing students, which could deprive resources students who are struggling. Though it would grow enrolment at schools with these programs, increasing enrolment at one school means drawing students from another, moving the problem of under-enrollment from one school to another. The expansion of these programs is not financially feasible as it introduces new costs at a time when the VSB faces a $27 million operating deficit. Even if new programs were introduced, the budget constraint would reduce the quality of the programs as resources would be spread thinly across the city. Furthermore, the lack of French immersion teachers presents a significant administrative challenge to expanding the program, as the province already faces a shortage (Sherlock, 2015). This option has good stakeholder and political acceptability, as the introduction of additional programming at all schools is unlikely to face opposition from any party.
6.2. Analysis of Option 2: Expansion of the Tier 1, 2 and 3 School Funding

Expanding the provision of Tiered funding for the least privileged students in the district is equitable as it targets the students who need it most and compensates for environmental factors effecting students’ performance. This includes the provision of hot breakfast and lunch programs and supplementary staff to assist students. The additional resources provided under the Tiered funding scheme are expected to improve student performance, making the program effective. Though current program expenditures could not be found, but the additional staff alone presents a significant cost to the VSB (there are 5 additional staff at Tier 1 schools). However, this cost is offset by targeted provincial funding the board would not otherwise receive. Furthermore, by maintaining the program’s current budget allocation after the closures of some schools currently receiving Tiered funding, the savings could then go towards expanding the program elsewhere. Though this does not generate savings for the Vancouver School Board, it does not impose new costs, except to compensate for the provincial funding lost after the closure of school receiving targeted funds. The expansion of services to vulnerable children is unlikely to encounter resistance from stakeholders, or by the board of trustees, making it politically viable. The expansion of Tiered funding is administratively simple as it is the re allocation of funding and resources within an existing program.

6.3. Analysis of Option 3: Increased Administrative Discretion

Increasing administrator’s discretion is difficult to justify, as the literature on its efficacy remains mixed (Brewer 1993, Eberts and Stone, 1988). However, all four of the Principals interviews for study believed increasing administrator’s hiring discretion would be effective. Though extensive literature exists supporting administrative discretion under the charter school movement, that level of autonomy would not be adopted under the proposed policy, potentially leading to another case of ineffective policy lite. Control over hiring may improve student performance at low performing schools, but in light of performance being driven by factors exogenous to the school, its influence may be limited.
Furthermore, the seniority provisions in the current Collective Bargaining Agreement between the BC Public Schools Employers’ Association, the Vancouver Board of Education and the BC Teachers Federation, may undermine the efficacy of the policy. As per the Collective Agreement, when a position becomes available, if “two (2) or more employees have relatively equal qualifications (including teaching experience and suitability to the particular position), the position shall be offered to the applicant with the greater/greatest seniority.” Principals would either need to follow this provision or face violating the Collective Agreement. Though cost neutral, this option is likely to face significant stakeholder opposition, from teachers, as it undermines their professional autonomy. The current collective agreement between the BC Public Schools Employers’ Association, the Vancouver Board of Education and the BC Teachers Federation protects teacher autonomy as a professional right. The current collective agreement specifies: “Employees shall…have individual professional autonomy in determining the methods of instruction, and the planning and presentation of materials in their professional assignments” (Provincial and Local Matters Collective agreement, p.117). Increasing administrator control over teaching would undermine this right, which would generate stakeholder opposition. The lack of stakeholder acceptance could generate opposition from the Board of Trustees, making it politically unfeasible.

6.4. Analysis of Option 4: Accelerated School Closures

Accelerating the rate of school closure is equitable as it moves students from the schools with the lowest enrolment and fewest resources to larger schools where they would be able to access additional supports and extra curricular activities more easily. This option has the potential to be effective. Despite the weak correlation between school size and student performance, it stands to reason that access to additional resources would improve student outcomes. It is worth noting the weak correlation may be caused by shortcomings in the FSA, as noted in section 4.3. The VSB’s own Interim Long Range facilities plan projects that school closures will save $16 million a year in operating costs, not counting deferred maintenance and other savings. In light of the VSB’s current deficit, it would be beneficial to roll this timeline forward in order to realize these savings sooner. Currently savings are being generated in ways that are harmful to students, such as cutting
supports at schools receiving Tiered funding and decreasing teacher prep time (Vancouver Board of Education 2016/2017 Preliminary Budget). The proposition to close schools in 2010 received considerable public opposition. However, at a SFU City Conversation Event on March 17, 2016, VSB trustee Mike Lombardi claimed at a public event that the context had changed. He asserted that parents are now more understanding of the resources available at larger schools, and that enrolment had gotten so low as to make closures more appealing to the public. Despite his claims, it appears parental resistance remains (Sherlock, 2016). Accelerated school closures pose some administrative complexity to the board, due to the challenges associated with closing multiple schools, redrawing catchment areas and parental consultation. Though these pose an administrative challenge, the VSB has been discussing and planning school closures for over a decade, meaning the necessary planning and resources are already in place.

6.5. Summary Tables: Societal Objectives

Policies were scored based on the Measures outlined in Table 7. For simplicity, options ranked High were scored as 3, Medium as 2, and Low as 1. Cost is weighted twice as highly as the other considerations given the Board’s current budget deficit, the Board’s ability to afford a particular course of action is the greatest predictor of whether or not it can be implemented.
### Table 9. Scoring of Societal Objective Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Option 1: Equalized Programming</th>
<th>Option 2: Expansion of Tier 1, 2 and 3 School Funding</th>
<th>Option 2: Increased administrative discretion</th>
<th>Option 3: Accelerated School Closures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficacy</td>
<td>High (3)</td>
<td>Medium (2)</td>
<td>Medium (2)</td>
<td>Medium (2)</td>
</tr>
<tr>
<td>Equity</td>
<td>Low (1)</td>
<td>High (3)</td>
<td>Medium (2)</td>
<td>Medium (2)</td>
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<tr>
<td>Subtotal</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

### Table 10. Scoring of Government Management Considerations

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Option 1: Equalized Programming</th>
<th>Option 2: Expansion of Tier 1, 2 and 3 School Funding</th>
<th>Option 3: Increased administrative discretion</th>
<th>Option 4: Accelerated School Closures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost (x2)</td>
<td>Low (1) x 2 = 2</td>
<td>Low (1) x 2 = 2</td>
<td>Medium (2) x 2=4</td>
<td>High (3) x 2= 6</td>
</tr>
<tr>
<td>Stakeholder Acceptability</td>
<td>High (3)</td>
<td>High (3)</td>
<td>Low (1)</td>
<td>Low (1)</td>
</tr>
<tr>
<td>Political Feasibility</td>
<td>High (3)</td>
<td>High (3)</td>
<td>Low (1)?</td>
<td>Medium (2)</td>
</tr>
<tr>
<td>Administrative Ease</td>
<td>Low (1)</td>
<td>High (3)</td>
<td>Medium (2)</td>
<td>Medium (2)</td>
</tr>
<tr>
<td>Subtotal</td>
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<td>13</td>
<td>16</td>
<td>12</td>
<td>15</td>
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</table>
Chapter 7. Recommendation and Conclusions

Based on the analysis presented above, this report recommends accelerating the rate of school closures and expand funding to the least privileged schools. School closures would eliminate much of the excess space students are transferring into, and close under resourced, under enrolled schools, and generate much needed savings for the VSB sooner than 2030. Increasing Tier 1 through 3 funding would improve the results of the least privileged students in the district. This has the potential to make these schools more attractive and decreasing flight. Even if the school does not become a choice school, the policy will still improve the opportunities the city’s least privileged students.

Policies ending choice are not an option for the VSB as it was enshrined in provincial legislation, and is too popular with parents to be feasible. In an era where education favours the individual and BC’s public schools are in competition with private institutions, it is necessary for public schools to continue to offer the highest learning outcomes possible. Simultaneously, public schools must generate the most equal learning outcomes possible in order to preserve socio-economic mobility, while accepting choice is an element of the modern educational landscape in Vancouver. Given the constraints faced by the VSB, directing what additional funding it can towards the lowest performing schools generates the most equitable system under the circumstances.
References


education/how-to-reform-education-start-with-school-choice/article15955257/


OECD. (2010) PISA 2009 Results: Overcoming Social Background, Equity in Learning Opportunities and Outcomes, Volume II


Appendix A.

Map of Vancouver Local Health Authority Boundaries

Source: Local Health Area 165, Vancouver Midtown 2012, Socio-Economic Profile.