"If It Matters… Measure It" – The Fraser Institute, Socioeconomics and School Performance

By Katrina Isacsson
Faculty of Education, University of Ottawa

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Thesis Advisor:

Dr. Lorna McLean
Faculty of Education, University of Ottawa

Thesis Committee:

Dr. David Trumpower
Faculty of Education, University of Ottawa

Dr. Joel Westheimer
Faculty of Education, University of Ottawa

Faculty of Education, University of Ottawa
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DEDICATION

I would like to dedicate this thesis to my parents for their considerable financial contributions, D. Read for his endless motivation and J. Daniels for his outstanding inspiration. In particular, I would like to dedicate this work to my mom for proof reading all fifteen of its drafts and every piece of scholarly writing that I have ever submitted. While I hold her responsible for any typos found hereafter, I am well aware that the hereafter would not exist without her generous help and unwavering support.

ABSTRACT

Isn't the report card just a way to distinguish the "have" schools from the "have not" schools? This is the ninth in a series of frequently asked questions that can be found on the school performance section of the Fraser Institute's website. Importantly, the report cards in question are both produced and published by the Fraser Institute, an independent public policy research group that ranks Canadian elementary schools on a set of indicators gleaned from the results of provincial standardized testing. While the Fraser Institute answers this question with a simple *No*, the thesis research presented here uses a mixed methods approach to examine the accuracy of this simplistic answer. Using socioeconomic data and regression analysis, this research endeavors to uncover if standardized test results can indeed stand independently of class and other demographic factors to produce a valid point of school comparison. This research also provides an in depth exploration of the Fraser Institute's annual elementary school report card from the perspective of current elementary teachers in Ontario. Lastly, this research presents findings regarding the ways that parents of elementary school children use and understand the Fraser Institute's school ratings.

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CHAPTER 1 - INTRODUCTION

THESIS INTRODUCTION

Isn't the report card just a way to distinguish the "have" schools from the "have not" schools? This is the ninth in a series of frequently asked questions that can be found on the School Performance section of the Fraser Institute's website. Notably, the report cards in question are both produced and published by the Fraser Institute, an independent public policy research group that ranks Canadian elementary schools on a set of indicators gleaned from the results of provincial standardized testing. In Ontario, these tests are conducted by the Education Quality and Accountability Office (EQAO) and are designed to evaluate reading, writing and mathematical ability. As such, it would seem that these tests would render a result upon which schools could be legitimately compared. However, a closer examination of test results, in context with school demographics, reveals that the answer to this frequently asked question is not as simple as the Fraser Institute would have us believe. While the Fraser Institute answers question nine with a simple *No*, the data analyzed in this thesis indicates a much more complicated reality.

Using regression analysis, this research uncovers relationships between the Fraser Institute's school ratings and key demographic indicators as they relate to individual school populations in the Ottawa-Carleton District School Board (OCDSB). The research presented here is situated within a large body of literature indicating a strong connection between educational attainment and family background and, therefore, this research clearly demonstrates the importance of placing student achievement indicators in context with demographic and other pertinent background information.

Further, this thesis research also provides a more in depth understanding of the Fraser Institute's annual elementary school report card from the perspective of current elementary teachers in Ontario. Gleaned from a sample of teachers surveyed at the Halton District School Board (HDSB), the qualitative data indicates an overall consensus that, in the absence of demographic data, the Fraser Institute's overall ratings cannot be used to meet the Institute's stated goal of assisting school improvement.

Lastly, this thesis research also examines the ways in which parents of elementary school children understand and use the Fraser Institute's school ratings. While this research clearly indicates that, among the sample of parents who took part in this research, parental uses of the Fraser Institute's school ratings are varied, the data analyzed in this report also highlight a serious shortcoming in parental knowledge and understanding with regard to the Fraser Institute's school ratings.

In its totality, this thesis research explores the Fraser Institute's school ratings in context with student demographic indicators, teacher perceptions and parental understanding. The purpose of this study was to analyze the Fraser Institute's rating system, as well as to discover its implications for the parents and teachers of elementary school aged children.

Context.

The Fraser Institute's Report Card on Ontario's Elementary Schools is the central focus of this thesis research. Given that the Fraser Institute conducts and publishes this research from its position as a public policy institute, or think tank, a basic understanding of the function, purpose and effectiveness of institutions which operate under the umbrella term

'think tank' is imperative to the understanding of this research. Further, due to the fact that the Fraser Institute relies on the results of provincial standardized testing to produce its school report cards, it is also important that readers be acquainted with the history and current practices of standardized testing in the province. Accordingly, the following will familiarize readers with think tanks, the Fraser Institute and Ontario's Education Quality and Accountability Office.

Defining Think Tanks.

According to the University of Pennsylvania's Think Tanks and Civil Societies Program, over 6,500 think tanks, or public policy institutes, exist worldwide.[1] However, because think tanks vary in size, structure, policy domain and significance, there are significant difficulties in defining the term 'think tank'.[2] While the exact definition is still up for debate, for the purposes of this research, I have chosen to use the middle ground definition proposed by McGann and Weaver in the book Think Tanks and Civil Societies. McGann and Weaver "begin with the core definition of think tanks as policy research organizations that have significant autonomy from government and from societal interests such as firms, interest groups, and political parties."[3] However, they also recognize that autonomy is a relative rather than an absolute term, and that the operational definition of think tanks must differ from region to region.[4]

[1] Think Tanks and Civil Societies Program. (2012). *Global Think Tank Directory.* Retrieved from http://www.gotothinktank.com/directory/
[2] Stone, D. (2004). Introduction: Think Tanks, Policy Advice and Governance. In D. Stone, & A. Danham, *Think Tank Traditions: Policy Research and the Politics of Ideas.* Manchester: Manchester University Press. P. 2.
[3] Weaver, K., & McGann, J. (2000). Think Tanks and Civil Societis in a Time of Change. In K. Weaver, & J. McGann, *Think Tanks and Civil Societies: Catalysts for Ideas and Action.* New Jersey: Transaction Publishers, p. 5.
[4] Ibid.

Just as it is difficult to pin down an exact definition of a think tank, it is equally difficult to understand exactly what think tanks do. McGann and Weaver note that the briefest answer to this question is that "think tanks may do several things, but that not all think tanks do the same thing."[5] Fortunately, they expand on this vague definition by noting that think tanks generally do at least one of six things. Think tanks "carry out basic research on policy solutions in a fashion similar to that done by university-based researchers,"[6] provide "advice on immediate policy concerns that are being considered by government officials,"[7] evaluate government programs, [8] "serve as facilitators of issue networks and the exchange of ideas,"[9] "serve as suppliers of personnel to government and as a place for politicians and policy makers who are out of power to recharge their batteries," [10] and interpret "policies and current events for the electronic and print media."[11]

Given that there is no consensus regarding what exactly constitutes a think tank, scholars have proposed various typologies to explain the diversity that exists among policy institutes.[12] In his 2009 book, Do Think Tanks Matter, Donald Abelson asserts that three major categories of think tanks operate in Canada and the United States. He categorizes these as academic (or universities without students), government contractors and advocacy tanks.[13] However, it should be noted that Abelson and other scholars caution that it is

[5] Ibid.
[6] Ibid.
[7] Ibid.
[8] Ibid.
[9] Ibid. p. 6.
[10] Ibid.
[11] Ibid.
[12] Abelson, D. (2009). *Do Think Tanks Matter? Assessing the Impact of the Public Policy Institutes.* Montreal: Queen's University Press. p. 18.
[13] Ibid.

possible for a think tank to possess characteristics common to more than one of these typologies; consequently, these categorizations are not mutually exclusive.[14]

As the name suggests, academic think tanks are typically comprised of academics that are hired to write scholarly studies, rather than to assume teaching and administrative responsibilities.[15] Due to this, academic think tanks are often referred to as universities without students given that they tend to function in a similar fashion, with their principal goal being to promote a better understanding of the social, economic, and political issues that are faced by society.[16] However, unlike universities, Abelson contends that "the seminars and workshops they offer and the studies they produce are generally intended for policymakers, not students."[17] Moreover, academic think tanks typically produce book-length studies and receive research funding through the private sector. Given this, academic think tanks are generally able to set their agenda internally. Despite the fact that they devote considerable effort to advocacy work, Abelson argues that the Brookings Institution and the Hoover Institution are good examples of academic think tanks.[18] In addition, Abelson notes that while Canada has "several think tanks that regard academic or policy-relevant research as one of their principal functions [none have] come close to resembling the largest and most distinguished research-oriented think tanks in the United States."[19] All of the foregoing examples highlight the inherent difficulty in categorizing think tanks.

Further highlighting categorization difficulties is the fact that government contracted think tanks have strong similarities to their academic counterparts in that both generally recruit staff who hold strong academic credentials from prestigious universities, both value

[14] Ibid. p. 21.
[15] Ibid. p. 19.
[16] Ibid.
[17] Ibid.
[18] Ibid.
[19] Ibid.

the use of rigorous social science methods and both endeavor to have their research perceived as objective and credible.[20] However, unlike academic think tanks, which are generally funded by a mixture of foundations, corporations and individuals, and are therefore somewhat autonomous in their agenda setting, government contracted think tanks generally receive the majority of their funding in the form of contracts with government agencies which end up playing a substantial role in setting agendas and controlling associated outputs.[21] Consequently, government contracted think tanks have a propensity to produce reports for the agencies who contract them rather than the publicly circulated books and articles produced by academic and advocacy agencies. [22] In the United States, RAND and the Urban Institute are representative of leading government contracted think tanks. However, in Canada, many of the major players in this category, such as the Economic Council of Canada and the Science Council of Canada, were disbanded in the early 1990's.[23]

Lastly, advocacy think tanks are seen to represent the most common policy research institutes to emerge in North America over the last 40 years.[24] Given that advocacy think tanks typically maintain their formal independence despite strong links to particular ideological interests, Abelson states that they are generally able to "combine a strong policy, partisan or ideological bent with aggressive salesmanship in an effort to influence policy."[25] Given this, Weaver and McGann argue that advocacy think tanks "tend to view their role in the policy making process as winning the war of ideas rather than as a disinterested search for best practices, and they are more often than not staffed by non-academics who are less

[20] Weaver, K., and McGann, J., (2000). p. 7.
[21] Ibid.
[22] Ibid.
[23] Abelson, D. (2009). p.19.
[24] Ibid, p. 20.
[25] Ibid.

interested in basic research."[26] Due to this, they commonly place more emphasis on producing concise reports for policymakers rather than on producing book length studies.[27] Moreover, Abelson notes that advocacy think tanks are "known more for marketing and repacking ideas than for generating them [and that they] have played a critical role in transforming the complexion of the policy research community."[28] Employees of advocacy think tanks frequent newscasts and political talk shows and strive to share their insights with a wide audience. Further, advocacy think tanks draw the majority of their staff from government, political parties, and interest groups, rather than from university faculties, leading them to be less 'credentialed' in terms of social science expertise than other classifications of think tanks.[29] As such the American based Brookings Institution and the Canadian based Fraser Institute are often placed in the advocacy think tank category.[30] As the Fraser Institute features predominately in the research presented here, the role of advocacy think tanks will be discussed in more detail in the following sections.

Think Tanks, The Media and Policy Influence.

As the previous section highlights, general classifications of think tanks may be problematic given that many organizations possess characteristics common to more than one typology. Further, as Abelson argues, the way scholars, journalists and the media classify these institutes can have a significant impact on the way different think tanks are perceived.[31] For example, Abelson contends that, although all three can be categorized as advocacy think tanks, "referring to the Brookings Institution as a world-renowned policy

[26] Weaver, K., and McGann, J., (2000). p. 7.
[27] Abelson, D. (2009). p.20.
[28] Ibid.
[29] Ibid.
[30] Ibid.
[31] Abelson, D. (2009). p. 21.

research institution provides the organization with instant credibility [while] indicating that the Heritage Foundation and the Fraser Institute are well-known advocacy think tanks may imply that they are more committed to advancing their ideological agenda than to pursuing scholarly research."[32] Consequently, the way the media categorizes a think tank may cause the public to misinterpret, positively or negatively, that organization's credibility. Supporting this assertion is a significant body of literature that indicates that the news media has the power to influence public perceptions. Media research highlights the fact that news reports are simultaneously able to influence the issues that reach the public and to direct the way they are perceived.[33] Hence, given that advocacy think tanks have come to receive regular reference by the media, academics have been increasingly drawn to study the link between a think tank's public visibility and its influence on public opinion.

Several recent studies regarding media portrayals of think tank research have indicated a troubling tendency on the part of the media to overlook issues of credibility and reliability when reporting think tank findings. For example, Hass reviewed think tank references concerning education in the American news media and found that the "media nearly always presented [the think tanks he reviewed] as credible sources of education research regardless of the actual extent to which it adhered to the professional norms of education research."[34] A similar study published by the University of Colorado's Education and the Public Interest Center found that, in regard to issues of education, "advocacy-oriented think tanks are over-represented as compared to university research"[35] in American

[32] Ibid.
[33] Haas, E. (2007). False Equivalency: Think Tank References on Education in the News Media. *Peabody Journal of Education , 82* (1), 63-102. p. 63.
[34] Ibid, p. 77.
[35] Yettick, H. (2009). *The Research that Reaches the Public: Who Produces the Educational Research Mentioned in the News Media?* . United States: Boulder and Tempe: Education and the Public Interest Center & Education Policy Research Unit. p. 13.

news media mentions. Similarly, Canadian academic Helen Raptis examined nearly 750 texts regarding the Canadian based Fraser Institute and found that, despite methodological concerns, "less than 1% of the hundreds of articles published [on the organization] between 1998 and 2011 charged the Fraser Institute with using unacceptable measurement practices."[36] Raptis' findings are substantiated by research conducted by Rich and Weiver, who found that the Canadian print and broadcast media has a tendency to rely disproportionately on a small group of policy institutes, namely, the Conference Board of Canada, the Fraser Institute, the C.D. Howe Institute, and the now disbanded Economic Council of Canada.[37] In response to evidence that the news media appears to be lacking in efforts to vet think tank reports before publishing their findings, the University of Colorado suggests that the media should, at the very least, include full disclosure and asserts that non peer-reviewed research should be labeled as such.[38] In any case, the news media's apparent tendency to present all think tanks' research as being both credible and authoritative may promote misconceptions about the validity of think tank research, which is grounded in a general lack of public knowledge about these organizations.[39]

Although the media may have a tendency to publish think tank reports without first assessing their quality, Abelson questions whether the sheer volume of a think tank's media exposure equates to its influence in the realm of public policy. He notes that there has been a tendency among journalists and scholars to assume that the most visible think tanks are best equipped to influence policy. Accordingly, Abelson argues that academics and the media have overlooked the fact that think tanks "exercise different types of influence at

[36] Raptis, H. (2011). Ending the Reign of the Fraser Institute's School Rankings. *Canadian Journal of Education , 35* (1), 187-201. p. 192.
[37] Weaver, K, Rich, A. (1997). *Think Tanks, the Media and the Policy Process*. Washington DC: American Political Science Association, 1997.
[38] Yettick, H. (2009). p. 15.
[39] Haas, E. (2007). p. 95.

different stages of the policy-making cycle."[40] In an effort to challenge this assumption, Abelson compared the public visibility and policy relevance of think tanks using a mathematical formula which compared the relationship between a think tank's media mentions, and two important phases in governmental policy formulation, these being parliamentary testimony and government consultations. He found that there is a "strong correlation between media visibility and parliamentary testimony, but there is no correlation between media visibility and government consultations and between parliamentary testimony and government consultations."[41] Abelson concluded that:

> Think tanks like the Cato Institute, the Fraser Institute, and the Canadian Institute of Strategic Studies might be effective in shaping the national agenda or enlarging the terms of political discourse, [but] they might be less influential in contribution to policy development at more formal stages, while, on the other hand, think tanks with more modest media profiles, such as RAND, the Caledon Institute of Social Policy, and the Canadian Council on Social Development, might play a more active role in more formal stages of policy formation.[42]

It can be seen that the most visible think tanks are not always the most relevant or important in the policy making process. However, the findings of these highly visible think tanks are nonetheless shaping public perception and driving government agendas.

Think Tanks in Canada.

As an active player in the realm of public policy, Evert Lindquist "is a member of the Institute of Public Administration of Canada, and serves on its Board of Directors, Governance Committee, and Research Committee. Additionally, Lindquist sits on the editorial advisory boards of the *Australian Journal of Public Administration*, *Journal of*

[40] Abelson, D. (2009). p. 92.
[41] Ibid, 125.
[42] Ibid.

Comparative Policy Analysis, and *Canadian Journal of Nonprofit and Social Economy Research*."[43] From his vantage point, Lindquist argues that "Canadian think tanks are a relatively young group of organizations, having only started to emerge in the early 1970's."[44] Much like their American counterparts, Lindquist notes that some Canadian think tanks have "acquired something close to celebrity status [as] their leaders and senior staff appear frequently on television and comment regularly in the print media."[45] However, as highlighted by the previous section, Lindquist points out that, despite the prominence of Canadian think tanks, most citizens know relatively little about them.[46]

Most academics agree that Canadian think tanks found their inception in the 1969 Ritchie Report. This report, headed by Ronald Ritchie, was the product of a government-mandated committee charged with considering the feasibility of creating an independent policy institute in Canada.[47] The report found that "there was insufficient multidisciplinary and policy-oriented research in Canada [and eventually] led to the creation of the Institute for Research on Public Policy (IRPP)."[48] The IRPP began the first wave of Canadian policy institutes and was joined by major players such as the Canadian Council on Social Development, the C.D. Howe Institute, the Canada West Foundation and the Fraser Institute by the middle of the 1970's.[49] Although many of these founding Canadian think tanks have undergone significant transformations, they all remain operational today.

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[43] University of Victoria. (2012). *"Dr Evert A. Lindquist.* Retrieved from http://www.uvic.ca/research/centres/cccbe/research/home/members/profiles/LindquistEvert.php
[44] Lindquist, E. (1998). A Quarter Century of Canadian Think Tanks: Evolving Institutions, Conditions and Strategies. In A. Denham, & M. Garnet, *think tanks across nations a comparative approach* (pp. 127-144). Vancouver: University of British Columbia Press. p. 127.
[45] Ibid.
[46] Ibid.
[47] Lindquist, E. (2008). Think Tanks or Clubs? Assessing the Influence and Roles of Canadian Policy Institutes. *Canadian Public administration , 37* (4), 547-579. p. 264.
[48] Lindquist, E. (1998). p.128.
[49] Ibid.

Like think tanks worldwide, Canadian think tanks vary with regard to mandate, ideological orientation, fiscal resources and research practices.[50] However, despite these differences, Lindquist asserts that Canadian think tanks have several overarching commonalities. For example, Lindquist notes that the majority of Canadian think tanks repackage data rather than generate their own, contract out policy research, and step lightly around issues of policy analysis, either by avoiding policy prescriptions or ensuring that such work is undertaken by in-house staff or trusted outsiders.[51] Further, Canadian think tanks tend to be small when compared to their American counterparts largely due to the fact that "the funding base for most Canadian think tanks remains tenuous and even the most successful ones struggle to retain members and to secure support for important research topics."[52]

The struggle faced by Canadian think tanks to acquire necessary financial resources has been deemed by some academics to influence more than just their size. The fact that American policy institutes have established a more visible policy presence than Canadian institutes has been attributed to the relatively modest resources available to most Canadian think tanks.[53] However, along with these financial disparities, underlying differences in Canadian and American political structures, and the resulting ease of access to participation in policy-making procedures have also been seen to contribute to the less effective nature of Canadian think tanks at the policy level.[54]

[50] Lindquist, E. (2004). "Three Decades of Canadian Think Tanks: Evolving Institutions, Conditions and Strategies. In D. Stone, & A. Denham, *Think Tank Traditions: Policy Research and the Politics of Ideas* (pp. 264-280). Manchester: Manchaster University Press. p. 267.
[51] Lindquist, E. (2008). p. 562.
[52] Lindquist, E. (2004). p. 273.
[53] Abelson, D. (2009). p. 61.
[54] Ibid, 61.

Canada has undergone significant policy and institutional change since its first think tank was created. Lindquist states that, as a nation, Canada has:

> Witnessed a dramatic shift from a growing, if troubled, welfare state and a national economy to cash-strapped governments trying to place an increasingly disgruntled and fractious public in the context of fundamental economic restructuring. This in turn has led to an expanding number of think tanks, and more opportunities and exposure for their outputs and staff in the media.[55]

However, as discussed, media exposure does not always equate to influence. As can clearly be seen, there currently exists no consensus on the influence of Canadian think tanks with regard to policy debates and policy-making.[56]

The Fraser Institute.

The Fraser Institute was founded in 1974 by a group of academics and business executives to conduct research, to advocate for the use of market solutions to policy problems and to draw attention to what they believed was the counterproductive presence of government in the economy.[57] Given this, media analyst Murray Dobbin notes that it was determined that "what was needed was a think-tank that would re-establish the dominance of free enterprise ideas, the value of the market, and property rights."[58] Although 38 years have passed since its inception, the Fraser Institute continues to function as a self-proclaimed "independent Canadian research and educational organization."[59] The Fraser Institute proclaims that it conducts and publishes its own research on "critical economic and public

[55] Lindquist, E. (2004). p. 279.
[56] Ibid.
[57] Lindquist, E. (1998) p. 129.
[58] Dobbin, M. (2003). *The Myth of the Good Corporate Citizen: Canada and Democracy in the Age of Globalization.* Toronto: J. Lorimer. p. 183.
[59] Cowley, P., Easton, S., & Thomas, M. (2012). *Report Card on Ontario's Elementary Schools 2012.* Fraser Institute. p. 233.

policy issues including taxation, government spending, health care, school performance, and trade"[60] from offices in Calgary, Montreal, Toronto, and Vancouver.[61]

The Fraser Institute is unambiguous about its focus as the organization's vision and mission statements are included in all of its major publications and internet content. The Institute's declared vision entails "a free and prosperous world where individuals benefit from greater choice, competitive markets, and personal responsibility."[62] To achieve this, the Fraser Institute's stated mission is to "measure, study, and communicate the impact of competitive markets and government interventions on the welfare of individuals."[63] However, according to Dobbin, "the Fraser Institute has worked systematically to change the country's 'ideological fabric,' focusing on media coverage, and on grooming a right-wing intellectual elite."[64] As such, Dobbin essentially asserts that the Fraser Institute has focused strategically on issues, such as taxation, unemployment and school and hospital reform, in a concerted effort to undermine Canadian egalitarianism.[65]

Although Dobbin has taken a critical view of the Fraser Institute, Canadian think tank specialist, Lindquist, describes the Institute's activities as follows:

> The Fraser Institute has three distinct areas of activity. First, it publishes an even balance of monographs and collections of articles often written by academic economists. While these publications are usually topical, they apply general market principles to the problems and are geared towards lay readers and university students. Statistics Canada data are parlayed in the Tax Facts volume, and the institute has a centre that monitors media stories. With respect to convocation, one or two symposia are held each year, usually in preparation for the publication of a volume of papers, and there is also a speaker series dealing with topical issues. Finally, it has devised creative ways to draw attention to its ideas and values: the widely reported Tax Freedom Day, the Poleconomy board game, a contest for reducing wasteful

[60] Fraser Institute. (2013). *About Us*. Retrieved from http://www.fraserinstitute.org/about-us/overview.aspx
[61] Fraser Institute. (2013). *Contact Us.* Retrieved from http://www.fraserinstitute.org/about-us/contact-us.aspx
[62] Fraser Institute. (2013). *Who We Are.* Retrieved from http://www.fraserinstitute.org/about-us/who-we-are/overview.aspx
[63] Ibid.
[64] Dobbin, (2003). p. 184.
[65] Ibid. p. 216.

> government expenditures, and syndicated radio spots, which are transcribed and published in *Fraser Form*. The institute actively seeks foundation support, usually from the United States, to support specific projects.[66]

Although the Fraser Institute actively seeks monetary support, the Institute makes it clear on its website, major publications and annual report documents that it operates as "an independent, non-profit organization with no affiliations to any political party."[67] As such, the Fraser Institute states that it receives its funding through "charitable donations, unrestricted grants, ticket sales and sponsorships from events, the licensing of products for public distribution, and the sale of publications."[68] This approach seems to be working as, at the end of 2010, the Fraser Institute reported nearly $4.5 million in assets and $10.8 million in annual revenue to the Canada Revenue Agency.[69] This is substantial funding given that, unlike the situation in the United States, there is comparatively limited financial support in Canada from private foundations for policy research resulting in an intense competition to secure non-profit funding.[70] However, as pointed out by Dobbin, the Fraser Institute's assertion that it does not accept government funding needs to be qualified. While the Fraser Institute does not accept direct government funding, it does benefit from the fact that the government forgoes substantial tax revenue from the Institute's donors as they are able to deduct the charitable contributions they make to the Fraser Institute or its supporting foundations from their yearly taxes.[71]

Today, the Chairman of the Fraser Institute, Peter Brown, asserts in the Institute's most recent annual report that the organization's "work is respected worldwide for the truth

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[66] Lindquist, E. (2008). p. 560.
[67] Fraser Institute. (2013). *Who We Are.*
[68] Ibid.
[69] Canada Revenue Agency. (2013, January 30). *Schedule 6: Detailed Financial Information - THE FRASER INSTITUTE.* Retrieved from http://www.cra-arc.gc.ca/ebci/haip/srch/t3010form22sched6-eng.action?b=119233823RR0001&e=2010-12-31&n=THE+FRASER+INSTITUTE
[70] Lindquist, E. (2008). p. 273.
[71] Dobbin, M. (2003). p. 187.

of its peer-reviewed research and its testing of the real consequences of political solutions over ideology."[72] However, despite Brown's apparent confidence, the Fraser Institute has come under harsh criticism from a number of influential groups. For example, The Canadian Union of Public Employees (CUPE) responded to the Fraser Institute's 2006 report on Canadian government debt with a news brief that instructed the Institute to "search deep into [its] soul and try and demonstrate a modicum of integrity and honesty in [its] reports."[73] Later, in 2009, the president of the Elementary Teachers' Federation of Ontario (ETFO) issued a media release which stated that "the Fraser Institute's 'Report Card on Ontario's Elementary Schools 2009' is a 'flawed document' that should be given a failing grade by schools and parents."[74] More recently, in response to the Institute's annual report card on fiscal performances, Nova Scotia's NDP finance minister stated that the Fraser Institute "'produces junk' and is nothing more than a 'political organization'."[75]

Teachers' federations are not the only critics of the Fraser Institute's report cards. Academic David Chudnovsky argues that the Fraser Institute uses the results of Ontario's standardized tests in a completely irresponsible way and contends that the Institute's report card contributes to "further marginalization of already disadvantaged communities, schools and students."[76] Likewise, academic Philip Nagy has asserted that the Institute's report is "written from a particularly narrow value system, [and] is seriously flawed and damaging to

[72] Fraser Institute. (2011). *Annual Report 2011.* Retrived from http://www.fraserinstitute.org/about-us/who-we-are/annual-reports.aspx
[73] CUPE. (2006, November 14). *A six step plan for the Fraser Institute.* Retrieved from http://cupe.ca/economics/A_Six_Step_Plan_for_
[74] ETFO. (2009, March 3). *Ranking of Schools Reduces Education to a Simple "Numbers Game"*. Retrieved from http://www.etfo.ca/MediaRoom/MediaReleases/Pages/Ranking%20of%20Schools%20Reduces%20Education%20to%20a%20Simple%20Numbers%20Game.aspx
[75] Carlson, K. (2012, May 6). Thinking Outside the Tank: The Fraser Institute is Embracing the Competition its Successes Helped Inspire. *National Post*. Retrieved from http://news.nationalpost.com/2012/05/06/thinking-outside-the-tank-the-fraser-institute-is-embracing-the-competition-its-success-helped-inspire/.
[76] Chudnovsky, D. (2010, Fall). The Treat Schools Project: How Good is Our School? How Can We Know. *Our Schools/Our selves*, 25-46. p. 28.

education. It should play no role in judging the quality of schools."[77] Moreover, Philip Nagy argues that the Institute's high school rankings can be criticized both conceptually and empirically. He asserts that the rankings are conceptually flawed as they are "based on a narrow set of values concerning what is important about a child's education [and misapply] basic conceptions of gender equity."[78] Additionally, Nagy explains that the Fraser Institute's rankings are empirically flawed because they "capitalize on small differences, and, through the weighting system used, give unjustified importance to some of the criteria."[79] Overall, Nagy contends that the Fraser Institute's school reports are unsound and damaging to education.

Despite the criticisms detailed above, the Fraser Institute continues to be a well-known research group in Canadian society. According to its most recent annual report, the Fraser Institute "set new records for media mentions (16,745) and page downloads from [its] website (17.28 million)"[80] in 2011. Additionally, the Institute's credibility is no doubt bolstered by an open letter from Canadian Prime Minister Stephen Harper, included in its 35th anniversary publication "35 Big Ideas: How the Fraser Institute is Changing the World," in which Harper states: "Looking ahead, I have no doubt that your commitment to the highest standards of research, under the direction of your Executive Director, Dr. Mark Mullins, will continue to enrich public policy discourse in Canada."[81] However, the Fraser Institute's choice to include an endorsement from Canada's highest political figure, in a publication designed to celebrate its achievements as an 'independent research organization,'

[77] Nagy, P. (2004). An Analysis of the Fraser Institute Rankings of Ontario High Schools. In M. Moll, *Passing the Test: The False Promises of Standardized Testing* (pp. 188-200). Ottawa: Canadian Center for Policy Alternatives. p. 188.
[78] Ibid.
[79] Ibid.
[80] Fraser Institute. (2011). *Annual Report 2011.* p. 2.
[81] Fraser Institute. (2009). *35 Big Ideas: How the Fraser Institute is Changing the World.* Retrived from www.fraserinstitute.org/.../fraser-ca/.../35thAnniversaryBook.pdf. p. 2.

can also be seen to represent a problematic disconnect between vision and reality. Thus, it can be concluded that the Fraser Institute is, at the very least, a controversial institutional fixture in Canadian society.

The Education Quality and Accountability Office (EQAO).

In a report published by the Ontario Institute for Studies in Education at the University of Toronto, it is noted that Ontario's education policy underwent significant changes in the early 1990's.[82] According to the authors of this report, these changes occurred in many facets of "education policy influence including curriculum, program structure, provisions for student diversity, accountability, governance, funding, teacher professionalism, teacher working conditions, school safety, and school choice."[83] Further, during this time, economic and political uncertainty contributed to a climate of concern about the quality of education in the province,[84] and school systems found themselves under increasing pressure to inform the public about what they were doing and how well their efforts were working in schools.[85] In response, and in an effort to focus on accountability and transparency, the New Democratic Party (NDP), under the leadership of premiere Bob Rae, established the Royal Commission on Learning and mandated that a comprehensive review of Ontario's educational system be undertaken.

According to the Ontario Ministry of Education's website, the Royal Commission was established "to ensure that Ontario's youth are well-prepared for the challenges of the

[82] Anderson, S., & Jaafar, S. (2006, September). *Policy Trends in Ontario Education 1990-2003: Working Paper.* Retrieved from fcis.oise.utoronto.ca/~icec/policytrends.pdf. p. 1.
[83] Ibid.
[84] Earl, L. (1995). Assessment and Accountability in Education in Ontario. *Canadian Journal of Education* 20 (1), 45-55. p. 45.
[85] Ibid.

twenty-first century."[86] As such, the Ministry's website states that the Commission's mandate was to "suggest a vision and action plan to guide the reform of elementary and secondary education. This would include values, goals and programs of schools, as well as systems of accountability and educational governance."[87] Given that Ontario's education system had not seen a comprehensive audit since the 1950's, the Ministry of Education declared that there was a clear need to conduct a thorough review of the province's educational institutions.[88] However, Anderson and Jaafar note that the Commission's review may have also served as a "political strategy to delay further policy initiatives and to engage the public in charting the future of Ontario education after the government's initial policy agenda failed to win much public support."[89] The Royal Commission toured the province inviting and receiving written and oral submissions from interest groups and conducting its own background research.[90] The end results of this effort were released by the Royal Commission in a four-volume report entitled *For the Love of Learning* in 1995.

In her 1995 article, Earl notes that, at the time the Commission's report was released, "educators and policy makers [were] discovering that they need[ed] better information to make good decisions – to describe the quality of education, to monitor efforts at reform, and to identify areas for corrective action."[91] However, with the exception of a few sample student assessments conducted during the 1970's and 1980's, Ontario had almost no history of large-scale assessment and had never conducted assessments that were high-stakes for

[86] Ontario Ministry of Education. (2005). *Royal Commission on Learning.* Queens Printer for Ontario. Reetrieved from http://www.edu.gov.on.ca/eng/general/abcs/rcom/main.html.
[87] Ibid.
[88] Anderson, S., and Jaafar, S. (2006). p. 11.
[89] Ibid.
[90] Ibid
[91] Earl, L. (1995). p. 45.

students, schools, or districts.[92] The report released by the Royal Commission on Learning paved the path for change as it stated that there was value in "a check on the success of the [educational] system in delivering a program that brings all or nearly all children to a point, by about age 9, that enables them to build on dependable foundation skills so that they can acquire more sophisticated knowledge and understanding."[93] The recommendations made by the Royal Commission resulted in the implementation of provincial standardized testing in Ontario and the creation of an agency to construct, administer, score and report on these tests. These changes aligned with the Royal Commission's 50th and 51st recommendations.[94]

Although Conservative Party leader Mike Harris took control of Ontario's government in 1995, the recommendations made by the NDP mandated Royal Commission on Learning were not overlooked. In 1996, the Harris government officially established the Education Quality and Accountability Office (EQAO) proposed by the Royal Commission as a semi-independent government agency separate from the Ministry of Education.[95] EQAO's mandate is to "conduct province-wide tests at key points in every student's primary, junior and secondary education and report the results to educators, parents and the public."[96] Accordingly, the agency states that it endeavors to "produce objective, reliable information, through the public release of this information and through the profiling of the value and use of EQAO data across the province."[97]

To achieve its mandate, EQAO uses standardized testing to assess all students enrolled in Ontario public schools in Grade 3 and Grade 6 in reading, writing and

[92] Volante, L. 2007. "Educational Quality and Accountability in Ontario: Past, Present and Future," *Canadian Journal of Educational Administration*, 58. P.1.
[93] Royal Commission on Learning. (1994). *For the Love of Learning: Report of the Royal Commission on Learning.* Royal Printer for Ontario. p. 255.
[94] Ibid, 256.
[95] Anderson, S., and Jaafar, S. (2006). p. 15.
[96] EQAO. (2013). *About EQAO.* Retrieved from http://www.eqao.com/AboutEQAO/AboutEQAO.aspx?Lang=E
[97] EQAO. (2013). *Mandate.* Retrieved from http://www.eqao.com/AboutEQAO/Mandate.aspx?Lang=E

mathematics. Further, EQAO also administers two secondary school assessments that address literacy and mathematics among grade 9 students.[98] Each of these assessments is designed to measure student achievement in relation to provincial curriculum expectations as well as provide a gauge of how students are doing with regard to a common provincial standard.[99]

According to EQAO, "accurate information about how students are doing at key points in their education is essential to improving achievement."[100] That said, EQAO is quick to point out that its "achievement results can be interpreted meaningfully only in the context of the system that produced them."[101] As such, it asserts that evaluating the quality of education requires a more comprehensive picture of the unique and complex characters of schools, boards and the province than numerical values or quantitative result measures.[102]

EQAO contends that its "objective and reliable assessment results are evidence that adds to the current knowledge about student learning and serves as an important tool for improvement at the individual, school, school board and provincial levels."[103] However, the Ontario Teachers Federation (OTF) has taken issue with EQAO testing for several key reasons. Notably, the OTF contends that EQAO could achieve its mandate, and save millions of dollars, through random testing,[104] which would also serve to reduce the media and commercial exploitation of its results.[105] Further, the OTF argues that formative

[98] EQAO. (2013). *General Questions*. Retrieved from http://www.eqao.com/AboutEQAO/GeneralQuestions.aspx?Lang=E.
[99] EQAO. (2011). *Improving Education Through Evidence of Learning 2010-2011 Annual Report.* Ottawa: Queens Printer for Ontario. p. 9.
[100] Ibid. p. 10.
[101] EQAO. (2013). *Completing the picture: The Education Quality Indicators Framework.* Retrieved from http://www.eqao.com/EQI/EQI_Framework.aspx
[102] Ibid.
[103] EQAO. (2013). *About EQAO.*
[104] Ontario Teachers Federation. (2011). *A New Vision for Large-Scale Testing in Ontario.* Retrieved from www.otffeo.on.ca/english/media_room/briefs/new_vision.pdf. p. 3.
[105] Ibid. p. 11.

assessment more effectively promotes student learning than does summative assessment,[106] that EQAO testing impinges on classroom instruction,[107] that EQAO testing is not beneficial for students,[108] and that EQAO testing places a distorted value on a single snapshot in time.[109] Despite these criticisms, EQAO's most recent annual report indicated that the organization remains committed to an "unshakeable belief that good data matter and that they provide essential evidence that fuels the kinds of discussions that enable continuous improvement in the publicly funded education system." [110]

The Fraser Institute and EQAO.

The Fraser Institute first introduced its Report Card on Ontario's Elementary Schools in 2003[111] and has published it on a yearly basis ever since. Notably, the Fraser Institute's "report card uses Grade 3 and Grade 6 EQAO test results to calculate each school's overall rating out of 10."[112] According to the Fraser Institute, this overall rating comprises the foundation of its report card and is based on "the school's performance on nine indicators, all of which are derived from province-wide tests of reading, writing, and mathematics skills that are administered by the province's Education Quality and Accountability Office."[113] The nine indicators that the Fraser Institute uses to calculate each school's overall rating are as follows:

1. Average level of achievement on the grade 3 EQAO assessment in reading;
2. Average level of achievement on the grade 3 EQAO assessment in writing;
3. Average level of achievement on the grade 3 EQAO assessment in mathematics;

[106] Ibid. p. 5.
[107] Ibid. p. 7.
[108] Ibid. p. 9.
[109] Ibid. p. 6.
[110] Ibid. p. iv.
[111] Fraser Institute. (2013). *School Performance.* Retrieved from https://www.fraserinstitute.org/report-cards/school-performance/ontario.aspx.
[112] Ibid.
[113] Cowley, P. and Easton, S. and Thomas, M. (2012). p. 5.

4. Average level of achievement on the grade 6 EQAO assessment in reading;
5. Average level of achievement on the grade 6 EQAO assessment in writing;
6. Average level of achievement on the grade 6 EQAO assessment in mathematics;
7. The difference between male and female students in their average levels of achievement on the EQAO assessment in grade 6 reading;
8. The difference between male and female students in their average levels of achievement on the EQAO assessment in grade 6 mathematics;
9. The percentage of EQAO assessments that did not meet the provincial standard.[114]

Based on the nine indicators outlined above, the Fraser Institute confidently asserts that its report card ratings combine a variety of relevant and objective indicators of school performance.[115] Despite this, academics have argued that the Institute is using EQAO's assessment data without the contextual information that EQAO itself states is required to glean a comprehensive picture of the individual characteristics of schools, boards and the province as a whole.[116] While the Fraser Institute does concede to the fact that "some personal and family characteristics, left unmitigated, can have a deleterious effect on a student's academic development," [117] it contends that its report card provides "evidence that successful teachers overcome such impediments"[118] and that "the effective school will produce good results, regardless of the family background of its students."[119] Thus, the Fraser Institute continues to publish its report card on the premise that their rankings assist "parents when they choose a school for their children and encourages and assists all those seeking to improve their schools."[120]

[114] Ibid. p. 5.
[115] Ibid. p. 3.
[116] Johnson, D. (2005). / Raptis, H. (2010).
[117] Cowley, P. and Easton, S. and Thomas, M. (2012). p. 3.
[118] Ibid.
[119] Ibid. p. 9.
[120] Cowley, P., Easton, S., & Thomas, M. (2011). *Report Card on Ontario's Elementary Schools 2011*. Fraser Institute. Retrieved from http://www.fraserinstitute.org/research-news/display.aspx?id=17483. p. 3.

DEFINING THE RESEARCH QUESTIONS

According to the Fraser Institute's website, the organization's work is guided by the maxim "If it matters, measure it."[121] As such, the Institute has elected to use the results of provincial standardized testing to compare Ontario's elementary schools. Importantly, the Institute asserts that its report card helps parents locate quality schools for their children and facilitates school improvement.[122] However, given that EQAO openly states that the data it collects is "only one of the sources of information that should be used to assess student achievement [and that] provincial testing results should always be considered alongside other school and school board based information,"[123] one may ask if the Fraser Institute has successfully embodied its maxim and measured all relevant indicators that matter when it comes to school performance. The research presented here strives to address the following questions:

1. Is there a relationship between the Fraser Institute's elementary school report card scores, school zone demographics and/or student body characteristics?
2. How do elementary teachers perceive the public unveiling of the Fraser Institute's annual Report Card on Ontario's Elementary Schools?
3. Do parents understand how the Fraser Institute rates and ranks elementary schools? How do parents use the Fraser Institute's annual school report card?

THEORETICAL LENS: CRITICAL THEORY - CULTURAL AND SOCIAL REPRODUCTION

The relationship that exists between school and society has been critically examined by a myriad of researchers over the last half century. Accordingly, there are many theoretical approaches that strive to challenge basic assumptions about what schools really

[121] Fraser Institute. (2013). *Reserach Topics.* Retrieved from http://www.fraserinstitute.org/research-news/research/topics.aspx
[122] Cowley, P. and Easton, S. and Thomas, M. (2012). p. 3.
[123] EQAO, "Education Quality Indicators Framework."

do, and to better understand the actual process of schooling. Of specific interest to this research is Critical Theory, a concept that has held an impressive tenure in the field of sociology. Importantly, critical theory is rooted in the mid 1800's work of Karl Marx. Given that Marx was primarily concerned with the way capitalism stratifies class, it follows that critical theory, as it relates to education, is premised on the assumption that "the educational system has largely failed in its promise to promote a more egalitarian society."[124]

While all critical theory stems from the work of Karl Marx, it is important to note that there is no such thing as a unified critical theory.[125] That said, all critical theories do share a set of common assumptions about the link between school and society.[126] Writing about social struggle and, in particular, how marginalized groups fare in stratified societies, Pierre Bourdieu's theoretical concepts fall within the realm of critical theory and are of specific relevance to this research project.[127] Thus, a Bourdieuian theoretical framework was used to inform the research presented here.

Pierre Bourdieu is a widely recognized critical theorist who has authored more than 30 books and nearly 350 articles.[128]. Importantly, a significant amount of Bourdieu's work strives to better understand the role of education in cultural reproduction.[129] Essentially, Bourdieu's work in this field is referred to as Cultural and Social Reproduction Theory and argues that schools transmit certain forms of culture, and thus reproduce not only that

[124] Wotherspoon, T. (2004). *The Sociology of Education in Canada: Critical Perspectives.* Canada: Oxford University Press. p. 34.
[125] Gibson, R.1986. *Critical Theory and Education*, Great Britain: Hodder and Stoughton, 3.
[126] Ibid.
[127] Mills, C., and Gale, T. 2010. *Schooling in Disadvantaged Communities: Playing the Game from the Back of the Field*, NLD, Springer, 13.
[128] Swartz, D. 1997. *Culture and Power: The Sociology of Pierre Bourdieu,* Chicago: University of Chicago Press, 1.
[129] Gibson, R. (1986). *Critical Theory and Education.* Great Britain: Hodder and Stoughton. p. 54.

culture, but also the social class structure.[130] Notably, this theory is grounded in Bourdieu's argument that schools favour the dominant, primarily middle class, culture. Due to the fact that middle class children are inherently entrenched in this favoured culture, Bourdieu contends that they are greatly advantaged by the educational system and, consequently, inequalities are reinforced.[131] Accordingly, for Bourdieu, "although schools claim to be fair and neutral transmitters of culture, they in fact actively maintain inequality whilst claiming to provide equal opportunity."[132]

Considering that dominant groups generally hold control over economic, social and political resources, it is not entirely surprising that their culture is regularly bolstered and reproduced within a school setting. However, how this bolstering reproduces inequality is not as obvious. Bourdieu employs the concepts of symbolic violence and cultural capital to support his theory of cultural and social reproduction.

Bourdieu's theory of symbolic violence is used to explain the subtle processes that lead subordinate classes to perceive the ideas and practices of the dominant class, ideas which are often against their own best interest, as both natural and common sense.[133] For Bourdieu, symbolic violence "represents how symbolic power (rather than economic or positional) is wielded by schools to ensure that inequalities are seen as necessary and inevitable, rather than as man-made and changeable."[134] Accordingly, because schools do not transmit culture in an objective and just fashion, Bourdieu contends that they function to legitimize and reinforce disadvantage.[135] Because that symbolic violence serves to weaken and reject non-dominant cultures, it inflicts symbolic wounds and distortions upon the

[130] Ibid.
[131] Ibid.
[132] Ibid.
[133] Ibid. p. 55.
[134] Ibid.
[135] Ibid.

perceptions and beliefs of subordinate individuals. Importantly, these symbolic wounds are persistent in the routine encounters of classrooms and many adults still bear the scars from their own childhood experiences.[136]

Building on the theory of symbolic violence, Bourdieu proposed the concept of cultural capital in the 1960's to describe the unequal distribution of familiarity with bourgeois culture and how this unequal distribution "helps to conserve social hierarchy under the cloak of individual talent and academic meritocracy."[137] Significantly, cultural capital is found in the resources that people possess for both economic and social success. These resources "include not only wealth and economic assets, but also knowledge and understandings about social expectations, dominant values and other pertinent information that institutions use in their ongoing operations."[138] In essence, this means that schools find themselves entwined with class-based assumptions and expectations such as rules of conduct, manners of expression and required background knowledge which give some students a competitive advantage over others in their understanding and application.[139]

Bourdieu argued that schools have a tendency to treat children as if they all have equal access to cultural capital and that this becomes a 'taken for granted' mechanism that leads to stratified levels of achievement for different groups in a society.[140] Essentially, students lacking cultural capital find themselves disadvantaged in a school setting because their linguistic style, everyday knowledge, attitudes and behavior are at odds with the dominant school curriculum. Bourdieu defines the embodiment of culture as habitus, which

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[136] Ibid.
[137] Mills, C., & Gale, T. (2010). *Schooling in Disadvantaged Communities: Playing the Game from the Back of the Field (Google eBook).* Australia: Springer. p. 14.
[138] Wotherspoon, T. (2004). p. 51.
[139] Ibid. p. 40.
[140] Harker, R., Mahar, C., & Wikes, C. (1990). *An Introduction to the Work of Pierre Bourdieu.* United Kingdom: The Machmillan Press Ltd. 87.

can essentially be seen as the product of an individual's history, structure and socialization.[141] Thus, habitus is internalized culture and emerges as dispositions and values that guide behavior.[142]

Scholar Loizos Symeou suggests that "even though, in introducing the concept of cultural capital, Bourdieu did not focus on school-family interactions, his analysis points to the importance of class and class cultures in mediating children's and parents' negotiations in the schooling system."[143] According to Symeou, parents from lower socioeconomic classes lack the cultural knowledge to work the educational system to their child's advantage and often feel incapable of helping their children to do well in school. Conversely, upper and middle class parents are more apt to lobby the educational system to meet their own agendas and can more easily attain outside expertise to help their children succeed.[144] Therefore, cultural capital can be seen as a valuable theoretical concept as it can be used to explain the impact of a child's home background on their scholastic development and also serves to demonstrate the importance of active school-family relationships.[145]

Bourdieu's theory of cultural and social reproduction, as it relates to education, lends itself to my research and analysis. Although Bourdieu's work has sometimes been criticized for casting too wide a net, it aligns well with the research presented here. Given that Bourdieu's theoretical framework was to inform rather than constrain this research, it provides a valuable structure upon which to conduct my research. Lastly, while Bourdieu's writings relate specifically to the educational system in France, rather than Canada, it should

[141] Symeou, L. (2007). Cultural Capital and Family Involvement in Children's Education: Tales from Two Primary Schools in Cyprus. *British Journal of Sociology of Education , 28* (4), 473-487. p. 474.
[142] Gibson, R. (1986). p. 56.
[143] Symeou, L. (2007). p. 475.
[144] Ibid.
[145] Ibid. p. 473.

be pointed out that the fundamental elements of Bourdieu's theory were adapted to meet the needs of this study.

This chapter has acquainted the reader with the necessary background knowledge to ground the findings of this thesis. In the following chapter, current literature pertaining to issues of educational equity, the relationship between socioeconomics and academic success, and the practice and consequences of standardized testing will be carefully reviewed.

CHAPTER 2 - LITERATURE REVIEW

EDUCATIONAL EQUITY

The United Nations Millennium Development Goals brought key issues of equity and inclusion to the forefront of educational policy reform. As such, many levels of educational governance have struggled to create their own definitions of educational equity. UNESCO asserts that educational equity "requires securing all children's rights to education, and their rights within and through education to realize their potential and aspirations."[146] Closer to home, the Ontario Ministry of Education defines equity as "a condition or state of fair, inclusive, and respectful treatment of all people [and contends that] equity does not mean treating people the same way without regard for individual difference."[147] Drawing on the Ministry's definition of equity, the stated objective of the OCDSB's Equity and Inclusive Education plan is "to ensure equity of opportunity and equity of access to the full range of programs, services and resources offered by the Board to foster successful educational achievement and social outcomes." Similarly, the HDSB states that its board will "commit to serve staff, students, and families in diverse communities by incorporating the principles of equity and inclusive education into all aspects of its operations, structures, policies, programs, procedures, guidelines, and practices, consistent with the principles of the Ontario Human Rights Code." [148]

As the largest school board in Ontario, it is not surprising that the Toronto District School Board (TDSB) has the most explicit policy on equity and inclusion. In its Equity

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[146] UNESCO. (2010). *EFA Global Monitoring Report: Reaching the Marginalized.* Oxford: Oxford University Press. Retrieved from http://unesdoc.unesco.org/images/0018/001866/186606e.pdf

[147] Ontario Ministry of Education. (2009). *Realizing the Promise of Diversity: Ontario's Equity and Enclusive Education Strategy.* Queens Printer for Ontario. Retrieved from www.edu.gov.on.ca/eng/policyfunding/memos/.../EquityWeb.pdf

[148] HDSB. (2010). *Equity and Inclusive Education Policy.* Retrieved from http://www.hdsb.ca/Policy/EquityandInclusiveEducationPolicy2010.pdf

Foundations Statement the TDSB states:

> The Toronto District School Board values the contribution of all members of our diverse community of students, staff, parents, and community groups to our mission and goals. We believe that equity of opportunity, and equity of access to our programs, services, and resources are critical to the achievement of successful outcomes for all those whom we serve, and for those who serve our school system.
>
> The Board recognizes however, that certain groups in our society are treated inequitably because of individual and systemic biases related to race, colour, culture, ethnicity, linguistic origin, disability, socio-economic class, age, ancestry, nationality, place of origin, religion, faith, sex, gender, sexual orientation, family status, and marital status. Similar biases have also impacted on Canada's aboriginal population. We also acknowledge that such biases exist within our school system.
>
> The Board further recognizes that such inequitable treatment leads to educational, social, and career outcomes that do not accurately reflect the abilities, experiences, and contributions of our students, our employees, and our parent and community partners. This inequitable treatment limits their future success and prevents them from making a full contribution to society.
>
> The Board is therefore committed to ensuring that fairness, equity, and inclusion are essential principles of our school system and are integrated into all our policies, programs, operations, and practices.[149]

Further, Canadian researchers, Ross and Berger have conducted research aimed at reducing achievement gaps and increasing equity between advantaged and disadvantaged students. They conclude that, above all, "principals need to recognize that schools are nested in a systemically biased society in which powerful forces support the existing hierarchy of social groups. Principals with a deep commitment to equity outcomes need to take a critical stance toward the extra-school forces that inhibit social justice and act as advocates for underprivileged students in the community beyond the school."[150] Similarly, an Australian research study found that productive leadership practices "can be transformative in terms of

[149] TDSB. (2000). *Equity Foundation Statement and Commitments to Equity Policy Implementation.* Retrieved from http://www.tdsb.on.ca/_site/viewitem.asp?siteid=15&menuid=682&pageid=546

[150] Ross, J., & Berger, M. (2009). Equity and Leadership: Research-Based Strategies for School Leaders. *School Leadership and Management , 29* (5), 463-476. p. 464.

disrupting discourses and practices within schools that perpetuate student marginality."[151] As such, it seems that school boards need to do more than merely draft an equity and inclusive education plan. They need to ensure that school administration, and school principals in particular, operate with the framework outlined by their equity and inclusive policies.

Given the relevance of school equity and inclusive education policies to the research presented here, I relied on the interpretations of educational equity outlined above to inform this study.

SOCIOECONOMICS AND ACADEMIC SUCCESS

In the mid 1960's, the United States' Department of Health, Education and Welfare commissioned a report assessing the equality of educational opportunities for children from different minority backgrounds. According to Gamoran and Long, the researchers anticipated that the findings of their report would reflect what most Americans already assumed to be true, that "poor and minority children performed poorly in school because their schools lacked resources."[152] Instead, the Coleman report, formally known as the Equality of Educational Opportunity Study, revealed that "the impact of school resources on student achievement was modest compared to the impact of students' family backgrounds."[153] Although this research is couched in the policies of 1960's America, it brought much needed attention to key socioeconomic issues in contemporary Canadian education. Today, many academics contend that family, environment, and socioeconomics

[151] Niesche, R., & and Keddie, A. (2011). Foregrounding Issues of Equity and Diversity in Educational Leadership . *School Leadership and Management , 31* (1), 65-77. p. 74.
[152] Gamoran, A., & Long, D. A. (2006). *Equality of Educational Opportunity: A 40-Year Retrospective.* Wisconsin Center for Education Research. University of Wisconsin–Madison. p. 1
[153] Ibid.

trump the influence of the school on student achievement in affluent nations. As such, they propose that school outcomes are directly linked to a student's social class background.[154] Accordingly, scholars have been drawn to investigate the various ways in which schools, and the relationships families have with them, passively enable the reproduction of class inequalities. Key contributions in this field, as they relate to the research proposed here, are outlined below. Importantly, given that this research involves the Canadian educational system exclusively, key Canadian contributors feature prominently in this review. However, given their relevance to the data analyzed in this study, non-Canadian key contributions with regard to standardized testing have been included in the data analysis sections of this report.

Conducting research concerning how two large Canadian school boards respond to the demands of the poor, Levin and Gaskell note that:

> In Canada, the challenges of poverty in urban areas have grown over the past quarter century. Increasing wealth has been concentrated in the hands of those who were already relatively well off. The diversity of Canada's urban population has increased, and the resulting linguistic, cultural and religious differences interact with economic inequality, leaving aboriginal, racialized and new immigrant populations at a greater disadvantage than they have ever been. In this context, the challenges of educating all children with the intellectual and social capacities they need to participate as citizens and make a living are of critical importance.[155]

Given this, it is imperative that we understand the effect of poverty on student learning in Canada.

A 2004 report commissioned by the Manitoba Centre for Health policy plainly states that "children from disadvantaged neighborhoods are more likely to be in poorer health and

[154] Weis, L. (2010). Social Class and Schooling. In M. Apple, S. Ball, & L. Gandin, *The Routledge International Handbook.* Great britain: CPI Anthony Rowe. p. 414.
[155] Gaskell J. & Levin, B. (2010). The challenges of poverty and urban education in Canada: Lessons from two school boards. In Raffo, J. et al. (Eds.). Education and Poverty in Affluent Countries. 148-160. London: Routledge. p. 148.

have difficulties in school."[156] Given this, it is not surprising that many academics have researched the correlation that exists between socioeconomic status and a child's academic performance. Strikingly, this correlation is believed to take root even before children enter their first classroom. This assertion is evidenced in a study conducted in Vancouver and published by the Canadian Institute for Health Information. This report notes that by age 5, children from lower socioeconomic neighborhoods are already less prepared for learning than children from more affluent areas.[157] The data gathered for this study demonstrates that threats to healthy childhood development certainly can and do appear across the entire socioeconomic spectrum and are in no way limited solely to disadvantaged families.[158] However, as one moves from families with the highest incomes to families with the lowest incomes, the proportion of vulnerable children rises dramatically.[159] This finding is firmly upheld by the Programme for International Student Assessment (PISA) study conducted in 2000, which found that in all thirty-two participating countries "students with higher family socioeconomic statuses had higher achievement than did students with lower family socioeconomic statuses."[160]

Comparing the impact of various socioeconomic factors, a study published by the Economic Council of Canada suggests that the difference between adverse and favorable socioeconomic influence can make a difference of up to five years in the amount of

[156] Brownell, M., Roos, N., Fransoo, R., & al., e. (2006, October). Is the Class Half Empty? A Population-Based Perspective on Socioeconomic Status and Educational Outcomes. *IRPP Choices , 12* (5). p. 1.
[157] Hertzman, C., McLean, S. A., Kohen, D. E., Dunn, J., & Evans, T. (2002). *Early Development in Vancouver: Report of the Community Asset Mapping Project (CAMP)*. Canadian Population
Health Initiative and the Canadian Institute for Health Information. Human Early Learning Partnership.p. 3.
[158] Ibid.
[159] Ibid. p. 1.
[160] Bussière, P., Cartwright, F., Crocker, R., Ma, X., Oderkirk, J., & Zhang, Y. (2001). *Measuring up: The Performance of Canada's Youth in Reading, Mathematics and Science OECD PISA Study—First Results for Canadians aged 15*. Ottawa: Statistics Canada. p. 32.

education a Canadian attains in his or her lifetime.[161] This finding is consistent with the work of Lloyd and Hertzman, scholars at the Human Early Learning Partnership (HELP) at the University of British Columbia, who assert that the development of children in high vulnerability neighborhoods, over time, falls behind that of children living in more affluent areas.[162] Interestingly, additional research conducted by Hertzman et al suggests that children from poor families who live in mixed-income or affluent neighborhoods appear to be at a lower developmental risk than their counterparts in lower socioeconomic neighborhoods.[163] Similarly, a Canada-wide study documenting links between neighborhood income and child development found that neighborhood affluence was positively associated with the development of verbal ability and negatively associated with reported behavioral problems in children.[164] Given these findings, the studies conclude that a child's neighborhood plays an important role in his or her educational development.

Canadian research also suggests that family characteristics and home environment play a key role in a child's academic attainment. A Statistics Canada report, authored by Knighton and Mirza, indicates that the likelihood that a young Canadian will enter postsecondary school increases substantially with each successive level of parental education and household income.[165] This is not surprising given that parents are seen by many researchers to play an important motivating role in their children's postsecondary participation. Knighton and Mirza note that "parents with more education tend to share in their children's intellectual pursuits and pass down skills and beliefs that are conducive to

[161] Siedule, T. (1992). *The Influence of Socioeconomic Background on Education.* Economic Council of Canada. p. xi.
[162] Lloyd, J., & Hertzman, C. (2008). From Kindergarten Readiness to Fourth-Grade Assessment:Longitudinal Analyisi with Linked Population Data. *Social Sciences and Medicine , 68*, 111-123. p. 119.
[163] Hertzman, C., McLean, S. A., Kohen, D. E., Dunn, J., & Evans, T. (2002). p. 1.
[164] Kohen, D. E., Brooks-Gunn, J., Leventhal, T., & Hertzman, C. (2002). Neighborhood Income and Physical and Social Disorder in Canada: Associations with Young Children's Competencies. *Child Development , 73* (6), 1844-1860. p. 1856.
[165] Knighton, T., & Mirza, S. (2002). Postsecondary participation: the effects of parents' education and household income. *Education Quarterly Review , 8* (3), 25-32. p. 30.

achievement."[166] Similarly Canada's participation in the 2000 PISA study, mentioned above, revealed a province-wide pattern that linked a higher degree of parental expectations with a higher level of student achievement.[167] The results of this study concluded that "in all provinces and in all domains, students whose parents expected them to get a university education had significantly higher average performance than did those whose parents expected them to complete a college or trade diploma or a high school diploma."[168]

Research conducted using data gathered by Statistics Canada has demonstrated that children attain higher levels of academic achievement when their parents are highly involved in their education and upbringing.[169] Using data gathered from the 1994-1995 National Longitudinal Survey of Children and Youth, Norris' research indicates that teachers rate parents in higher socioeconomic brackets as more involved in their child's education than other parents.[170] This finding is backed by a similar Statistics Canada report which notes that higher socioeconomic levels "lead directly to higher levels of achievement, superior academic focus in the children, lower levels of hostile parenting, higher levels of perceived parental social support, and lower levels of parental depression."[171] Likewise, a Manitoba based study concluded that "community based parenting programs can lead to significant improvements in parenting practices and decreased behavioral problems in children, as well as increased numeracy and literacy development in children."[172]

Key contributors to the body of literature concerning how parenting practices differ across socioeconomic lines include Lareau (Lareau 1989, 2003), Vincent and Ball (Vincent

[166] Ibid. p. 25.
[167] Bussière, P., Cartwright, F., Crocker, R., Ma, X., Oderkirk, J., & Zhang, Y. (2001). p. 34.
[168] Ibid.
[169] Wotherspoon, T. (2004). p. 226.
[170] Norris, C. (1999). Parents and Schools: The Involvement, Participation, and Expectations of Parents in the Education of their Children. *Education Quarterly Review , 5* (4), 61-80. p. 77.
[171] DeBlois, S., & Burce, R. (1999). How do Families Affect Children's Success in School? *Education Quarterly Review* 6:1, 33.
[172] Brownell, M., Roos, N., Fransoo, R., & al., e. (2006, October). p.21.

and Ball 2004, 2010, 2008), and Gillies (Gillies 2005, 2012). Although their research is not Canadian in nature, and the specific areas of their research differ, their findings are relevant here given that they unanimously demonstrate the ability of middle and upper class parents to provide time and money to support their children's educational endeavors; a reality which seems to translate into higher rates of academic success. Additionally, the work of these academics also suggests that parents in higher socioeconomic brackets inherently find themselves involved in networks with other parents, teachers and employers that prove advantageous for their children.

In general, we can see that the Canadian and American based literature outlined thus far highlights the overall paradox of our educational system: a system designed to foster equality, but which finds itself time and again reproducing the social inequality it detests. Overall, this body of research demonstrates the importance of socioeconomic indicators, family life and parental involvement to a child's academic success.

STANDARD MEASURES OF ACADEMIC SUCCESS

Ross Traub, in Standardized Testing in Canada, defines standardized testing as follows:

> Generically, an achievement test is designed to assess the knowledge and understanding a student has acquired of a school subject. A standardized achievement test is further defined by its being given and scored in the same way, whenever and wherever it is used. Standardization means that the scores of all students tested can be fairly compared one against the other. Very often we think of standardized tests as consisting of multiple-choice questions, the answers to which can be scored by machine. But so-called performance tests – essays in language or social studies, laboratory assignments in science, problem solving exercises in mathematics, and so forth – can also be standardized; the essential requirements are that the conditions of administration and scoring be the same for all the students who

are tested so that their scores can be compared.[173]

However, since Traub first proposed this definition in 1994, much has changed in the realm of large scale testing in Canada. As such, the term high-stakes testing has come to describe tests that have serious consequences for students, teachers, schools, boards and/or school systems.[174] Although testing was historically used as a tool to measure student learning, Jones and Hargrove note in their 2003 book, 'The Unintended Consequences of High-Stakes Testing', that these assessments have "moved from being an individual student assessment to a system for ranking and comparing students."[175]

Under the Canadian constitution, education is a provincial or territorial responsibility. As a result, Canadian researchers, Volante and Jaafar contend that "there is a great deal of diversity across provinces and territories in the specific structure and general organization of elementary and secondary school systems. These differences reflect the unique culture, history, and geography that characterize particular provinces and territories."[176] However, despite these differences, every province and territory in Canada, with the exception of Nunavut, administers some form of centrally mandated large-scale assessment.[177]

Furthermore, an article on standardized testing published in Canada's *Education Quarterly Review* states that "poor achievement, even at the elementary school level, increases the chances that a child will not have the skills and opportunities to participate

[173] Traub, R. (1994). *Standardized testing in Canada: A survey of standardized achievement testing by ministries of education and school boards.* Toronto: Canadian Education Association. p. 5.
[174] Jones, G., Jones, B. D., & Hargrove, T. Y. (2003). *The Unintended Consequences of High-Stakes Testing.* Lanham: Rowman and Littlefield Publishing Group. p. 2.
[175] Ibid.
[176] Cumming, J., & Maxwell, G. (2004). *Profiles of Educational Assessment Systems Worldwide.* United States: Taylor and Francis. p. 202.
[177] Ibid. p. 203.

fully in and contribute to Canadian society as an adult."[178] Upon reflection, it is not surprising that standardized testing has become the focus of investigation and discussion in both public policy and academic circles.[179] As noted in a previous section, standardized testing in Ontario is the responsibility of the Education Quality and Accountability Office (EQAO), which is an independent provincial agency, funded by the Government of Ontario. Importantly, EQAO's stated mandate is to "conduct province-wide tests at key points in every student's primary, junior and secondary education and report the results to educators, parents and the public."[180] Research conducted by Wolfe, Childs and Elgie notes that Ontario's provincial assessment program, much like that in the rest of the country, has three main objectives: to report on test results, to report on the quality of education and to report to accountability boards.[181] Thus, we can identify that the primary objective of Ontario's standardized testing is to provide data for accountability and improvement purposes.

In its effort to facilitate improved teaching and learning, EQAO provides teachers and administrators with individual reports that contain individual student performance profiles and a strategy indicating how they should use the exemplars when talking to parents.[182] Further, EQAO also requires districts and individual schools to prepare their own school improvement plans based on assessment findings and other information which they believe to be relevant to student learning (e.g., demographics, program descriptions).[183] Accordingly, EQAO asserts in its most recent annual report that improvement planning brings about positive educational change as it "increases a school or school board's capacity

[178] Tremblay, S. (2001). Factors Affecting Grade 3 Student Performance in Ontario: A Multilevel Analysis. *Education Quarterly Review , 7* (4). p. 26.
[179] Ibid.
[180] EQAO. (2013). *About EQAO.*
[181] Wolfe, R., Childs, R., & Elgie, S. (2004). *Final report of the external evaluation of the EQAO's assessment process.* Toronto: OISE/University of Toronto.
[182] Volante, L. (2007). Educational Quality and Accountability in Ontario: Past, Present, and Future. *Canadian Journal of Educational Administration and Policy , 58*. p. 2.
[183] Ibid.

to design and manage change that will improve student outcomes."[184]

Although EQAO remains confident that standardized assessment data will bring about positive educational reform, Volante contends that assessment led reforms "have not been widely embraced by the majority of Ontario's teachers nor their unions [as] many educators within the province view provincial assessment with a suspect eye and dispute the taken-for-granted assumption that external testing will lead to system improvement."[185] Standardized province wide assessment remains a controversial issue in Ontario.[186] Specifically, this controversy can be seen in the fact that standardized testing is endorsed at the policy level given that it places an emphasis on accountability, while at the more functional level some teachers and teachers' federations contest the practice. Although potentially biased, Ontario's two elementary teaching federations remain opposed to standardized testing in its current form.[187] The Elementary Teachers Federation of Ontario (ETFO) accuses standardized testing of wasting "precious classroom time and scarce resources at a time when elementary education in Ontario is seriously under funded."[188] Likewise, the president of the Ontario English Catholic Teachers Association (OECTA) cautions parents that "tests convey 'a moment' in a classroom year, and fail to take into account how much progress each child makes during that time."[189] While opposition to these large-scale testing programs is mounting, in her 2004 book Passing the Test; The False Promises of Standardized Testing, editor Moll notes that "it is difficult for the public to enter

[184] EQAO. (2011). *Improving Education Through Evidence of Learning 2010-2011 Annual Report.*
[185] Volante, L. (2007). p. 2.
[186] Johnson, D. (2005). *Signposts of Success: Interpreting Ontario's Elementary School Test Scores.* Toronto: CD Howe Institute. p. 23
[187] Ibid.
[188] ETFO. (2008, September 27). *Teachers Call for End of Standardized Testing in Ontario Schools.* Retrieved from http://www.etfo.ca/MediaRoom/MediaReleases/Pages/Teachers%20Call%20for%20End%20of%20Standardized%20Testing.aspx
[189] OECTA. (2005, October 19). *OECTA Says EQAO Test Results Yield Partial Picture Only.* Retrieved from http://www.oecta.on.ca/wps/portal/search?WCM_GLOBAL_CONTEXT=http://localhost:10038/wps/wcm/connect/web+content/OECTA/News+and+Events/News/Releases/05+OECTA+says+EQAO+test+results+yield+partial+picture+only

into the debate when presented with tables, pie charts, and graphs derived from processes that are not fully explained to them and little contextual information within which to interpret the results."[190]

Despite clear reservations from Ontario's teachers' federations, EQAO remains a true believer in the value of standardized testing. The 'About' section of EQAO's website plainly states that standardized tests act as "a catalyst for increasing the success of Ontario students by measuring their achievement in reading, writing and mathematics [and by producing data sets that] provide a gauge of quality and accountability in Ontario's publicly funded education system."[191] While EQAO data may indeed help improve school outcomes, many have questioned the overall comparability of these test results. In his 2005 book, *Signposts of Success: Interpreting Ontario's Elementary School Test Scores*, Johnson explores the variations in Ontario's elementary school standardized test scores and attempts to separate the influence of socioeconomic factors from the influence of schools. This research led Johnson to conclude that "between 40 and 50 percent of the variation in schools' average test scores is explained by variations in schools' socio-economic environments."[192] Although also published by a prominent Canadian think tank, the C.D. Howe Institute, Johnson's research can be seen to explore EQAO assessment results in a much more holistic manner than the Fraser Institute.

Like Johnson, Thompson rightfully notes that discounting the effects of poverty on student achievement defies common sense as it "implies that the family role in children's

[190] Moll, M. (2004). Forward. In M. Moll, *Passing the Test: The False Promises of Standardized Testing* (pp. 9-11). Ottawa: Canadian Center for Policy Alternatives. p. 9.
[191] EQAO. (2013). *About EQAO.*
[192] Johnson, D. (2009). *Ontario's Best Public Schools, 2005/06-2007/08: An Update to Signposts of Success.* C.D. Howe Institute. p. 1.

educations is negligible, at least in a good school."[193] Although his research on equitable measures of school performance stems from an American perspective, his value-added model of school rating is relevant here as it strives to take school and environmental influences into account and apply them to standardized test scores. By taking a multitude of student characteristics into account, including poverty, race, mobility and stability, Thompson is able to distinguish the influence of demographics that are outside of a school's control from those under a school's control to generate school ratings that compare actual performance to that predicted by poverty rates.[194] Similarly, the Tennessee Value Added Assessment System (TVAAS) was developed by Sanders as a means to rectify the problem inherent in comparing a school's standardized test scores, that is, that apparent differences may simply reflect disparities in the two different student populations rather than a difference in school performance.[195] As such, the TVAAS model is seen to determine the effectiveness of school systems, schools, and teachers based on actual student academic growth over a period time.[196] Significantly, Sanders and Horn note that an integral part of the TVAAS approach is a "massive, longitudinally merged database linking students and student outcomes to the schools and systems in which they are enrolled and to the teachers to whom they are assigned as they transition from grade to grade."[197]

Overall, it can be seen that the practice of using standardized tests to make inferences about school performance is a contentious issue that is likely to continue well into the future. Speaking against standardized assessment, the ETFO news release published on the Federation's website notes that "a conversation with their child's teacher, not scores on

[193] Thompson, B. (2004). Equitable Measures of School Effectiveness, *Urban Education* 3(2).
[194] Ibid. p. 1.
[195] Ibid. p. 4.
[196] Sanders, W., & Horn, S. (1998). Research Findings from the Tennessee Value-Added Assessment System (TVAAS) Database: Implications for Educational Evaluation and Research. *Journal of Personnel Evaluation , 12* (3). p. 1.
[197] Ibid.

provincial tests, is the best report card on student achievement parents can get."[198] Conversely, the Fraser Institute contends that the utilization of standardized test scores in their annual Report Card on Ontario's Elementary Schools "assists parents when they choose a school for their children and encourages and assists all those seeking to improve their schools."[199] While the Fraser Institute's elementary school report cards have been in published in select Canadian provinces for the last 10 years, it was not until recently that academic critiques of the Fraser Institute have come to light. Helen Raptis is at the forefront of this criticism.

In 2010, Raptis successfully convinced the *Times Colonist*, a Victoria based newspaper, not to publish the Fraser Institute's school rankings.[200] Published in its place was Raptis' article, *The Case Against the Fraser Institute's School Rankings*, which pointed out that "the Fraser Institute, the press, and much of the public had been erroneously conflating provincial test scores with school rankings."[201] Raptis's inquiry into the Fraser Institute's use of standardized assessment data reveals that the Canadian media has, on the whole, failed to question the Fraser Institute's legitimacy or methodology.[202] Further, another recent criticism of the report card comes from Simon Fraser University Professor Gutstein, who asserts that the Fraser Institute uses standardized test scores to produce results they were not designed to generate, specifically, to evaluate entire schools. Gutstein notes that the school report cards "ignore certain information about individual and socioeconomic

[198] ETFO. (2008, September 27).
[199] Cowley, P., Easton, S., Thomas, M. (2011).
[200] Raptis, H. (2010, February 2010). The Case Against the Fraser Institute's School Rankings: Editorial. *Times Colonist* . p. C10.
[201] Ibid.
[202] Ibid.

difference and magnify minuscule differences in [test] scores."[203]

Clearly, there are inherent problems in comparing the results of standardized assessments. Nonetheless, these comparisons continue to be made and their fundamental flaws appear to go largely unnoticed and unreported. This lack of knowledge is a key issue that this research endeavors to address.

DETRIMENTAL CONSEQUENCES OF STANDARDIZED TESTING

Academics have argued that overemphasis placed on standards and accountability measures across a narrow range of skills, namely numeracy and literacy, has resulted in a decrease in the intellectual nature of school curricula and reduced the level of professional autonomy held by teachers.[204] This narrowing of the curriculum is evidenced by a body of literature which indicates that teachers purposefully align their instruction with that of the official curriculum being tested.[205] Further, this tendency to teach what is tested has been seen to limit the amount of time teachers spend on non-tested subject areas.

The focus on testable subjects can be clearly seen in the United States where it has been reported that since the *No Child Left Behind Act* became law in 2002, the majority of the nation's elementary school districts have increased the amount of time they spend on reading and math by cutting the time allotted to other subjects by roughly one-third.[206] This shift in subject based teaching time is highlighted by a study conducted in North Carolina

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[203] Gutstein, D. (2010). *Reframing Public Education Countering school rankings and debunking the neoliberal agenda* . Working Paper.
[204] Westheimer, J. (2011). Once Upon A Time, Not Too Long Ago, Teaching Was Considered a Profession, But Then Came Standardization, Tests, and Value-Added Merit Pay Schemes That Ate All Humanity for Breakfast....The rest is no fairytale. . *Independent Schoot* , 1-6. p. 4.
[205] Jones, G., Jones, B. D., & Hargrove, T. Y. (2003). p. 29.
[206] Center on Education Policy. (2007, July 25). *As the Majority of School Districts Spend More Time on Reading and Math, Many Cut Time in Other Areas.* Retrieved from http://www.cep-dc.org/cfcontent_file.cfm?Attachment=PressRelease_CurricAndInstruction_072407.pdf

elementary schools where teachers "reported that after the implementation of the testing program, they spent substantially more time teaching the tested subjects of mathematics, reading, and writing and less time teaching science, social studies, the arts, and physical education and health."[207] Further, "in addition to increasing time spent on English and math, many [American school] districts appear to be changing their curriculum to provide a greater emphasis on content and skills covered on high-stakes tests used for *No Child Left Behind* purposes."[208] All of this highlights the fact that standardized tests are seen by many to result in a "diminished value attributed to any educational activity that standardized tests do not measure."[209]

Although there is a significant amount of literature that reports on the narrowing of instructional focus in American schools following the introduction of *No Child Left Behind*, Concordia University professor Volante notes that "researchers the world over have found [that] external testing can strongly influence how teachers educate students."[210] There is considerable evidence that supports the notion that standardized testing results in an overemphasis of assessed subjects. These studies have found that there is a tendency for schools and school districts to narrow their teaching to reflect this value imbalance by carefully focusing their instruction on test preparation activities and the teaching of test based content.[211] While considerable research has been conducted on the results of testing in American schools, Volante also points out that "teachers in Ontario have not been immune to [these] forces and have reported spending a disproportionate amount of time on tested

[207] Jones, G., Jones, B. D., & Hargrove, T. Y. (2003). p. 30.
[208] Center on Education Policy. (2007, July 25).
[209] Westheimer, J. (2011). p. 4.
[210] Volante, L. (2007). p. 2.
[211] Ibid.

subjects [and some have even] indicated they focus much of the second half of the school year on test preparation activities."[212]

Given the high stakes involved in standardized testing, it is not surprising that many teachers have been accused of teaching to the test. The Center on Education Policy describes this practice as follows:

> 'Teaching to the test' is generally viewed as a bad thing, whether it comes up in news reports, parent conversations, or legislative debates. In the classroom, however, teaching to the test can cover a variety of activities – from outright cheating, to drilling students in practice questions that look a lot like test items, to good teaching of important knowledge and skills. As a general rule, any form of teaching to the test is inappropriate if it raises test scores without also increasing students' knowledge and skills in the broader subject being tested.[213]

Numerous studies, predominately conducted in the United States, have found that "teachers are teaching increasing amounts of test-taking strategies and skills."[214] Here again, it can be seen that teaching time within the school day is being taken away from non-tested subjects in an effort to focus more specifically on those areas that are tested. This practice is not surprising given that Stewart asserts that in the United States, test "results are regularly used to inform decision making about funding levels, with higher performing schools being rewarded with increased funding, and lower performing schools losing funding; and to select teachers for rewards such as enhanced salaries for high or improved test results."[215]

Similar to their American counter parts, Canadian teachers are facing increasing pressure to produce quality test scores, and the practice of teaching to the test has undeniably found its way across the border. In an Ontario based study conducted by Ricci, high school

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[212] Ibid.
[213] Kober, N. (2002). *TestTalk for Leaders-Issue 1: Teaching to the Test: The Good, the Bad, and Who Is Responsible.* Center on Education Policy.
[214] Jones, G., Jones, B. D., & Hargrove, T. Y. (2003). p. 75.
[215] Stewart, M. (2004). The Perils of Testing. In M. Moll, *Passing the Test; The False Promises of Standardized Testing.* Ottawa: Canadian Center for Policy Alternatives. p. 179.

students were coached for over a month prior to provincial literacy testing.[216] Additionally, Ricci reported that teachers received instructions to explain to students that the preparatory sessions were not designed to make them literate, but were designed to improve their test-taking skills."[217] Thus, "methodologies which are meant to promote critical thinking, problem solving, analysis, hypothesizing, and synthesizing may give way to an emphasis on recall of facts and rote learning."[218] This is clearly problematic, given that "the more time teachers spend on drilling and practicing skills preparing students for what is going to be in the […] test, the less time they have to spend discussing and dialoguing about more engaging substantive issues."[219] Further, after a 2010 probe of a small number of the provinces, 5,000 secondary and elementary public schools, ten public schools in Ontario were investigated for cheating and irregularities on province wide EQAO tests.[220] In response to these accusations, former Ontario Premier Dalton McGuinty noted that the "pressure public school educators face to perform well on province-wide tests in reading, writing and mathematics is no excuse for breaking the rules."[221] It can be seen that while McGuinty was clear that there is no justification for cheating, he could not deny the fact that Ontario teachers find themselves under increased pressure to produce high scoring students.

Testing clearly affects what is taught in schools. However, perhaps less obviously, testing also affects the professional autonomy enjoyed by teachers. Prior to the introduction of high-stakes testing, teachers were responsible for choosing what they would teach within

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[216] Sweet, M. E. (2006). *Standardized Testing - Unmasking a Threat to Democracy*. GRIN Verlag. p. 352.
[217] Ibid
[218] Stewart, M. (2004). p. 180.
[219] Sweet, M. E. (2006). p. 345.
[220] Hammer, K., & Howlett, K. (2010, September 21). Ten Ontario Schools Investigated for Breaking Rules in Province Wide Testing. *The Globe and Mail*. Retrieved from http://www.theglobeandmail.com/news/national/ten-ontario-schools-investigated-for-breaking-rules-in-provincewide-testing/article1213738/
[221] Howlett, K. (2010, September 21). *Pressure on educators no excuse for cheating, Ontario Premier says* . Retrieved from http://www.theglobeandmail.com/news/national/pressure-on-educators-no-excuse-for-cheating-ontario-premier-says/article1213762/

a broad framework of topics. The practice of standardized testing changes this, as these tests not only define what specifically needs to be taught, but also the context of this knowledge.[222] Testing not only sharply defines what knowledge and skills are deemed important for students to learn, but also takes the decisions about what knowledge is considered crucial out of teachers' hands.[223] This is an unfortunate reality given that a recent study conducted by Jones, Jones and Hargrove "suggests that teachers need to be empowered and have autonomy over their actions and over the decisions that affect them in order to be satisfied with their jobs."[224] Further, teachers also indicate concern over their loss of morale as their autonomy dwindles and pressure to achieve high test scores rises.[225]

The results of standardized tests throughout the United States, and increasingly across Canada, are being used to place, maintain, and track students as well as to compare and rank teachers, schools and boards.[226] In addition to limiting autonomy, the extreme focus on test scores and competition between teachers and schools is seen to impede the development of professional relationships and collaboration between teachers."[227] In a member opinion survey conducted by the Alberta Teachers' Association, more than a quarter of the teachers polled commented on the "unusual stress for teachers, students, parents and administrators caused by the testing program."[228] This viewpoint is highlighted by a comment made by a Florida superintendent who noted that "when a low-performing child walks into a classroom, instead of being seen as a challenge, or an opportunity for improvement, for the first time since I've been in education, teachers are seeing that child as

[222] Jones, G., Jones, B. D., & Hargrove, T. Y. (2003). p. 28
[223] Ibid.
[224] Ibid. p. 142.
[225] Ibid. p. 4.
[226] Stewart, M. (2004). p. 179.
[227] Volante, L. (2007). p. 3.
[228] Hyman, C. (2004). Alberta Learning Achievement Testing Program: Alberta Teachers Express their Opinions on Achievement Testing. In M. Moll, *Passing the Test; The False Promises of Standardized Testing* (pp. 173-176). Ottawa: Canadian Center for Policy Alternatives. p. 176.

a liability."[229] McAide notes that standardized tests are seen by some as a tool used to separate winning students from losing students given that they stratify students without measuring actual learning.[230] As such, "many researchers believe that the high-stakes accountability movement will have the greatest impact on minorities, students with disabilities, students from low-status socioeconomic communities, and students with limited English proficiency."[231] Further, while standardized testing highlights educational inequalities, it does very little to change the underlying conditions of poverty, language, access, or culture that contribute to the trend that sees marginalized groups achieving lower scores.[232] In his 2009 book, *Unequal by Design: High-Stakes Testing and the Standardization of Inequality*, Wayne Au asserts that "high stakes tests are incredibly efficient at sorting for race and economic class."[233] Because of this, standardized tests are often seen to hurt rather than help marginalized students as Au contends that they have the ability to "enact inequality by increasing the educational and social stratification of students, and by extension, their communities."[234]

Furthermore, lower scoring schools are often comprised of higher proportions of poor students who typically need more help to succeed in school.[235] Research conducted by Berliner and Nichols concluded that schools with high populations of marginalized students often struggle to attract and maintain a quality teaching staff. They note that "teachers know that they stand a better chance of being successful where neighborhoods and families are healthy and communicate a sense of efficacy, where incomes are both steady and adequate,

[229] Berliner, D., & Nichols, S. (2007, March 12). High-Stakes Testing Is Putting the Nation At Risk. *Education Week*. p. 3.
[230] McAdie, P. (2004). Testing the Limits. In M. Moll, *Passing the Test: The False Promises of Standardized Testing.* Ottawa: Canadian Center for Policy Alternatives. p. 153.
[231] Jones, G., Jones, B. D., & Hargrove, T. Y. (2003). p. 109.
[232] Ibid.
[233] Au, W. (2009). *Unequal By Design: High-Stakes Testing and the Standardization of Inequality.* New York: Routledge, Taylor and Francis. p. 139.
[234] Ibid. p. 140.
[235] Jones, G., Jones, B. D., & Hargrove, T. Y. (2003). p. 143.

and where health-care and child-care programs exist. So the best of them soon move to schools with easier-to-teach students."[236] Further compounding this problem is research which suggests that disadvantaged groups of students are more likely to have meaningful instruction replaced by worksheets that drill students in trivial exercises designed for test preparation rather than real learning.[237] This practice highlights the dilemma that marginalized students may in fact be twice penalized by standardized testing practices. Once by the testing itself, and again by the pressure teachers are under to produce high scoring classes.

Proponents of standardized testing contend that such testing provides a valuable source of data that, if acted upon, has the potential for improving classroom practice.[238] Based on my literature review, however, it seems that there is more disagreement than agreement with this perspective. Overall, the research outlined above indicates that there are a myriad of negative and often unintended consequences that result from standardized testing. Of specific importance to this research are the implications that these tests have on teacher morale and their consequences for marginalized students.

The literature reviewed in this chapter is intended to provide the reader with an account of important and relevant publications regarding fundamental elements of this thesis. Accordingly, the research outlined above represents a critique of the effects of standardized testing that is in no way intended to assess the construct validity of the tests themselves. As such, this section covered key issues concerning educational equity, the link between socioeconomics and educational attainment, standard measures of educational

[236] Ibid. p. 4.
[237] Meaghan, M., & Casas, F. (2004). "Bias in Standardized Testing and the Misse of Test Scores – Exposing the Achilles Heel of Educational Reform," . In M. Moll, *Passing the Test; The False Promises of Standardized Testing* (pp. 35-50). Ottawa: Canadian Center for Policy Alternatives. p. 38.
[238] Wideman, R., Delong, J., Morgan, D., & Hallett, K. (2003). *An Action Research Approach to Improving Student Learning, Using Provincial Test Results.* EQAO.

success and the negative consequences of standardized testing. In the following chapter, I will review the methodology that I used to gather and analyze the data relevant to this study.

CHAPTER 3 - METHODOLOGY

RESEARCH DESIGN

The principle tenet of pragmatism is the notion that what is important is not abstract philosophy, but, rather, what works in practice.[239] Accordingly, a pragmatic researcher focuses on the research questions being asked, rather than the specific methods being used to answer them.[240] Given this, I determined that a pragmatic framework would afford this study with the freedom to develop in a way that would best address my research questions. This proved to be a useful approach as my study faced, and overcame, several key obstacles which will be discussed in later chapters.

According to Burke Johnson and Larry Christensen, pragmatic epistemologies align well with mixed methods research studies.[241] Given that the two approaches work well together, and the fact that my study addresses both quantitative and qualitative research questions, it follows that I conducted it using a mixed methods approach. As its name suggests, mixed methods research draws on a mixture, or combination, of quantitative and qualitative approaches.[242] The underlying premise of mixed methods research is the notion that the combined approach allows for a better understanding of a research problem than either approach can achieve on its own.[243] Further, because quantitative and qualitative approaches have different strengths and different weaknesses, a mixed methods researcher is

[239] Johnson, B., & Christensen, L. (2008). *Educational Research: Quantitative, Qualitative, and Mixed Approaches.* United States: Sage Publications. p. 33.
[240] Cresswell, J. 2007. *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, United States: Sage Publications, 22.
[241] Johnson, B., and Christensen, L. 2008. 442.
[242] Ibid. 51.
[243] Clark, V., et al. 2008. Mixed Methods Approaches in Family Science Research, *Journal of Family Issues* 29, 11: 1543-1566. 1546.

likely to improve the quality of his or her work by combining complementary strengths while being mindful not to overlap weaknesses.[244]

To address the quantitative portion of my research, I used non-experimental, correlational research. Essentially, correlational research studies are used to analyze the relationship between two quantitative variables.[245] As such, I used this approach to determine the relationship between elementary school based demographic indicators (independent variables) and student academic achievement indicators (dependent variables).

To determine elementary teachers' perceptions and parental conceptions of the Fraser Institute's annual report card, I relied on qualitative research methods embedded within grounded theory. Grounded theory aligned well with my research given that it makes use of the views of participants to generate a general explanation of a given process, action or interaction.[246] To gather these points of view, I conducted participant interviews and anonymous questionnaires.

PARTICIPANTS

Given that this study required that both teachers and parents take part in a survey regarding the Fraser Institute's annual school ratings, it was important that I locate a sample of teachers and parents from which to draw participants. The following outlines how this was done.

[244] Johnson, B., and Christensen, L. 2008. 51.
[245] Ibid, 44.
[246] Cresswell, J. (2007). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches.* United states: Sage publications. p. 53

Finding a School Board.

In order to explore the quantitative relationship between the Fraser Institute's report card rankings and the individual characteristics of schools' populations, it was important that I select an adequately sized school board to analyze. Further, to ensure a cohesive end result, I hoped to qualitatively gather elementary teachers' perceptions of the Fraser Institute from within the same school board. Given that I conducted this research through the University of Ottawa, and the fact that the OCDSB is the "largest school board in Eastern Ontario serving over 72,000 students,"[247] the OCDSB was my first choice for all aspects of this research.

Although I had originally planned to conduct the qualitative portion of my research with the OCDSB, I also submitted research applications to the Waterloo Regional District School Board (WRDSB), Halton District School Board (HDSB) and Upper Canada District School Board (UCDSB) in an effort to improve the likelihood that my research would be approved. Given that both the OCDSB and UCDSB did not grant permission to conduct this research within their school district, it can be seen that this was a wise approach.

Fortunately, the HDSB's Research Advisory Committee approved my research application pending slight revisions. Rather than email my survey link directly to their elementary teachers, the HDSB agreed to "post the information to a general e-mail conference for elementary teachers entitled Elementary Education."[248] After obtaining approval from the University of Ottawa's Office of Research Ethics and Integrity, I forwarded my electronic survey link for posting in the Halton District School Board's e-mail conference in mid May 2012.

[247] OCDSB. (2013). *Working in Our School Board.* Retrieved from http://www.ocdsb.ca/ab-ocdsb/wh/Pages/default.aspx
[248] HDSB. (2012, May). Research Ethics Board – Application Response.

It should also be noted that the WRDSB also approved this research, but their approval did not come until June 13, 2012, exactly two weeks before school finished for the year. Given this short time frame, and the fact that I had already generated a sufficient survey response from the HDSB, I did not include the WRDSB in this research. Rather, I relied on the pragmatic approach that I designed my research around and collected quantitative data from the OCDSB and qualitative data regarding teacher perceptions of the Fraser Institute from the HDSB. Although I would have liked both of these data sets to originate from the same source, I feel strongly that elementary teachers employed by public schools in Ontario share more similarities than differences in their professional lives.

Parents.

To ascertain how parents use and understand the school ratings produced by the Fraser Institute, it was important that I involve the parents of current elementary school children in my research. While elementary school teachers were easy to locate and contact through their common employer, connecting with a sufficiently large sample of parents with elementary school aged children was not as simple. In order to locate and survey the demographic of parents that I deemed relevant to my research, I concluded that I had to approach them through an organization that catered to their children. Having previously been an employee of the After School Care Programs run by the Ottawa Based YMCA/YWCA, I determined that this would be an acceptable venue for conducting this portion of my research. I contacted the YMCA/YWCA for permission to visit these after school programs and invite parents to participate in this research. Once this permission was

granted, I applied for and obtained ethics approval from the University of Ottawa's Office of Research Ethics and Integrity.

At the time of this research, the YMCA/YWCA had fourteen After School Care Programs running in public elementary schools throughout Ottawa. Further, the YMCA/YWCA's after school programs were not restricted to schools in low-income neighborhoods and were being run from elementary schools that scored between 2.5 and 9.4 on the Fraser Institute's 2012 report card. Given that children are picked up from the Y's after school programs, rather than loaded onto busses, I hoped that this approach would allow me to make contact with a large number of parents. In the end this is a convenient sample, however, the wide variety of after school programs and the number of potential respondents justifies this choice.

DATA SOURCES AND COLLECTION STRATEGIES

Both the quantitative and qualitative data sources and the collection strategies that I used to conduct this research are discussed in detail in the following sections.

Quantitative Data.

As mentioned previously, the quantitative component of this research study concerns the relationship between student demographic indicators and the Fraser Institute's annual report card. To my benefit, the majority of this data has already been collected by several government agencies. I used secondary or existing sources of data for this portion of my study.

School specific demographic data is an integral part of this research study but, unfortunately, there is no standard way to compile this data. The Ontario Ministry of Education has begun to compile school profiles by cross-referencing student postal code data from the 2007 – 2008 school year with Canadian census data collected in 2006.[249] Similarly, EQAO has also gathered school based demographic statistics using school postal code data from the 2010 – 2011 school year and the 2006 census. I was unsuccessful in my efforts to contact the Ontario Ministry of Education for access to the raw data used in their school profiles. Fortunately, however, EQAO strives "to encourage research that maximizes the potential for transforming EQAO data into useful information with which to leverage action and influence learning."[250] I contacted EQAO's research data portal by email to request password protected access to the Ottawa portion of the raw demographic data collected by EQAO, which is hosted online in its data portal. This request was approved.

EQAO has also "created a data portal through which researchers can access selected EQAO data files."[251] Access to this information is "limited to files containing information from which names, Ontario education numbers and other personal identifiers have been removed"[252] and must be formally applied for through the data portal. I applied for access to this data by completing and submitting a standard form provided by EQAO and was subsequently granted access to elementary school student achievement results aggregated at the school, board and provincial levels as well as EQAO student questionnaire responses and a demographic profile of each school's grade three and grade six students from the 2010 - 2011 school year through the data portal. However, as this section of my research pertains

[249] Ontario Ministry of Education. (2010). *School Information Finder*. Retrieved from http://www.edu.gov.on.ca/eng/sift/glossary.asp#demo2
[250] EQAO. (2013). *Data Portal For Researchers.* Retrieved from http://www.eqao.com/Research/DataPortal.aspx?Lang=E
[251] Ibid.
[252] Ibid.

exclusively to the OCDSB, I analyzed only this portion of the data that I received from EQAO.

Lastly, the individual school ratings published by the Fraser Institute comprised the final quantitative data set relevant to my research. Specifically, I was interested in the school ratings for the OCDSB contained within the 2012 publication of the Fraser Institute's Report Card on Ontario's Elementary Schools. Currently, this is the most recent school report card published by the Fraser Institute. Additionally, it uses EQAO data from 2010 – 2011. Within its report card publication, the Fraser Institute provides a Detailed School Report (Fig. 1) for each of the schools it assesses. I downloaded the Fraser Institute's complete Report Card on Ontario's Public Schools from the organization's website. I then extracted the school reports pertaining to OCDSB schools and compiled a spreadsheet with the data contained in each of these school reports.

Figure 1. Sample Fraser Institute Detailed School Report.

A – **GEOGRAPHICAL AREA**

B –	**School name [Affiliation] City**						**Gr 6 enrollment: 30**	
C –	ESL (%): 10.0						Special needs (%): 23.3	
D –	Actual rating vs predicted based on parents' avg. inc. of $40,000: 1.1						2009-10 Rank: 1114/2733	Last 5 Years 465/2327
	Academic Performance		**2006**	**2007**	**2008**	**2009**	**2010**	**Trend**
E –	Gr 3 avg. level:	Reading	3.0	2.7	2.8	2.3	2.4	▼
F –		Writing	2.8	2.9	3.2	2.7	2.8	—
G –		Math	2.9	3.3	3.2	3.0	3.0	—
H –	Gr 6 avg. level:	Reading	2.6	2.8	2.8	2.9	3.0	▲
I –		Writing	2.8	2.9	2.9	2.9	2.9	—
J –		Math	2.7	3.0	2.9	3.0	2.8	—
K –	Gender gap (level):	Reading	E	n/a	F 0.1	F 0.4	n/a	n/a
L –		Math	E	n/a	F 0.1	E	n/a	n/a
M –	Tests below standard (%)		28.1	18.7	20.8	23.5	28.2	—
N –	Tests not written (%)		14.4	11.0	11.5	0.0	0.0	▲
O –	**Overall rating out of 10**		**7.0**	**8.2**	**7.9**	**6.7**	**6.5**	—

P

Source: The Fraser Institute's "Report Card on Ontario's Elementary Schools 2012," pg 11.
Note: An explanation of the Indicators found on the Fraser Institute's detailed school reports can be found in Appendix One.

Qualitative Data.

I gathered qualitative data to investigate elementary teachers' perceptions of the Fraser Institute's annual report card, the current ways parents are using the Institute's report card, and the overall intelligibility of the report card to its primary audience, the parents of school age children. To do this, I intended to use questionnaires and participant interviews. Unfortunately, I struggled to locate teacher participants with the time and/or motivation to schedule an interview session. For this reason, the qualitative data analyzed in this report was derived solely from questionnaires which were distributed to teachers at the HDSB through an electronic survey invitation posted to a general elementary education email conference for the Board. Moreover, survey data from parents was collected via paper surveys distributed through Ottawa based YMCA/YWCA After School Care Programs. Despite the fact that I was unable to complete participant interviews with teachers, the questionnaire responses from my survey generated a rich data set, which allowed me to address my research question in a full and complete manner.

Teachers.

To ascertain the way elementary teachers perceived the Fraser Institute's school report card, I used a simple, web-based, questionnaire (Appendix 2). The web-based component of this questionnaire was important as it allowed me to send the survey to teachers electronically and did not require that I meet with them in person. Furthermore, research by Altreck and Settle indicates that web surveys are particularly effective when a researcher hopes to reach respondents at work.[253] Thus, the fact that the HDSB agreed to post a link to this survey in a general email conference that their elementary teachers use to

[253] Alreck, P., & Settle, R. (2003). *The Survey Research Handbook: Third Edition.* New York: McGraw-Hill. p. 184.

interact with each other may have positively increased the response rate. Although I intended for both my quantitative and qualitative data to originate from the same source, I concluded that elementary teachers in Ontario are likely bound within the same epistemology. Finally, the pragmatic design of this research afforded me with the flexibility to use another school board for this portion of my study. In sum, I was able to collect, analyze and integrate data from two separate school boards to adequately address my research questions.

Of particular note, the electronic survey link was uploaded by the HDSB with less than a month left in the school year. Given that this was a very busy time for teachers, I am fortunate to have collected responses from a total of 26 elementary teachers. Although this is a small fraction of the total number of elementary teachers employed at the HDSB, it is impossible to know how many of them regularly visit the email conference where my survey link was hosted. Accordingly, there is no way to determine the response rate this survey received. That said, research by Tourangeau et al. on survey response rates indicates that the topic of a survey emerges as a major determinant of participation as it appears that respondents who are interested in a given survey topic are far more likely to respond.[254] Similarly, Altreck and Settle contend that "ordinarily, those who are highly involved with the topic are more likely to respond than those who aren't [this] includes those who feel strongly positive about issues or topics and those who feel strongly negative as well."[255] It is likely that the 26 teachers who took the time to complete my survey had a pre-existing interest in the Fraser Institute's school rankings.

[254] Ibid.
[255] Alreck, P., & Settle, R. (2003). p. 37.

Parents.

To better understand the current ways that parents are using the Fraser Institute's report card data, and to ascertain whether or not they truly understand it, I surveyed the parents of current elementary school students (Appendix 3). This survey was completed on paper primarily because of the inherent difficulty in attaining a list of parental email addresses. As previously discussed, I chose to distribute this survey to parents through the Ottawa based YMCA/YWCA After School Care Programs. Although I personally distributed 100 surveys to the parents of children attending one of four of the Y's after school programs, only 20 completed surveys were returned. While this number is lower than I would have liked, it is not entirely surprising given the busy lives most parents of elementary school aged children are faced with, coupled with the fact that survey response rates tend to be low among those who are pressed for time.[256] Additionally, as stated above, it is likely that the parents who did take the time to complete this survey had an increased degree of involvement or interest in the Fraser Institute's school rankings.[257] Overall, I found that the majority of the parents to whom I distributed surveys chose to take them home rather than complete them at the YMCA/YWCA program. Much like a mail survey, parents were faced with a paper survey which they were required to fill out and return in order to participate in this research. Accordingly, the 20 percent completion rate that I received can be seen as slightly better than the expected response to mail surveys, which typically generate response rates of between 5 and 10 percent.[258] Nonetheless, this response rate is an

[256] Ibid.
[257] Ibid.
[258] Ibid. p. 36.

adequate number to provide insight into parental uses and understandings of the Fraser Institutes school ratings.

Academics.

Although few academics have published scholarly work in which they write specifically about the Fraser Institute, Dr. Helen Raptis and Dr. David Johnson are exceptions to this rule. At the time of this research, Raptis is employed by the Faculty of Education at the University of Victoria, and Johnson is employed by the Faculty of Economics at Wilfrid Laurier University. While both Raptis and Johnson lecture and research at distinguished Canadian universities, their educational backgrounds afford them with unique views of the Fraser Institute and school rankings in general. I contacted both Raptis and Johnson to ascertain if they would be willing to take part in an interview. Fortunately, both agreed and these interviews provided invaluable insight that I have used to shape my research. The content and context of these interviews are discussed throughout subsequent chapters pertaining to data analysis.

Public Relations.

It was important to allow the Fraser Institute an opportunity to respond to the results of this research. To this end, I contacted Peter Cowley, the Senior Vice President of Operations and the Director of School Performance Studies at The Fraser Institute, for an interview after I completed an analysis of the data gathered for this research. Cowley did not hesitate and made himself available for a telephone conversation the day following my request. The results of this interview are discussed throughout the data analysis sections of this thesis.

QUANTITATIVE DATA ANALYSIS

Specifically, the relationship between the Fraser Institute's report card rankings and the individual characteristics of school populations was explored using regression analysis. According to Johnson and Christensen, regression analysis is "a set of statistical procedures that are used to explain or predict the values of a dependent variable on the basis of the values of one or more independent variables."[259] Put more simply, regression analysis "formalizes something that the human pattern recognizer does instinctively, and this is to fit a line or a curve through a set of data points."[260] To do this, relevant quantitative data was collected from the EQAO data, outlined in the previous chapter, as well as the 2012 publication of the Fraser Institute's Report Card on Ontario's Elementary Schools. I then used the data analysis tool in Microsoft excel. The specific indicators gleaned from each of these data sources can be found in figure 2. In cases where the same information was available from multiple data sources, the data deemed most relevant to the population of a school's EQAO test takers was used. For example, EQAO data reporting on the percentage of special education students in grade three and grade six was used in regression analysis rather than the Fraser Institute's data given that the Fraser Institute's special education statistic is only representative of a school's grade six students. In addition, I chose to use income data collected by EQAO in my regression analysis rather than that collected by the Fraser Institute given that EQAO has access to the private postal code data of schools' attendees and can therefore compile a more accurate income statistic.

According to Creswell, "multiple regression (or multiple correlation) is a statistical procedure for examining the combined relationship of multiple independent variables with a

[259] Ibid. p. 486.
[260] Livingstone, D. (2009). *A Practical Guide to Scientific Analysis.* United States: Wiley. p. 145.

single dependent variable."[261] Given that many of the independent variables relevant to this study exist concurrently, whenever possible, multiple regression analysis was used to analyze the potential impact they have together on the Fraser Institute's overall ratings. Unfortunately, many of these variables are highly correlated with each other. For example, schools with a large immigrant population are also likely to have a high percentage of English Language Learners. Given that two strongly correlated variables provide redundant information, using them simultaneously in regression analysis can lead to regression errors known as collinearity and multicollinearity.[262] To avoid the confusing and often misleading results produced by highly correlated variables, correlation analysis was run on the variables in question before multiple regression analysis was undertaken. Any variable that produced a correlation coefficient, with other potential predictors, greater than +0.7 or less than -0.7 was removed from the multiple regression equation and studied independently.[263] Additionally, variables weakly correlated with the Fraser Institute's overall ratings, which produced coefficients between -0.4 and +0.4 were removed given that they are not reliable predictors.[264]

Regression analysis produces a statistic that indicates how well the regression line approximates the real data. This statistic, or correlation coefficient, is known as *R Squared* (r^2) and can be used to ascertain how accurate one term is at predicting another. Essentially, the squared correlation coefficient (r^2) "can take a value of 0, where the regression is explaining none of the variance in the data, up to a value of 1 where the regression explains all of the variance in the set."[265] Thus, if R Squared is 1.0, the relationship between the

[261] Cresswell, J. (2007). p. 376.
[262] Harmon, M. (2011). *Advanced Regression in Excel - The Excel Statistical Master.* Excel Master Series. p. 37.
[263] Ibid
[264] Ibid.
[265] Livingstone, D. (2009). p. 151.

independent and dependent variable is perfect.[266] However, if R Squared is 0.0, knowing one variable will not help you to determine the other. Accordingly, the closer the R Squared value is to 1.0, the better you can predict the value of one variable from another.[267]

Adjusted R Square is a modification of R Square that accounts for the number of terms in a model. As such, it is seen to be a more reliable statistic than R Square. Consequently the research in this paper will report specifically on Adjusted R Square values. Adjusted R Square values have only been included in this paper in cases where the *Significance of F,* an indicator of meaningfulness, was less than or equal to .01, indicating at least 99.9 percent confidence level.[268]

Regression analysis can also be used to produce *Regression Coefficients*, or, the predicted change in the dependent variable given a one-unit change in the independent variable while holding all other independent variables constant.[269] To ensure that the Regression Coefficients included in this paper were real, and not produced by chance, the P-Value was considered. Like the Significance of F, the smaller the P-Value, the more likely it is that the coefficient did not occur by chance. As such, only variables with a P-Value of less than 0.01, or 1%, are included in this research.

Finally, it should again be noted that the quantitative research presented here is a case study that focuses exclusively on publicly funded schools in the OCDSB. At the time of this research, there were 117 publicly funded elementary schools in OCDSB.[270] Of these, 84 schools catered to both grade three and grade six students. Given that the Fraser Institute calculates its school ratings using grade three and grade six EQAO scores, it follows that

[266] Harmon, M. (2011). p. 18.
[267] Ibid.
[268] Tufte, D. (2012). *Regression Pointers for Dr. Tufte's ECON 3010 Class," Southern Utah University*. Retrieved from http://www.suu.edu/faculty/tufte/05SE3010-2/ECON_3010_Regression_Pointers.htm
[269] Livingstone, D. (2009). p. 487.
[270] OCDSB, "Schools and Staff: 2011-2012," www.ocdsb.ca/OCDSB%20Doc/Schools%20and%20Staff.pdf

only schools which offer classes at both levels are rated by the Institute. Further, in an effort to ensure student anonymity, EQAO does not release detailed achievement results for schools with less than 15 respondents per grade.[271] This restriction applied to 11 of the 84 OCDSB schools eligible to receive a rating from the Fraser Institute. Thus, 73 elementary schools in the OCDSB meet the Fraser Institutes inclusion requirements for its 2012 Report Card on Ontario's Public Schools. For unspecified reasons, 5 of these schools did not receive overall ratings. The sample used to generate the findings presented below consists of the 68 OCDSB elementary schools ranked by the Fraser Institute in 2012.

[271] EQAO. (2012). *Assessments of Reading, Writing and Mathematics, Primary and Junior Divisions, 2011-2012.* Retrieved from https://eqaoweb.eqao.com/pbs/listing.aspx

Figure 2. Quantitative Data Sets Pertinent to this Research.

<table>
<tr><th>Dependent Variable</th><th colspan="3">Independent Variables</th></tr>
<tr><td rowspan="4">Fraser Institute School Report Card Score</td><td>1. EQAO Demographic Data**</td><td colspan="2">Low Income Cut-Off: Percentage of population with families who spend 20 percentage points more than the average family on food, shelter and clothing.

Average Family Income: Average family income (before tax) in 2005 – Members of a single family living in a household and related by blood, marriage, or living in a common-law relationship Some University: Percentage of population with university certificate or diploma below the bachelor level + percentage with university certificate, diploma or degree.

Immigrant: Percentage of immigrants by selected places of birth subtracting those immigrants from the US and the UK.

Recent Immigrant: Percentage of recent (2001 to 2006) immigrants by selected places of birth excluding those born in the U.S. and the U.K.

No High School: Percentage of population with no certificate, diploma or degree

Some University: Percentage of population with some university education.

University Degree: Percentage of population with university certificate, diploma or degree.

Mobility 1 Year: Percentage of population who moved in the past year.

Mobility 5 Years: Percentage of population who moved in the past five years.

**Indicator definitions provided by EQAO</td></tr>
<tr><td rowspan="2">2. EQAO School Report Data</td><td>Student Demographics</td><td>▪ Language
- English Language Learner
- Non English First Language
▪ Special Needs</td></tr>
<tr><td>Academic Achievement Levels</td><td>▪ Reading
▪ Writing
▪ Mathematics</td></tr>
<tr><td>3. Fraser Institute Detailed School Reports</td><td colspan="2">Actual rating vs predicted based on parents' average employment income.</td></tr>
</table>

QUALITATIVE DATA ANALYSIS

The qualitative data sets relevant to this research project are comprised of digital and paper questionnaire responses and interview transcriptions. Like most surveys, the surveys I distributed to teachers and parents contained both quantitative and qualitative questions. I analyzed the quantitative data generated by my teacher and parent surveys by organizing the results into tables, graphical displays and summary statistics which are discussed in later

chapters. Conversely, I coded the qualitative data generated by the two surveys using Auerbach and Silverstein coding model (described below).[272] Auerbach and Silverstein state that this approach is designed to develop a theory, thus it is generally used in grounded theory research which aligned well with the parameters of my research study.[273]

The survey that was sent to elementary teachers at the HDSB was intended to provide insight into teachers' perceptions of the Fraser Institute. My analysis of the qualitative survey data focused on gaining an overall sense of how elementary teachers feel about the Fraser Institute's school ratings. Similarly, the survey that I distributed to the parents of elementary school students was designed to ascertain how parents understand and use the Fraser Institute's school ratings. To accomplish this task, I employed Auerbach and Silverstein's three phase coding method which identifies three key phases referred to as: Making the Text Manageable, Hearing What was Said, and Developing Theory.[274] Following their directions, I began my analysis by first identifying and labeling important words and phrases. Next, I categorized these words and phrases and started to look for possible relationships between the categories. Finally, I reflected on the results produced during the first two coding phases and moved on to focus on developing a theory.

In this chapter I have explained the data collection and analysis strategies that formed the foundation of this research. Given the central role played by the Fraser Institute's elementary school report card in this study, it is important that readers understand how these individual school reports are derived. Therefore, a detailed analysis of the indicators that the Fraser Institute uses to calculate its school ratings will be discussed in the following chapter.

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[272] Auerbach, C., & Silverstein, L. (2003). *Qualitative Data: An Introduction to Coding and Analysis.* New York: New York University Press. p. 31.
[273] Ibid.
[274] Ibid.

CHAPTER 4 - COMPONENTS OF THE FRASER INSTITUTE'S DETAILED SCHOOL REPORTS

The Fraser Institute contends that "comparisons are at the heart of improvement [and that] making comparisons among schools is made simpler and more meaningful by the report card's indicators, ratings, and rankings."[275] However, the indicators used to derive the Institute's ratings and rankings may not be as clear as the Fraser Institute would like us to understand. The following section will present a detailed analysis of the indicators that the Fraser Institute uses to calculate its overall ratings in context with the complete set of indicators that the Institute provides on its Detailed School Reports.

THE OVERALL RATING

The nine indicators that the Fraser Institute uses to calculate each school's overall rating out of ten have been outlined previously in the first chapter of this thesis. While the Fraser Institute contends that these indicators are indeed nine distinct measures, the Fraser Institute is in fact quantifying three key measures of academic performance: the average levels of achievement on grade three and grade six EQAO assessments; gender disparities within these assessment results; and the percentage of test grades that fall short of the provincial standard.[276] The Fraser Institute provides the formula that it uses to calculate each school's overall rating within its Report Card on Ontario's Elementary Schools (Appendix 4). However, it should be noted that this formula is written in a manner that is complex, and difficult to understand for individuals without foundational algebraic knowledge.

Wirth regard to the gender gap indicator, Nagy has argued that "the two criteria

[275] Ibid. p. 4.
[276] Ibid.

based on the gender gap reveal a serious misunderstanding of gender issues"[277] on the part of the Fraser Institute. He argues that the Institute has greatly overemphasized the gender component factored into its school ratings. Raptis has also argued that the Fraser Institute's gender indicator is misleading given that "the impact of gender on student achievement is more pronounced among low-SES than high-SES populations."[278] Although the Fraser Institute's school reports have not been examined by a significant number of academics, its overall rating calculation is not without its critics in academia.

OTHER INDICATORS OF SCHOOL PERFORMANCE

Four additional indicators also appear on the Fraser Institute's school report cards. Referred to by the Fraser Institute as *Other Indicators of School Performance*, these indicators comprise: the percentage of a school's students who were eligible to complete EQAO testing who either failed to submit tests or were formally exempted from writing them;[279] five years of the Fraser Institute's standardized scores to show whether a school is improving or worsening with regard to a specific indicator;[280] a comparison between the actual rating a school receives and a rating that is predicted based on the school's average parental income;[281] and the percentage of the students for whom English is a second-language and the percentage of students with special needs.[282] The Fraser Institute refers to these indicators as the *Tests not Written, Trend, Socioeconomic* and *Student Characteristic* indicators respectively.

[277] Ibid. p. 196.
[278] Raptis, H. (2011). Ending the Reign of the Fraser Institute's School Rankings. *Canadian Journal of Education , 35* (1), 187-201.
[279] Cowley, P. Easton, S. Thomas, M. (2012). p. 8.
[280] Ibid.
[281] Ibid. p. 12.
[282] Ibid.

It is significant to note that the set of additional indicators, detailed above, are not components of the computation that the Fraser Institute uses to derive a school's overall ranking. Rather, the Institute asserts that these indicators are included to provide "more information on the school's effectiveness"[283] and to help locate "other schools where the student body has similar characteristics."[284] While demographic indicators are not generally included as measures in large scale standardized testing like EQAO, they are often used to place student achievement in context with demographic and other pertinent environmental information.[285] It is troubling to note that the design of the Fraser Institute's Detailed School Report does not distinguish between indicators that are used in the calculation of a school's overall rating and those that are not. One must read the section of the Fraser Institute's Report Card on Ontario's Elementary Schools that deals specifically with each indicator to sort out which are actually factored into the rating calculation. Thus, as can be seen in figure 3, only a fraction of the indicators appearing on the Fraser Institute's detailed school results are actually factored into a school's overall rating. As previously mentioned, these indicators are the average levels of achievement on grade three and grade six EQAO assessments; gender disparities within these assessment results; and the percentage of test grades that fall short of the provincial standard are factored into a school's overall rating.[286]

[283] Ibid. p. 8.
[284] Ibid. p. 12.
[285] EQAO. (2013). *Completing the picture: The Education Quality Indicators Framework.* Retrieved from http://www.eqao.com/EQI/EQI_Framework.aspx
[286] Ibid.

Figure 3. The Indicators Included on the Fraser Institute's Detailed School Reports in Context with a School's Overall Rating.

GEOGRAPHICAL AREA

School name [Affiliation] City						Gr 6 enrollment: 26
ESL (%): 11.5						Special needs (%): 7.7
Actual rating vs predicted based					2010-11	Last 5 Years
on parents' avg. inc. of $56,000: 1.3					Rank: 849/2695	677/2283
Academic Performance		**2007**	**2008**	**2009**	**2010**	**2011**	**Trend**
Gr 3 avg. level:	Reading	2.3	2.3	3.2	3.1	3.2	▲
	Writing	2.8	2.9	2.9	3.1	3.2	—
	Math	2.4	2.6	2.9	3.0	3.1	▲
Gr 6 avg. level:	Reading	2.8	2.7	3.1	3.1	3.2	—
	Writing	3.1	3.1	3.2	3.2	3.1	▼
	Math	3.2	2.9	3.5	3.6	3.0	—
Gender gap (level):	Reading	F 0.2	F 0.1	M 0.2	F 0.2	n/a	n/a
	Math	F 0.1	F 0.1	M 0.5	F 0.1	n/a	n/a
Tests below standard (%)		32.9	33.8	14.0	10.4	18.0	—
Tests not written (%)		5.7	7.1	6.1	4.2	6.2	—
Overall rating out of 10		**6.5**	**6.3**	**6.9**	**7.7**	**6.9**	**—**

Factors of a school's overall rating

Source: Adapted from The Fraser Institute's "Report Card on Ontario's Elementary Schools 2012"

A CRITIQUE OF THE FRASER INSTITUTE'S OTHER INDICATORS OF SCHOOL PERFORMANCE

Clarity issues aside, one might wonder if the Other Indicators of School Performance, located on the Fraser Institute's Detailed School Reports, do indeed provide more information regarding a school's effectiveness. The Fraser Institute states that "a reader can have more confidence that the test results are a true reflection of the school's average achievement level if all, or almost all, of its students write the test."[287] Given this assertion, the Fraser Institute has provided the Tests not Written indicator as a kind of confidence measure. However, when calculating this statistic, the Fraser Institute does not exclude students who were formally exempted from writing these tests. According to EQAO, formal exemptions are "made for students who are unable to participate in an

[287] Cowley, P. Easton, S. Thomas, M. (2012). p. 8.

assessment even with accommodations."[288] Accordingly, these students did not take part in the examinations for legitimate and pre-authorized reasons. Given this omission, it seems unreliable for exempted students to render an absentee black mark upon their school. Further, including exempted students in the Tests not Written indicator may serve to skew the data and render it a less reliable tool.

In an effort to provide valid and meaningful statistics, the Fraser Institute only includes a Trend indicator on their Detailed School Reports "in those circumstances where five years of data are available and where the trend is statistically significant."[289] In this case, statistical significance equates to a 90% probability that the trend did not occur by chance.[290] Unfortunately, trends that meet these criteria do not appear often. In fact, a review of both the 2011 and 2012 Detailed School Reports published by the Fraser Institute reveals that a Trend indicator, representing either improvement or decline, is not available for roughly 90% of the schools rated by the Fraser Institute in either of these years. Rather, these reports indicate that there was *no significant change* or that there was *insufficient data* available to confirm a trend. Consequently, this indicator simply implies that school achievement levels are generally static over a five-year period.

The Fraser Institute's inability to produce meaningful Trend indicators for the majority of the schools it rates may also suggest that the vast majority of Ontario public schools experience very little change in academic achievement levels. In general, it can be seen that schools that perform poorly do not manage to increase their scores while schools

[288] EQAO. (2009). *Guide for Accommodations, Special Provisions and Exemptions Support for Students with Special Education Needs and English Language Learners.* Toronto: Queens Printer for Ontario. p. 1.
[289] Cowley, P. Easton, S. Thomas, M. (2012). p. 8.
[290] Ibid.

which perform well do not drop in score. In general, most schools do not deviate from the status quo over a five year period.

While it is encouraging to see the Socioeconomic indicator on the Fraser Institute's report card, its ability to "enable us to identify schools that are successful despite adverse conditions faced by their students at home"[291] is questionable. Although the actual calculation has not been made public, the Fraser Institute states that they calculate the Socioeconomic indicator using "regression analysis to determine the relationship between parental income and variations in school performance as measured by the Overall rating out of 10."[292] Subsequently, the Socioeconomic indicator represents the difference between a school's actual rating and its predicted rating based on the socioeconomic standing of its students.

According to the Fraser Institute, the predicted rating generated by the Socioeconomic indicator can be used as a "measure of the success with which each school took into account the socioeconomic characteristics of the student body."[293] However, in practice, this indicator does not seem to account for the disparities between relatively well-off student populations and those who fall below the poverty line. Take, for example, the case of Markham Ontario's Sainte-Marguerite-Bourgeois and Sudbury Ontario's Queen Elizabeth II.

Sainte-Marguerite-Bourgeoys is one of only nineteen schools to have received a perfect overall rating, or a 10/10, on the Fraser Institute's 2012 Report Card on Ontario's Public Schools. Additionally, it is the only school in Ontario to have achieved a perfect rating for the last five consecutive years. Despite its continued success, the Fraser Institute's

[291] Ibid.
[292] Ibid. p. 10.
[293] Ibid. p. 9.

Socioeconomic indicator suggests that Sainte-Marguerite-Bourgeoys is greatly exceeding expectations. In fact, based on its average parental income of $85,300, an income that is just shy of $20,000 above the median family income for the province,[294] the Fraser Institute forecasts its rating at a 6.2, a total of 3.8 points lower than their actual score.[295] Thus, the Socioeconomic indicator seems to imply that Sainte-Marguerite-Bourgeoys is highly effective in overcoming the economic situation of its relatively well-off student population.

Conversely, Queen Elizabeth II is among seven schools to have scored an overall rating of zero. The average parental income at Queen Elizabeth II, as reported by the Fraser Institute, is a meager $15,800. This is roughly $50,000 below Ontario's median family income[296] and a staggering $2,000 below the poverty line assigned to a two person family living in the most rural parts of the province.[297] Nonetheless, the Fraser Institute's Socioeconomic indicator suggests that, despite the Queen Elizabeth II dire socioeconomic position, it is failing to meet its potential and should have achieved an overall rating of 4.8.[298] Consequently, the Fraser Institute's Socioeconomic Indicator suggests that Queen Elizabeth II is highly ineffective at overcoming the severe economic disadvantages faced by its poverty stricken student population.

Based on their average family incomes, the Fraser Institute's Socioeconomic indicator predicts that Sainte-Marguerite-Bourgeoys should score only 1.4 points, or 14%, higher than Queen Elizabeth II. However, with the poverty line, and roughly $70,000 in average family income separating the students at Queen Elizabeth II from those at Sainte-

[294] Statistics Canada. (2012). *Median total income, by family type, by census metropolitan area* . Retrieved from http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/famil107a-eng.htm
[295] Cowley, P. Easton, S. Thomas, M. (2012). p. 85.
[296] Statistics Canada. (2012). *Median total income, by family type, by provience and territory* . Retrieved from http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/famil108a-eng.htm
[297] Canadian Council On Social Development. (2006, June). *Poverty Lines.* Retrieved from http://www.ccsd.ca/factsheets/fs_lico05_bt.htm
[298] Cowley, P. Easton, S. Thomas, M. (2012). p. 194.

Marguerite-Bourgeoys it would seem that the Fraser Institute's regression equation does not adequately take into account the disparities faced by students in extreme situations of poverty. Therefore, it could be argued that the Fraser Institute's Socioeconomic indicator should employ a curvilinear regression model to account for the effect of extreme poverty and/or the leveling off of income advantages, on its overall school ratings. Essentially, "a curve implies a changing ration between variables, whereas the uniform gradient of a straight line implies a constant ration."[299] As such, a straight regression line can produce a misleading correlation when the pattern of points on a scattergram conforms more closely to a curve than a straight line. Thus, the Fraser Institute's linear regression model may have resulted in an under-estimate of the strength of the relationship between a school's average family income and school ratings, as many of the points curve away from the regression line.

While one must delve more deeply into the previously discussed Other Indicators of School Performance to uncover potential fault in their application, the Student Characteristic Indicator is unquestionably misleading. Designed to help "identify schools with similar student body characteristics,"[300] this indicator is reported to note the percentage of each school's "students who are enrolled in ESL programs or who have certain identified special needs."[301] Given that EQAO test results comprise the efforts of each school's grade three and grade six students alone, it would seem appropriate for this statistic to be reflective of this portion of a school's population. While not as accurate, it would also be appropriate if this statistic were derived from a school's overall student population. However, a closer examination of the Student Characteristic Indicator, in context with EQAO reports, reveals that this indicator refers only to grade six students.

[299] Ibid.
[300] Ibid. p. 9.
[301] Ibid.

Interestingly, the Fraser Institute's Report on Ontario's Elementary Schools does not mention how the Student Characteristic Indicator is derived. However, given that the makeup of a school's grade six population is generally not reflective of its overall population, or even the population of the EQAO test takers to whom the Fraser Institutes report card refers, this indicator is relatively useless at identifying schools with similar student bodies. In fact, a comparison of the Fraser Institute's Student Characteristic indicators with 2011 EQAO data on elementary school test takers in the OCDSB reveals that the Fraser Institute's ESL indicator was only accurate for 3 of the 68 schools in question. Further, the Fraser Institute did not report an accurate number of special needs students for any of the 68 OCDSB elementary schools it evaluated. In fact, the Fraser Institute under reported the number of ESL and Special Needs students on its elementary school report cards for OCDSB schools 66% and 71% of the time respectively. As such, it can be seen that the Fraser Institute's Student Characteristic indicator is fundamentally flawed.

Thus, while the Fraser Institute contends that the results of its report card "demonstrates clearly that, even when we take into account factors such as the students' family background - which some believe dictate the degree of academic success that students can enjoy in school - some schools do better than others,"[302] one might ask where exactly the Fraser Institute has taken these factors into account. As we have seen, the Fraser Institute's report card does not in fact demonstrate the comparability of schools based on academic indicators alone.

[302] Ibid. p. 3.

A Discussion of Report Card Context with Peter Cowley

After I completed the data analysis for this research, I contacted Peter Cowley who is the Senior Vice President of Operations and the Director of School Performance Studies at The Fraser Institute for an interview. Given that Cowley is also the media contact for the Fraser Institute's school report card, he graciously accepted my request and spoke to me over the phone in early July, 2012. In my conversation with Cowley, I addressed many of the key findings that my research generated. However, given that my discussion with Cowley is pertinent to the data presented in several chapters of this thesis, I have elected to divide the results of this interview across several subsequent chapters. It should also be noted that technology failed me during this interview as my efforts to record it were unsuccessful. However, I took meticulous notes during our conversation and was nonetheless able to report on the contents of my interview. Despite this, I have chosen not to quote Cowley directly in this report as I do not have the transcriptions to substantiate our conversation. The following is a detailed account of my interview with Peter Cowley regarding the Fraser Institute's *Individual School Reports*. It was written immediately after our interview took place.

I started my conversation with Cowley by asking him why the Fraser Institute does not factor the 'other indicators of school performance,' into their overall ratings. Focusing his answer on socioeconomics, Cowley explained that the Fraser Institute has a purposeful reason for not taking socioeconomic levels into account when deriving their school ratings. He explained that EQAO tests are designed to assess fundamental skills that are a necessary requirement regardless of income. Based on this belief, Cowley stated that the Fraser Institute believes it would 'sell out' children in less favorable socioeconomic areas if the

Institute expected these children to achieve less than children from more affluent areas. Further, Cowley contended that low socioeconomic status does not always equate to poor performance on the Fraser Institute's report card. Thus, he concluded that the Fraser Institute's report card is useful in that it identifies high-ranking schools in low socioeconomic areas which can be used as models for improvement.

In response to my question as to why the 'other indicators of school performance' are nonetheless included on the Fraser Institute's Detailed School Reports, Cowley stated that the Fraser Institute has chosen to provide these indicators because of their potential usefulness as a filter when comparing schools. Further, Cowley asserted that these indicators could potentially provide parents with additional context in their endeavors to choose a school for their child. Essentially, these are the reasons listed in the Fraser Institute's official literature.

I also inquired with Cowley regarding the Fraser Institute's rationale for choosing to include only grade six students in its Student Characteristic Indicator. However, he declined to provide a rationale for this choice. Similarly, Cowley did not provide any insight into why the Fraser Institute includes formally exempted students in its Tests Not Written indicator.

Peter Cowley stated at the beginning of our telephone conversation that parents are the primary audience of the Fraser Institute's report card. However, given the complex math that goes into each school's overall rating, I asked Cowley if he thinks that parents understand how the ratings are derived. To underscore my question, I explained to Cowley the careful reading of the .pdf version of the Report Card on Ontario's Elementary Schools that I, myself, had to undertake before I was able to fully comprehend the meaning of the

report card rankings. In response, Cowley stated that it was not up to the Fraser Institute or myself to decide how fully parents should understand the report card. He contended that, as consumers, parents have the right to choose how deeply to delve into the documents which explain the school ratings. Further, Cowley stated that whether or not parents fully understand the basis of the Fraser Institute's ratings is not important as, either way, they are able to use them to compare schools – the intended purpose of the report card.

In this chapter we have reviewed the calculations that comprise the Fraser Institute's elementary school report card, as well as the potentially misleading nature of the Institute's Detailed School Reports. In the next chapter, the demographic context missing from the Fraser Institute's school ratings will be accounted for using regression analysis.

CHAPTER 5 - THE CONTEXT MISSING FROM THE FRASER INSTITUTE'S OVERALL RATINGS

REGIONAL CONTEXT

Like most cities in Ontario, Ottawa is not without its nuances. As Canada's capital, Ottawa is "the home of the Government of Canada, Parliament, the Senate, the Supreme Court of Canada and other government bodies."[303] Ottawa's economy centers around two major sectors: government and high tech,[304] resulting in the highest median total income reported in Canada's six largest cities.[305] Additionally, with immigrants comprising roughly a quarter of the city's population,[306] Ottawa reports some of the highest immigration rates in the province. Given this, the OCDSB is comprised of a unique student body. Therefore, it remains unclear whether the results of this study can be extended to the province as a whole. Nonetheless, it is likely that Ontario school boards share more similarities than differences, given that they are all fall under the jurisdiction of Ontario's provincial government and are governed by the Education Act.[307]

THE RELATIONSHIP BETWEEN EQAO SCORES AND THE FRASER INSTITUTE'S OVERALL RATINGS:

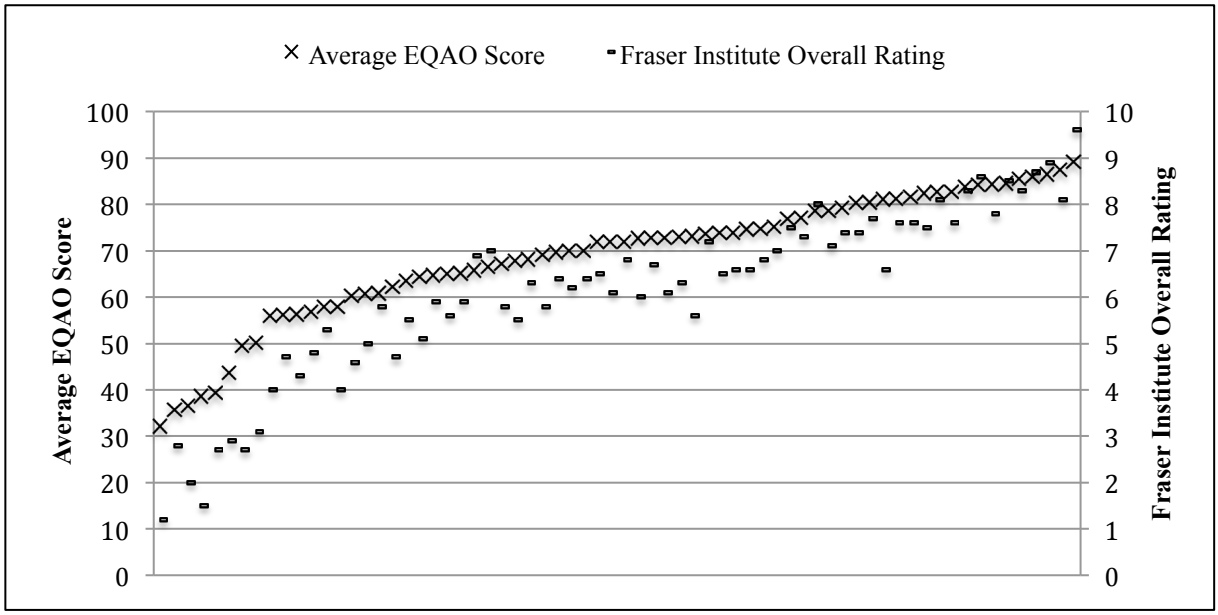
As mentioned earlier, the Fraser Institute uses relatively complex mathematical equations to calculate each school's overall rating. The "simplified description of the procedure used to convert EQAO data into the *Overall rating out of 10,*"[308] included in the

[303] City of Ottawa. (2013). *Quick Facts.* Retrieved from http://ottawa.ca/visitors/about/quick_facts_en.html
[304] City of Ottawa. (2012). *Ottawa's Economy.* Retrieved from http://ottawa.ca/visitors/about/economy_en.html
[305] Statistics Canada. (2012). *Median total income, by family type, by census metropolitan area.*
[306] City of Ottawa. (2013). *Portrate of Ottawa.* Retrieved from http://ottawa.ca/visitors/about/portrait_en.html
[307] Ontario Ministry of Education. (2013). *Who's responsible for your child's education?* Retrieved from http://www.edu.gov.on.ca/eng/document/brochure/whosresp.html
[308] Cowley, P. Easton, S. Thomas, M. (2012). p. 227.

Institute's Report Card on Ontario's Public Schools, is by no means simple in lay terms. The description speaks of standard deviations, aggregates, weighted averages, standardized values, and repeated re-standardizations. However, despite this effort, the Fraser Institute's overall ratings bear a striking resemblance to the overall percentage of a school's students meeting or exceeding the provincial standard on EQAO reading, writing and mathematics assessments.

As can be seen in figure 4, the Fraser Institute's 2012 overall ratings are very similar to the percentage of a school's students who either met or exceeded the provincial standard on EQAO's 2011 assessments. Given these results, it appears that the process used by the Fraser Institute to convert EQAO scores into the *Overall rating out of 10* accounts for very little. Accordingly, it can be asserted that the Fraser Institute's Report Card on Ontario's Elementary Schools is essentially a repackaging of EQAO data.

Figure 4. The Relationship Between a School's Fraser Institute Overall Rating and its Average EQAO Score.



David Johnson has also demonstrated the close relationship between the Fraser Institute's school ratings and EQAO achievement results in his book, *Signposts of Success*. Although he conducted his analysis using data pertaining to the Waterloo Regional District School Board (WRDSB), Johnson similarly found that the Fraser Institute's ratings closely resemble EQAO results. Based on these results, Johnson contends that "the Fraser Institute's overall rating number is, for all intents and purposes, simply a measure of the percentage of all students at the school, averaged over all the assessments, that achieves at Level 3 or Level 4 – in other words, it is an absolute achievement measure."[309] As Johnson stated during our telephone interview, which will be discussed in detail later, the formula that the Fraser Institute uses to derive its overall ratings is indeed *not very interesting* given the close resemblances that exists between the Fraser Institute's rankings and EQAO achievement results.

THE FRASER INSTITUTE'S OVERALL RATING IN CONTEXT WITH SCHOOL DEMOGRAPHICS

EQAO asserts that academic achievement results "can be interpreted meaningfully only in the context of the system that produced them."[310] Given this, EQAO produces and provides additional data that can be used to place academic achievement results in context with key demographic information.[311] Further, EQAO contends that "understanding and evaluating the quality of education requires not just numerical values or quantitative result measures such as achievement, but a more comprehensive picture of the unique and complex characters of schools, boards and the province."[312] Conversely, Meaghan and Cass argue that

[309] Johnson, D. (2005). p. 158.
[310] EQAO. (2013). *Completing the picture: The Education Quality Indicators Framework.*
[311] Ibid.
[312] Ibid.

ministries, boards and school officials in Canada are "unlikely to succeed in preventing the misuse of test scores because they cannot address the root causes of such misuse: namely, a media-driven sensitivity to student performance."[313] Despite EQAO's strong caution, the Fraser Institute has all but ignored contextual information in its use of EQAO data to calculate its overall ratings. Today, many academics contend that family, environment, and socioeconomics trump the influence of the school on student achievement in affluent nations. Accordingly, Statistics Canada asserts that:

> An important concern for any education system is the extent to which it serves the entire student population. Striving to ensure that all youth develop to their full innate potential regardless of their societal backgrounds is a fundamental principal of public education in Canada. However, family background affects learning in a variety of ways, both within and outside of the classroom, through mechanisms such as parenting skills and early childhood experiences. The role of broader social policy and its influence on achievement on other education gaps across social groups must thereby also be considered."[314]

Given this, the following section will examine how a consideration of context may be related to the Fraser Institute's overall ratings of the 68 OCDSB elementary schools ranked by the Fraser Institute in 2012.

Correlation Coefficients.

Before I undertook regression analysis on the qualitative data sets gathered for this research, I determined the correlation coefficients for the variables in question. As previously mentioned, combining two strongly correlated independent variables in multiple regression analysis can lead to regression errors. As such, I analyzed variables that produced

[313] Meaghan, M., & Casas, F. (2004). p. 41.
[314] Statistics Canada. (2012). *Education Indicators in Canada: An International Perspective.* Retrieved from http://www5.statcan.gc.ca/bsolc/olc-cel/olc-cel?catno=81-604-XIE&lang=eng#formatdisp. p. 49.

a correlation coefficient, with other potential predictors, greater than +0.7 or less than -0.7 independently. Similarly, when highly correlated variables were deemed to provide redundant information, such as *English Language Learner* and *Non-English First Language*, the variable which correlated most strongly with the Fraser Institute's overall ratings was chosen. Further, variables that were weakly correlated with the Fraser Institute's overall ratings, which produced coefficients between -0.4 and +0.4, were not included in this study as they were deemed to be unreliable indicators of the school's Fraser Institute's overall ratings. The correlation coefficients for the quantitative data sets included in this study can be found in figure 5. The variables that met the inclusion criteria for analysis are highlighted in grey. Additionally, complete regression outputs for the variables analyzed throughout this chapter can be found in appendix 5.

Figure 5. Correlation Coefficients.

	Overall Rating (Dependent Variable)	Low Income Cut Off	Average Family Income	Immigrant	Recent Immigrant	Non-English First Language	English Language Learner	No High School (Parent)	Some University (Parent)	University Degree (Parent)	Mobility 1 Year	Mobility 5 Years	Special Needs
Overall Rating (Dependent Variable)	1.00												
Low Income Cut Off	-0.62	1.00											
Average Family Income	0.72	-0.83	1.00										
Immigrant	-0.31	0.68	-0.60	1.00									
Recent Immigrant	-0.31	0.67	-0.60	0.90	1.00								
Non-English First Language	-0.43	0.67	-0.64	0.74	0.62	1.00							
English Language Learner	-0.53	0.74	-0.67	0.72	0.61	0.90	1.00						
No High School (Parent)	-0.60	0.85	-0.74	0.55	0.52	0.59	0.63	1.00					
Some University (Parent)	0.75	-0.65	0.81	-0.22	-0.29	-0.35	-0.42	-0.67	1.00				
University Degree (Parent)	0.75	-0.65	0.82	-0.23	-0.30	-0.39	-0.45	-0.65	0.99	1.00			
Mobility 1 Year	-0.36	0.39	-0.46	0.48	0.48	0.39	0.48	0.38	-0.34	-0.35	1.00		
Mobility 5 Years	-0.07	-0.10	-0.01	0.09	-0.02	0.25	0.22	-0.05	-0.02	-0.05	0.53	1.00	
Special Needs	-0.65	0.32	-0.52	0.09	0.06	0.15	0.24	0.36	-0.53	-0.51	0.07	-0.15	1.00

Average Family Income.

Fernette states that it is well known that Canadian youth from lower socioeconomic backgrounds are less likely to pursue a university education than youth from higher up the economic ladder.[315] He notes that "slightly more than one half (50.2%) of youth from families in the top quartile of the income distribution attend university by age 19, compared

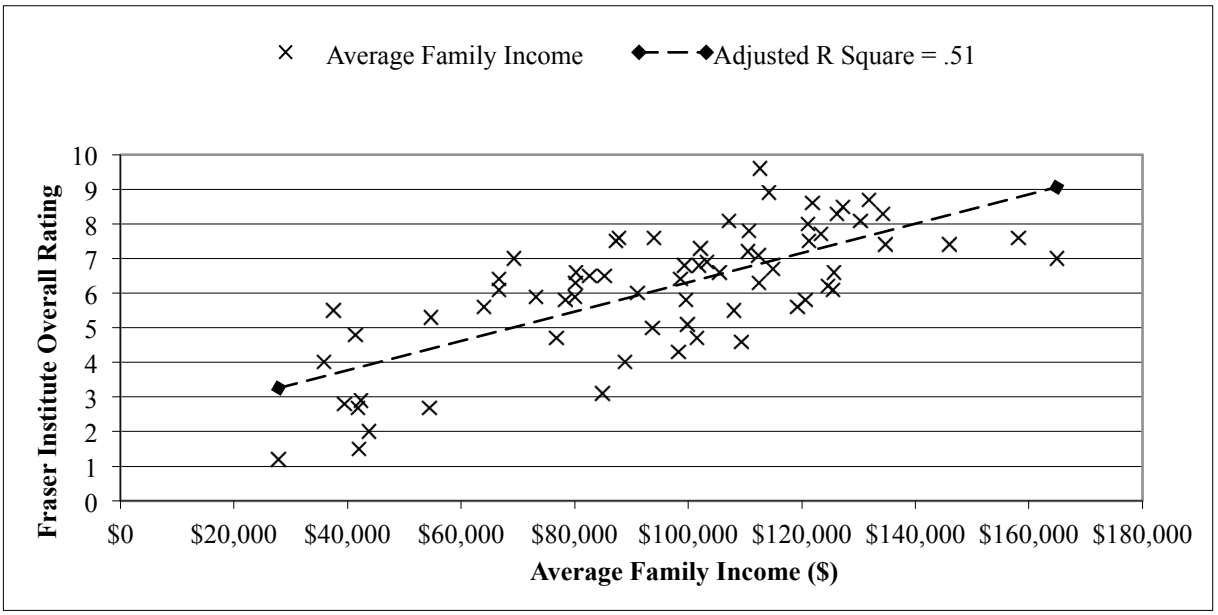
to less than a third of youth from families in the bottom quartile (31.0%)."[316] Similar to many of the academics discussed in Chapter Two, Fernette has concluded that school outcomes are directly linked to a student's social class background.[317] Thus, it would seem that a school's tax bracket should be considered alongside its academic achievement levels. While the Fraser Institute does include an income measure on their individual school reports, the overall ratings produced by the Institute are based on the results of EQAO testing alone. Furthermore, when the results are compared with the average family income statistic generated by EQAO, the Fraser Institute's data is, on average, roughly $10,000 below that reported by EQAO. Given that many of the indicators on the Fraser Institute's Detailed School Reports have proved questionable, coupled with the fact that EQAO is quite transparent in its calculations, I will rely exclusively on demographic data produced by EQAO for the remainder of this report.

The Fraser Institute contends that "less than 25% of the variation among Ontario elementary schools in the overall rating is associated with the level of parental employment income." Given these findings, the institute has deemed it an unimportant indicator of school performance. However, when analyzed using simple regression analysis, the *Average Parental Income* in the OCDSB in context with the Fraser Institute's overall rating produced an Adjusted R Square value of 0.51. As such, this indicates that parental income predicts just over half of a school's overall rating. This notable relationship is not surprising when one considers the recent Canadian literature surrounding the correlation between socioeconomic status and a child's academic performance. For example, both provincial and national research campaigns have concluded that children from higher socioeconomic

[316] Ibid.
[317] Ibid.

backgrounds tend to be in better health, are more prepared for learning, achieve higher levels of academic success and suffer fewer difficulties in school.[318] Overwhelmingly, these studies conclude that the economic standing of a child's neighborhood plays an important role in his or her educational development. This is clearly demonstrated in Figure 6 as it shows that a strong correlation exists between the Fraser Institute's overall ratings and family income levels. As such, it can be concluded that the Fraser Institute's overall ratings are, to some degree, ranking schools by household income.

Figure 6. The Relationship Between a School's Fraser Institute Overall Rating and its Average Family Income.



The link between socioeconomics and Fraser Institute scores, as discussed in this report, is supported by previous research. As a case in point, in 2001, Nagy found that the

[318] Brownell, M., Roos, N., Fransoo, R., Guèvremont, A., MacWilliam, L., Derksen, S., et al. (2004). *How Do Educational Outcomes Vary with Socioeconomic Status? Key Findings from the Manitoba Child Health Atlas*. Manitoba Centre for Health Policy, Department of Community Health Sciences. Winnipeg: University of Manitoba.
[318] Hertzman, C., McLean, S. A., Kohen, D. E., Dunn, J., & Evans, T. (2002).
[318] Siedule, T. (1992).
[318] Lloyd, J., & Hertzman, C. (2008).

distribution of the Fraser Institute's twenty highest and twenty lowest ranked schools is noticeably similar to the distribution of wealth in Ontario.[319] Nagy states that:

> The schools labeled high quality are clustered around the centers of wealth in the province, while those labeled of poor quality are mostly in the disadvantaged rural and isolated corners of the province. I submit that this is not a definition of quality that most Ontarians would be comfortable with. If a school serving the poor and isolated inevitably has a poor index of quality, there is a flaw in the index.[320]

A similar conclusion was reached by Shaker who contends that "schools catering to high-income families and university-bound students will do well [on the Fraser Institute's high school report card], while others will not."[321] It is perhaps not surprising that a 1999 news release published by the British Columbia Teachers' Federation clearly links socioeconomics to high Fraser Institute report card scores, and states that the Institute's report is flawed given that the socioeconomic status of school communities is not factored into a schools overall rating.[322]

In an article published in the Education Quarterly Review, Ryan and Adams likewise found that socioeconomic status directly affects many different educational variables and plays a powerful role in the lives of young children. As such, they observed that higher socioeconomic levels result in "higher levels of achievement, superior academic focus in the children, lower levels of hostile parenting, higher levels of perceived parental social support, and lower levels of parental depression."[323] Given these similar findings, Jones, Jones and Hargrove propose that the link between socioeconomics and standardized test scores is so

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[319] Nagy, P. (2004). p. 197.
[320] Ibid. p. 198.
[321] Shaker, E. (2004). How to Score High in School Rankings. In M. Moll, *Passing the Test: The False Promises of Standardized Testing.* Ottawa: Canadian Center for Policy Alternatives. p. 204.
[322] Froese-Germain, B. (2004). Fraser Institute Rankings of Canadian High Schools. In M. Moll, *Passing the Test: The False Promises of Standardized Testing* (pp. 182-186). Ottawa: Canadian Center for Policy Alternatives. p. 183.
[323] DeBlois, S., and Bruce, R. (1999). 33.

great that millions of dollars could be saved if one simply counted how many Volvos a student's family owned. They state that:

> Socioeconomic characteristics such as parents' occupation or level of income are so heavily correlated to success on standardized tests that some claim that a child's tests scores can be determined by a factor known as the Volvo effect: Simply count the number of Volvos, BMW's, or Mercedes owned by the family and you have a good indicator of how well the child will perform on standardized tests.[324]

While the research presented here clearly indicates a correlation between family income and the Fraser Institute's rankings, it follows that an examination of parental education is merited. To pursue this point further, the following section examines the Fraser Institute's rankings in context with parental education levels.

Parental Education.

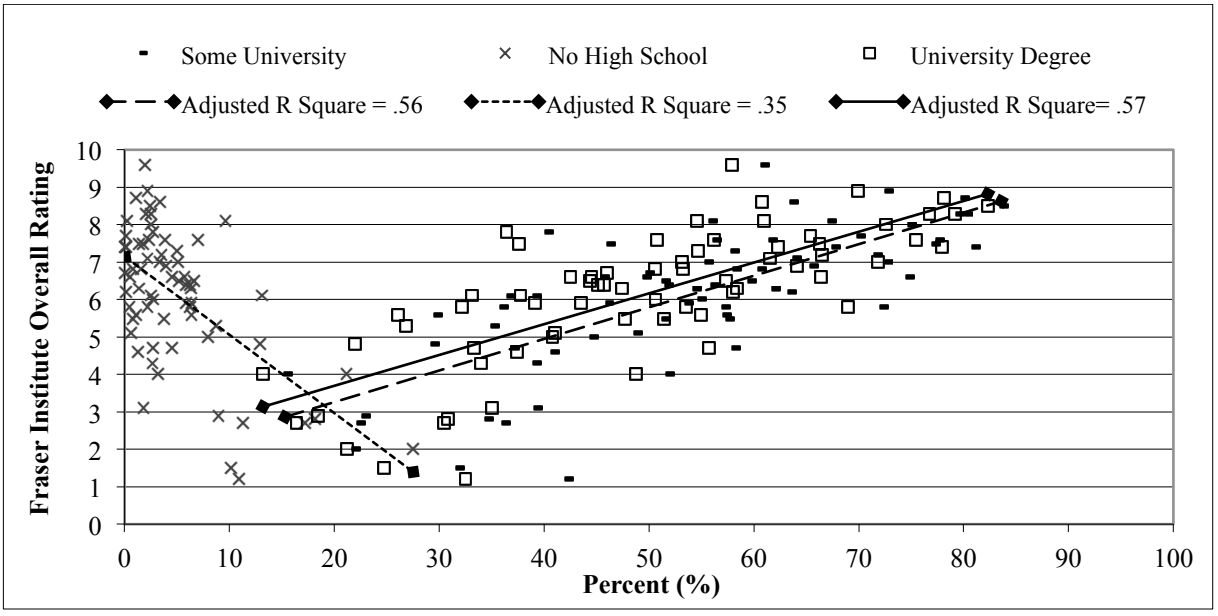
Research conducted in Canada also suggests that family characteristics and home environment play a pivotal role in a child's academic attainment. Over the last decade, government sponsored research studies have found that parents play an important part in motivating their children to participate in postsecondary education.[325] As well, these studies also indicate that parents who attend postsecondary school themselves are far more likely to encourage, and even to expect, that their children do the same.

Although a measurement of parental expectations is outside the scope of this study, EQAO has calculated a number of school-based statistics that pertain to the levels of parental education within individual school boundaries. These statistics clearly demonstrate that the Fraser Institute's overall ratings correlate with parental education levels. As can be

[324] Jones, G., Jones, B. D., & Hargrove, T. Y. (2003). p. 118.
[325] Tamara Knighton, and Sheba Mirza, 2002. "Postsecondary Participation: The Effects of Parents' Education and Household Income," *Education Quarterly Review* 8, no 3.
[325] Bussiere, P., and Cartwright, F., and Crocker, F., et al. 2001.

seen in figure 7, the percentage of the adult population within each school's region to have attained a university certificate or diploma at, or even below, the bachelor level strongly correlates with the Fraser Institute's overall ratings. Interestingly, the relationship between the Fraser Institute's ratings and the percentage of a school district's population to hold a bachelor level university degree produces an almost identical Adjusted R Square value as the percentage of a school's regional population with any level of university education. With Adjusted R Square values of .57 and .56 respectively, parental education is an undeniably important indicator of the Fraser Institute's overall ratings.

Figure 7. The Relationship Between a School's Fraser Institute Overall Rating and its Level of Parental Education.



Although the percentage of a school's regional adult population that failed to complete high school is not as significant an indicator as university education levels, it is also worthwhile to note the relationship this statistic has with the Fraser Institute's overall ratings. With a negative correlation of just over 35%, it can be seen that schools in districts

that report lower high school completion rates are more likely to receive a low rating from the Fraser Institute. This finding aligns well with the findings reported by the 2006 PISA Study, which concluded that parents provide a home environment that can positively or negatively impact on learning given that parents "serve as a model for learning, determine the educational resources available in the home and hold particular attitudes and values toward education."[326] The role played by parents in determining their child's life-long academic achievement is underscored by the work of Knighton and Bussiere who found that "university participation rates at age 21 were much lower for those whose parents both had at most a high school education than they were for youth who had at least one parent with a university education."[327] Without doubt, parental education is an important indicator of academic attainment, and, as such, it is also highly correlated with the Fraser Institute's school ratings.

Not surprisingly, parental income is directly correlated with parental education levels (Correlation Coefficients = Some University .81 / University Degree .82 / No High School .73) given that people who are highly educated tend to be employed more lucratively than those who are less well educated. Therefore, because highly correlated variables produce a collinearity error, these two indicators could not be combined in multiple regression analysis. However, simple regression analysis reveals that the level of participation in postsecondary education within a school's attendance boundary has slightly more impact on the Fraser Institute's overall ratings than does parental income. Much like the parental income levels discussed in the previous section, I concluded that the Fraser Institute's overall ratings are also, more or less, ranking schools by parental education levels.

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[326] Ibid.

[327] Bussiere, P., and Herbert, R., and Knighton, T. 1999. "Educational Outcomes at Age 21 Associated with Reading Ability at Age 15," *Statistics Canada*, http://www.statcan.gc.ca/pub/81-004-x/2009002/article/10896-eng.htm

The link between parental education and the Fraser Institute's school report card scores documented above is grounded in a body of literature which reaches the same conclusions as those identified above. For example, in 2007, Fernette found that parental education is strongly associated with university participation given that his study concluded that "youth with at least one university-educated parent enjoy a large advantage in university participation over youth with no postsecondary-educated parent, roughly in the range of 15 to 20 percentage points."[328] Similarly, Knighton and Mirza demonstrate a positive link between levels of parental education and the likelihood that young Canadians will enter postsecondary school.[329]

Special Needs and English Language Learners.

Based on a recently published EQAO report on Ontario student achievement, less than 50% of special needs students perform at or above the provincial standard on EQAO testing. Although English language learners outperform special needs students on EQAO testing, fewer than average reach the provincial standard. EQAO reports that in 2011, the percentages of English Language Learners who met the provincial standard in reading, writing and math were 54%, 66% and 60% respectively.[330] Thus, it would seem that a high percentage of special needs students and/or English language learners would negatively affect a school's EQAO performance.

Although the demographic statistics that I have analyzed in this report have so far been reflective of the entire population living within each school's boundaries, EQAO

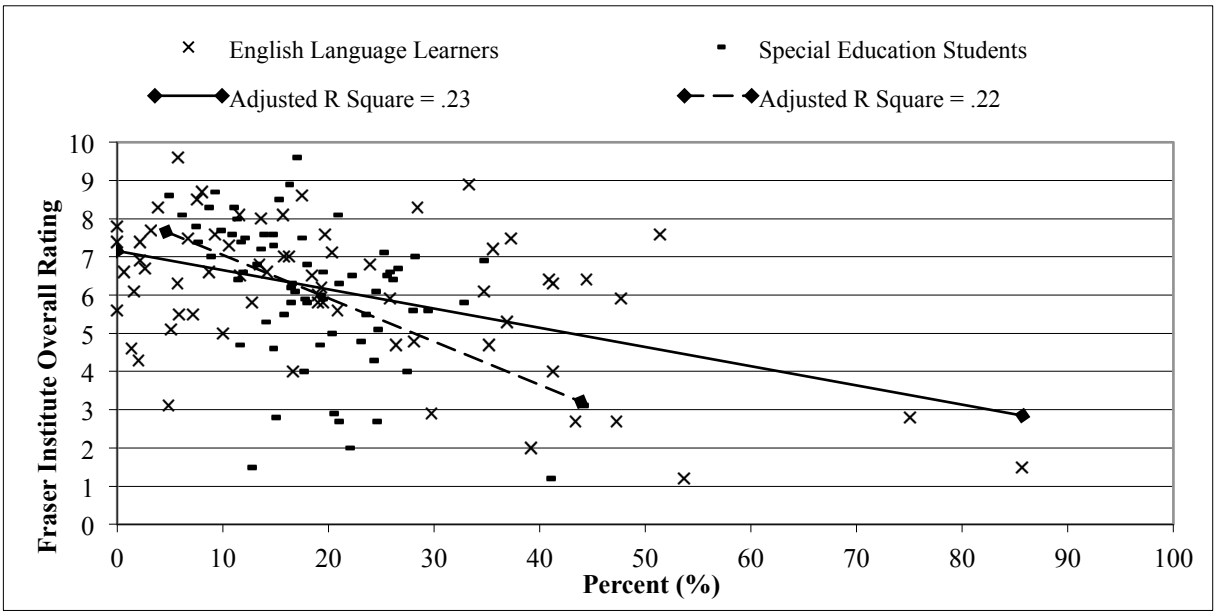
[328] Fernette, M. 2007. 20.
[329] Knighton, T., & Mirza, S. (2002). p. 30.
[330] EQAO. (2011). *EQAO's Provincial Elementary School Report: Results of the 2010–2011 Assessments of Reading, Writing and Mathematics, Primary Division (Grades 1–3) and Junior Division (Grades 4–6).* Toronto: Queens Printer for Ontario. p. 41.

provided me with specific statistics regarding the percentage of special needs students and English language learners who completed EQAO testing in the 2010-2011 school year. As such, this data pertains exclusively to the students at each school who completed the EQAO testing that the Fraser Institute used to compile its 2012 report card.

Examined alone, the Adjusted R Square values for the percentage of English language learners and special education students are relatively moderate. In correlation with the Fraser Institute's overall rankings, the percentage of English language learners who completed EQAO testing at a school can be used to account for only 23% of a school's Fraser Institute rating. Similarly, the percentage of special education students correlates to only 22% of its Fraser Institute Ranking. However, when combined in multiple regression, these indicators produce an Adjusted R Square value of .48. Thus, the percentage of English language learners and special education students at a school represent a substantial predictor of how well that school will perform on the Fraser Institute's overall ratings. Underscoring this, EQAO has even presented separate results for English as a second language students and native English speaking students.[331] This practice highlights the incongruent nature of these two student groups and demonstrates how a measure of school success that fails to take into account these important variables is unlikely to be a valid measure of school success.

[331] Johnson, D. (2005). p. 35.

Figure 8. The Relationship Between a School's Fraser Institute Overall Rating, English Language Learners and Special Needs Students.



Underlying standardized testing practices is the "assumption that students have equal opportunities to develop skills and knowledge and that they will be assessed in an equitable and fair manner."[332] However, this assumption represents a bias that negatively impacts students requiring special supports such as English language learners and special education students. Just as the previously discussed studies have documented the fact that children from disadvantaged backgrounds tend to score lower on standardized assessments, studies replicated in Canada and the United States demonstrate that special needs students, and children for whom linguistic factors are an issue, are likely to score lower on standardized tests.[333] In the case of a California based study that examined the test scores of four million public school children, the researchers revealed that "students who were fluent in English scored significantly higher in language and mathematics tests than immigrant children whose

[332] Meaghan, M., & Casas, F. (2004). p. 38.
[333] Ibid.

English comprehension was limited."[334] Likewise, a Canadian study that examined the scores of vocabulary tests "showed that students whose first language was English performed much better than other children."[335]

Similarly, reporting on the role of language in assessment, Trumbull and Salano-Flores note that "spelling, reading, and writing make particular demands that may not be so daunting to the native English-speaking student but do present problems for the English language learner."[336] They contend that, for English language learners, "assessments are often more of a test of language than of academic content-learning and may tell us little about what students actually know and can do."[337] As we have seen, the negative correlation that these research studies demonstrate between English language learners and achievement on standardized testing are characterized by the Fraser Institute's school report ratings.

Parental Income and Education in Context with Special Needs and English Language Learners.

As previously mentioned, parental income is directly correlated with parental education and they therefore cannot be combined in multiple regression analysis given that their strong correlation is likely to produce a collinearity error. However, the average parental income in combination with the percentage of English language learners and special education students produces an Adjusted R Square of 0.62. Similarly, combining the university degree indicator with the same language and special needs indicators results in an Adjusted R Square of 0.69. Consequently, it appears that socioeconomics, parental education, language background and special needs statistics are important indicators in the

[334] Ibid. p. 39.
[335] Ibid.
[336] Trumbull, E., & Salano-Flores. (2011). The Role of Language in Assessment. In M. Basterra, E. Trumbull, & G. Solano-Flores, *Cultural Validity in Assessment: Addressing Linguistic and Cultural Diversity.* New York: Rutledge. p. 22.
[337] Ibid.

Fraser Institute's Overall Ratings. Thus, the trends indicated by this research clearly demonstrate the importance of contextual indicators in predicting educational attainment. The findings presented above find strong support in current academia, and the fact that the Fraser Institute has not considered many of the factors which are critical to educational success leads one to wonder how it is that the Institute asserts that it is producing "a detailed picture of each school that is not easily available elsewhere."[338]

The Fraser Institute's Predicted Ratings.

As discussed earlier, the Fraser Institute has used regression analysis to produce a predicted socioeconomic rating for each school based on its average parental income. The Institute explains that:

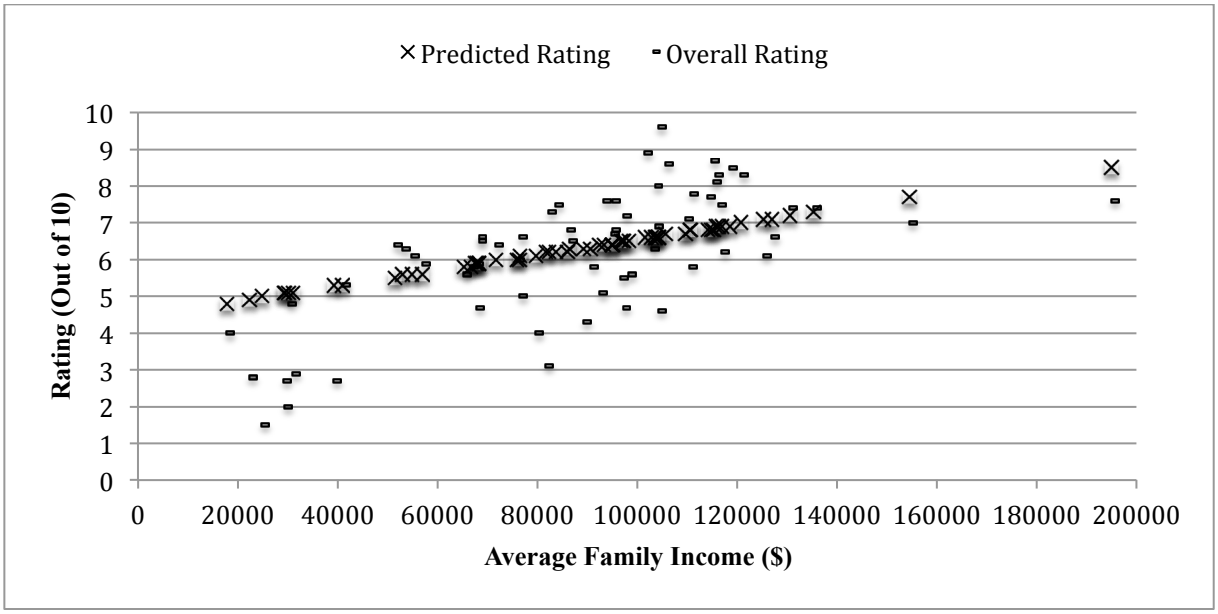
> As a measure of the success with which each school took into account the socioeconomic characteristics of the student body, we used the formula derived from the regression analysis to predict the *Overall rating* for each school. We then reported the difference (in the tables Actual rating vs predicted rating based on parents' avg. inc.) between the actual *Overall rating* and this predicted value in each school's results table.[339]

I was curious to see how well this rating actually took into account the socioeconomic conditions at a school. Given that the Fraser Institute provides this statistic as a positive or negative number which indicates the difference between a school's actual overall rating and its predictive rating, I calculated each school's predicted overall rating by adding its *actual rating vs. predicted rating based on parents average income* score to its overall rating. I then graphed these scores using the Fraser Institute's average parental income statistic (rather than the income statistic generated by EQAO) given that this is the indicator used by the Fraser Institute to generate the predicted rating. As can be seen in figure 9, the

[338] Cowley, P. Easton, S. Thomas, M. (2012). p. 5.
[339] Ibid.

difference between the Fraser Institute's predicted ratings for very high and very low income schools is relatively small. Further, figure 9 illustrates that the Fraser Institute's predicted ratings are much higher than the actual overall ratings assigned to OCDSB school's with an average family income of less than $50,000. As such, it appears that the Fraser Institute's predicted ratings do not adequately account for the vast differences that exist when a population moves between class structures. Therefore, as discussed in an earlier section, I believe that the Fraser Institute Socioeconomic indicator would be more meaningful if it was calculated using a curvilinear regression model.

Figure 9. The relationship between a School's Average Income and the Fraser Institute's Predicted and Overall Ratings.



INTERVIEW WITH DAVID JOHNSON

David Johnson is a Professor of Economics at Wilfrid Laurier University, where he specializes in macroeconomics, international finance and the economics of education.[340] Johnson has published a variety of articles regarding "Canada's international debts, the influence of American interest rates on Canadian interest rates, and the determination of the Canada-United States exchange rate." [341] While these publications are not directly relevant here, Johnson's background as an economist affords him unique insight into the Fraser Institute's school ratings. Johnson has also published a book entitled *Signposts of Success: Interpreting Ontario's Elementary School Test Scores,* in which he provides a quantitatively based analysis of Ontario's elementary school test scores with a particular focus on the WRDSB. Given that obvious similarities exist between the work presented here and the work published in Johnson's book, I contacted him by telephone to discuss his book and the results of my research.

In his book, Johnson essentially uses regression analysis to identify important indicators of academic performance and then designs a formula to factor these indicators out of student achievement results, thereby identifying what he deems to be successful schools in the WRDSB. As such, Johnson concludes that a relative ranking, rather than an absolute ranking, of elementary schools may help us to uncover the 'good practices' which make a difference in our elementary schools. Given that much of Johnson's book is dedicated to the determination of a formula that can be used to evaluate elementary school performance, I assumed that he would believe that the practice of rating elementary schools is a good and

[340] Wilfrid Laurier University. (2012). *Dr. David Johnson: Professor Economics.* Retrieved from http://www.wlu.ca/homepage.php?f_id=31&grp_id=749
[341] Ibid.

useful endeavor. Nonetheless, I began our conversation by asking him if he deemed the ranking of elementary schools to be a beneficial practice.

Johnson answered this question with an unwavering "yes" and then qualified this answer by stating that "when done right, this kind of comparison can open an intelligent conversation." Given this, Johnson went on to discuss the fact that his research showed that socioeconomic and parental education indicators can be used to predict about half of a school's EQAO performance. As I had also reached this conclusion, we discussed how this finding is similar to that of my own research. I then asked him what he believes accounts for the remaining variation in school based academic achievement levels. In response, Johnson presented what he called the alternative "quality of teaching hypothesis." Essentially, he explained that "teachers vary in quality in a meaningful way in terms of measured outcomes." Johnson stated that he believes that teaching aptitude accounts for a significant portion of the remaining variation in academic achievement. Interestingly, this is very similar to Peter Cowley's conclusion that low performing schools would benefit from higher levels of teacher training. However, Johnson was careful to also make sure that I understood that "the difference between a successful and an unsuccessful school is not always a measure of effective teaching." By this, he explained that some students are naturally brighter than others and would therefore demonstrate high achievement levels regardless of effective or ineffective teaching practices. Therefore, he stated that even when controlling for important demographic indicators, we cannot always attribute student success to the quality of instruction.

Lastly, I asked Johnson for his opinion regarding the elementary school ratings and ranking conducted by the Fraser Institute. Johnson began his answer by stating that what the

Fraser Institute provides is an "absolute rating based on EQAO scores alone." Given that the Fraser Institute asserts that they calculate their ratings using a "variety of relevant and objective indicators of school performance,"[342] I asked him to explain why he considers the Institute's ratings to be absolute rather than relative. Johnson explained that when he compared the EQAO based achievement indicators for the WRDSB with the Fraser Institute's ratings for the same region the two were almost identical. I again explained that this is very similar to my findings with regard to the OCDSB and Johnson stated that the formula the Fraser Institute uses to derive its overall ratings from EQAO scores is "not very interesting" given that the two are so similar. Thus, Johnson argued that the Fraser Institute is relying on what he deemed a "silly definition of an effective school" in that the Institute relies exclusively on EQAO indicators.

In this chapter, I have shown a clear correlation between the Fraser Institute's elementary school rankings and individual characteristics of school populations. In the following chapter, I will discuss my quantitative findings with regard to the way elementary teachers perceive the Fraser Institute's annual school report card.

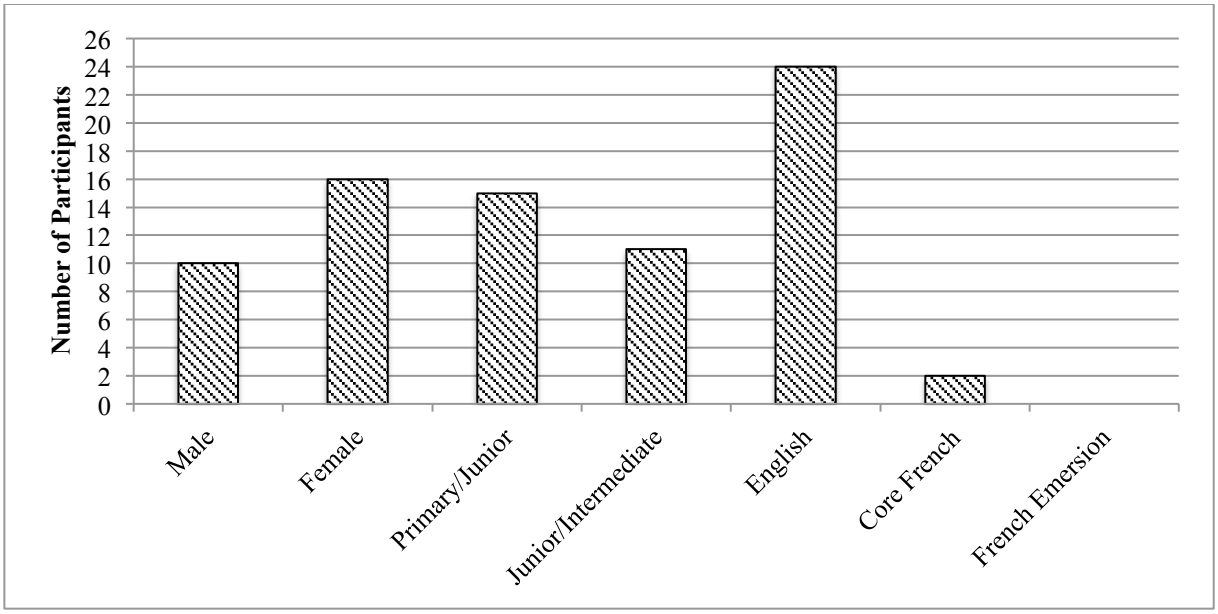
[342] Cowley, P. Easton, S. Thomas, M. (2012). p. 5..

CHAPTER 6 - ELEMENTARY TEACHER PERCEPTIONS OF THE FRASER INSTITUTE'S ANNUAL REPORT CARD

As mentioned previously, the elementary teachers who participated in this research were all employees of the HDSB at the time that I collected data for this study. The survey was uploaded to the HDSB elementary education email conference with less than a month left in the school year. I was initially worried that it would not generate an adequate response rate. I kept the survey open for two weeks of the summer and during that time I collected responses from 26 teachers.

Based on the profile questions asked at the beginning of the survey, a range of different teachers contributed to my data set. As can be seen in figure 10, among the 26 teachers who completed my survey, 16 identified themselves as being female and 10 as being male. Given that the teaching profession is largely dominated by women, particularly at the elementary school level, I was pleased to have gathered almost 40% of my responses from male teachers. With primary/junior teachers (grades JK-6) comprising 58% of survey respondents and Junior/Intermediate teachers (grades 4-10) representing the remaining 42%, all three levels of elementary school teachers were adequately represented by my sample. Nonetheless, with 24 of the 26 survey respondents reporting that they teach in English, core French and French immersion teachers are underrepresented in my sample.

Figure 10. Teacher Participant Profile.



Importantly, at the beginning of the survey, I also asked teachers to identify whether or not they were currently employed by OFIP schools. OFIP is the acronym used to refer to the Ontario Focused Intervention Plan which is an Ontario Ministry of Education imitative designed to "support all schools to improve student achievement."[343] Basically, through OFIP, low-performing schools attain access to additional funding which can be used for "job-embedded professional learning for teachers, resources, literacy and numeracy coaches and release time to facilitate additional training opportunities."[344] Because OFIP status is given to schools which score low on EQAO testing, it follows that schools with the OFIP designation are likely to have received a low Fraser Institute report card score. In total, 27% of the teachers who took part in this survey indicated that they taught in OFIP schools. Based these responses, I assume that at least 27% of the teachers who completed this survey scored poorly on the Fraser Institute's school report card. Accordingly, I have compared the

[343] Ontario Ministry of Education. (2013). *Ontario Focused Intervention Partnership (OFIP)*. Retrieved from http://www.edu.gov.on.ca/eng/literacynumeracy/ofip.html
[344] Ibid.

perceptions of teachers working at OFIP and non-OFIP designated schools in sections of the following analysis.

The online component of the survey that was sent to teachers allowed me to use a screening question to prevent teachers who were not familiar with the Fraser Institute from completing my survey. I included a disqualification question that asked respondents if they were familiar with the Fraser Institute's Report Card on Ontario's Elementary Schools. Respondents who answered 'yes' were then provided with a subsequent series of questions about the Fraser Institute and those who answered 'no' were redirected to the disqualification page which thanked them for their time. Only 1 of the 26 teachers who took my survey indicated that s/he was not familiar with the Fraser Institute's Report Card. Accordingly, I gathered data specifically pertaining to elementary teachers' perceptions of the Fraser Institute from 25 teachers.

As previously stated, research indicates that people who are interested in a given survey topic are far more likely to respond.[345] As a result, individuals who feel strongly positive or strongly negative about given issues or topics are more likely to respond to a survey that applies to their area of interest.[346] Due to this, it is likely that the 25 teachers who completed this survey had a pre-existing interest in the Fraser Institute's school rankings.

[345] Ibid.
[346] Alreck, P., & Settle, R. (2003). p. 37.

DOES THE REPORT CARD "HELP PARENTS CHOOSE"?

The Fraser Institute contends that its report card "assists parents when they choose a school for their children."[347] Given that this is one of the Fraser Institute's stated reasons for developing the report card, I was interested to see if the elementary teachers who took part in this research agreed with this assertion. I asked the teachers to rate their response to this statement on a five point scale that ranged from strongly disagree to strongly agree. The majority of respondents, 59%, either strongly disagreed or disagreed, however I was intrigued by the fact that 32% of respondents were on the other side of the fence and either agreed or strongly agreed.

In order to better understand why a teacher would agree or disagree with the Fraser Institute's assertion that its report card 'helps parents choose,' I provided an area for participants to explain their answer. After carefully examining the comments made by respondents, it became evident that the majority of respondents are opposed to parents using the Fraser Institute's report card to choose a school. Interestingly, 41% of the teachers surveyed made reference to the fact that the Fraser Institute's report card is not a reliable tool given that they believe it lacks relevant and necessary context. For example, one respondent noted that the Fraser Institute's report card "should not influence parents' decisions because the report does not provide a full picture of school quality. EQAO is one assessment measure and is not context-embedded. Real learning and assessment should be context-embedded and connected to students' lives." Another stated that the Fraser Institute's "report card on schools provides an incomplete snapshot of a school's profile. There are many factors that should be considered."

[347] Cowley, P. Easton, S. Thomas, M. (2012). p. 3.

Compellingly, 43% of the teachers who referenced the lack of context in the Fraser Institute's report card specifically mentioned the importance of socioeconomic, ESL and immigrant indicators with regard to accurately measuring school performance. One respondent summarized the problem by stating that the Fraser Institute's "report card provides yearly evidence that students coming from higher socioeconomic backgrounds tend to perform better on standardized tests than those from lower socioeconomic backgrounds. Nothing more." Although the Fraser Institute contends that effective schools "will produce good results, regardless of the family background of its student," many of the elementary teachers who took part in this research do not agree with this assertion. Additionally, the opinions expressed by these teachers align with current literature as Jones, Jones and Hargrove note that "many researchers believe that the high-stakes accountability movement will have the greatest impact on minorities, students with disabilities, students from low-status socioeconomic communities, and students with limited English proficiency."[348] The opinions expressed by the teachers who took part in this research are also reflective of teachers' federations throughout Canada. This can be seen in a statement made by the Quebec Provincial Association of Teachers which argues that the Fraser Institute's "rating system incorrectly suggests that the […] schools mentioned in the report are in 'fair competition,' which involves a 'level playing field.' It is not a competition and the playing field is most certainly not level."[349] Likewise, British Columbia's Teachers' Federation President, Irene Lanzinger, stated in a 2010 news release that "the Fraser Institute rankings are unfair, damaging, and inappropriate [as] they are based on an incredibly narrow set of

[348] Jones, G., Jones, B. D., & Hargrove, T. Y. (2003). 109.
[349] Froese-Germain, B. (2004). p. 184.

data that ignores important academic areas like science and social studies."[350] It can therefore be seen that concerns raised by the teachers who participated in this study find validation and support within academia and the teaching profession at large.

Nearly one third (32%) of the teachers who participated in this research indicated that they either agreed or strongly agreed with the Fraser Institute's assertion that its report card helps parents choose, however, their comments do not indicate that they are supportive of this practice. Additionally, all of these teachers validated their answer with comments that indicated that they were simply aware of parents who used the Institute's report. This can be seen in comments such as: "it's what parents look at when choosing a school," "parents view this when making the decision between Catholic and public [and] also in regards to what area to move to," and "parents will choose to live in, or even move from their present location, into a school boundary that has been ranked highly on the Fraser Institute's report."

None of the teachers who provided a positive response to the Fraser Institute's assertion that its report card helps parents choose schools for their children indicated that they view the Institute's report as a useful tool for school selection. In addition to this, several teachers noted that they believe that parents may put too much faith in the Fraser Institute's report card ratings. For example, one respondent noted that "some parents do use it but it is not as 'assistive' as those parents deem it to be." Further, another respondent stated that they "do not feel it 'assists' but rather influences parents." It can therefore be concluded that, while teachers are aware that parents are using the report card rankings when choosing a school for their child, they do not necessarily deem these rankings to be a valuable tool. Echoing the position of David Johnson, the teachers who took part in this

[350] British Columbia Teachers' Federation. (2010, February 5). Retrieved from BC Teachers Urge Parents to Ignore Misleading Rankings: http://bctf.ca/NewsReleases.aspx?id=20522

research indicate that the Fraser Institute's tendency to compare schools without accounting for divergent student populations is *unfair* and *not very useful*.[351]

Supporting the findings of this study, the president of the Alberta Teachers Association recently asserted that:

> Teachers agree that schools should be accountable to the public and that parents and others have the right to information about how well students are doing and how well schools are meeting students' needs. But these are complex questions that require a broad range of information about a considerable array of factors. Above all, there is a clear need to examine issues that go far beyond numbers related to diploma examinations. The Fraser Institute's rankings are an attempt to reduce complicated questions to simple numbers and to foster competition in the mistaken view that this "market method" will lead to school improvement. Rather than contributing to an informed discussion, their misguided approach leads to unfair criticism of schools and teachers, who instead should be supported in their crucial work in educating Alberta's youth.[352]

Given this, the teachers who took part in this research are not alone in their wariness of the Fraser Institute's school rankings being promoted as a tool to help parents select their children's schools. Speaking to the fact that test scores alone do not provide enough evidence to pass a judgment on quality, a group of Washington State educators "filed an initiative that requires any candidate running for any local or state-wide office in Washington to take the same high stakes test required of all tenth grade students, and to post their scores in the Voter's Pamphlet and on the Secretary of State's web site."[353] While this motion clearly did not see fruition, it serves to highlight the frustrations experienced by teachers when their school's standardized test results are made public.

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[351] Johnson, D. (2005). p. 3.

[352] Booi, L. (2000). *More "Drive-by Rankings" from the Fraser Institute* . Retrieved from ATA News: http://www.teachers.ab.ca/Publications/ATA%20News/Volume%2034/Number%2019/In%20the%20News/Pages/More%20Drive%20by%20Rankings%20from%20the%20Fraser%20Institute.aspx

[353] Moll, M. (2004). News Clips: Birds Eye View of Recent International Anti-Testing Activities. In M. Moll, *Passing the Test; The False Promises of Standardized Testing* (pp. 235-239). Ottawa: Canadian Center for Policy Alternatives. p. 236.

DOES THE REPORT CARD "ASSIST ALL THOSE SEEKING TO IMPROVE THEIR SCHOOL"?

Another major claim made by the Fraser Institute in support of its school report card is that it "assists all those seeking to improve their school."[354] I asked the elementary school teachers who took part in my survey to respond to this statement on a five point scale that ranged from strongly disagree to strongly agree. I also included a neutral category which allowed respondents to indicate that they neither agreed nor disagreed. I was not sure how teachers would respond to this question, but I was not entirely surprised with the result. An overwhelming 86% of respondents either strongly disagreed or disagreed with the Fraser Institute's claim of assistance and the remaining 14% provided a neutral response.

Again, I asked respondents to explain their answer and, again, many respondents expressed their belief that important contextual information is missing from the Fraser Institute's report card. When discussing the relationship between socioeconomics and test scores, one respondent noted that "the Fraser Report does far more harm than good, even more so than the publishing of EQAO results, because the Fraser Institute CLAIMS to take into account socioeconomic factors. This assertion creates the impression among non-educators that the Fraser Report reliably scores schools based on an even playing field. The reality is that they only take into account a few more factors than EQAO itself does, and does so using inaccurate or incomplete data." Along the same line, another teacher noted that "the sole resource that the Fraser Institute uses, EQAO, is a traditional pencil and paper test. The test marginalizes schools and segregates cities." Whether they have read the research or not, it would seem that teachers are well aware of the fact that lower-performing schools often contain higher proportions of poor students who typically require more help to

[354] Cowley, P. Easton, S. Thomas, M. (2012). p. 3.

succeed in school.[355]

It is evident that many of the teachers who took part in this research feel that the usefulness of the Fraser Institute's rankings is hindered by the narrow set of indicators the Institute uses to compile its report card. This finding is similar to that of a research study conducted in Ontario in 2010 by Ian Hardy in which he interviewed principals in an effort to "reveal tensions between principals' support for professional development associated with these provincial emphases, and advocacy for professional development relevant to the specific needs of their school sites."[356] Hardy found that, while principals do value the achievement data produced by EQAO, they are careful to place it in context with specific school based circumstances.[357] Thus, the importance of well-rounded educational attainment indicators is also reflected in Hardy's study. Despite these concerns, the Fraser Institute contends that it has "selected this set of indicators because they provide systematic insight into a school's performance. Because they are based on annually generated data, [that it] can assess not only each school's performance in a year but also its improvement or deterioration over time." [358]

The majority of the teachers who took part in this research also remarked that they feel that the public nature of the Fraser Institute's report card rankings serves to discourage rather than assist those seeking to improve their school. Respondents noted that this response is largely due to the fact that the rankings publicly identify schools that are failing to meet provincial expectations. Consequently, one teacher stated: "I don't feel that [the

[355] Robertson, H., and Ireland, D., 2004. "Form and Substance: Critiquing SAIP," in *Passing the Test; The False Promises of Standardized Testing*, ed. Moll, M., 129-148, Ottawa: Canadian Center for Policy Alternatives, 142.
[356] Hardy, I. 2010. Leading Learning: Theorizing Principals' Support for Teacher PD in Ontario, *International Journal of Leadership in Education* 13, 4: 421-436, 421.
[357] Robertson, H., & Ireland, D. (2004). Form and Substance: Critiquing SAIP. In M. Moll, *in Passing the Test; The False Promises of Standardized Testing* (pp. 129-148). Ottawa: Center for Policy Alternatives. p. 140.
[358] Cowley, P. Easton, S. Thomas, M. (2012). p. 5

Fraser Institute's report card] does more than identify the schools that have low test results," similarly, another teacher noted that the Fraser Institute's report card "is punishing rather than being supportive of under-achieving schools." Additionally, one teacher even suggested that the Fraser Institute's report card could "be used to point out areas of need, but this information should be provided without a ranking – more as feedback to the school board and the school." Despite the potentially negative consequences, Berliner and Biddle note that "too frequently, a story is found interesting to news reporters only if it is critical of public schools or has some scent of blood about it. In the news lingo, 'If it bleeds, it leads'."[359] It can therefore be seen that the fact that the Fraser Institute's school rankings are picked up by Canadian newspapers is not entirely surprising. However, one wonders if there is potential harm inherent in the act of publicly shaming poorly scoring schools.

In a joint position statement released by the Canadian Psychological Association and the Canadian Association of School Psychologists regarding the Canadian Press coverage of provincial standardized test results, the authors speak to the demeaning nature of publicly identifying low performing schools. This position statement articulates a significant concern "over the possibility that this singular emphasis on the schools as the cause of students' test performances could generate considerable harm by placing unwarranted pressure on teachers, administrators, and ultimately on the students themselves to increase test scores or risk losing status within the community."[360] However, Urdan and Paris state that "tests that were designed to assess individual achievement are [increasingly being] used to assess

[359] Berliner, D., & Biddle, B. (1999). The Awful Alliance of the Media and Public-School Critics. *Education Digest , 64* (3), 4-10. p. 5.
[360] Simmer, M. (2000). Position Statement. *Canadian Journal of School Psychology , 16* (1), 1-14. Smith, M. (1991). Put to the Test: The Effects of External Testing on Teachers. *Educational Researcher , 20* (5), 8-11. p. 1.

relative performance of teachers, schools, and districts."[361] Furthermore, they contend that many teachers reported having negative feelings about standardized achievement tests because they deem them to "have negative consequences for both teachers and their students."[362] In line with this finding is research conducted in the United States in the early 1990's by Smith, who used a qualitative approach to uncover how teachers think about standardized testing and found that teachers often feel upset about the testing because they do not believe it accurately measures any of the important material they cover in their daily instruction.[363]

Aside from the publicly demeaning nature of being issued a low report card rating, the majority of the teachers surveyed also remarked that the Fraser Institute's report card does not provide any type of either tangible or intangible assistance with regard to school improvement. Responding to the alleged assistive nature of the Fraser Institute's report card, respondents asked: "How can it assist? I see no advice given" and, "I'm not sure how the Institute 'assists schools'?". During my interview, I asked Cowley why the report card does not provide advice regarding how a school can improve. He responded by saying that the report card is merely an analysis of assessment data, however, he feels that it also provides the first step to school improvement as it allows us to identify successful schools which can be used as a model for improvement. However, given that the Fraser Institutes Elementary School Report Card is essentially a repackaging of EQAO assessment data, it follows that these schools are identified long before the Fraser Institute's annual report card is hits the press.

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[361] Urdan, T., & Paris, S. (1994). Teachers Perceptions of Standardized Achievement Tests. *Education Policy , 8* (2), 137-156. p. 140.
[362] Ibid.
[363] Smith, M. (1991). Put to the Test: The Effects of External Testing on Teachers. *Educational Researcher , 20* (5), 8-11. p. 8.

DOES THE REPORT CARD "FACILITATE SCHOOL IMPROVEMENT"?

According to the Fraser Institute, the act of publicly rating and ranking schools attracts attention that provides motivation for poorly performing schools to improve.[364] To determine whether or not elementary teachers agree with this assertion, I asked survey participants to rate their response to this statement on a five point scale which ranged from strongly disagree to strongly agree. Much like the previous survey questions discussed in this report, the vast majority of respondents, 77%, either strongly disagreed or disagreed with the Fraser Institute's claim that its report card facilitates school improvement by drawing attention to poorly performing schools.

While they are in the minority, 18% of the teachers who took part in this research indicated that they agreed with the Fraser Institute's claim that the public identification of low performing schools provides motivation that fosters improvement. However, after reviewing their comments, it appears that all of these teachers were referring to the fact that the identification of low performing schools may help to change policy, particularly in regard to funding. For example, one teacher noted that she agreed with the Fraser Institute's statement "only in that it might create public awareness of the inequity suffered by low-performing schools, and that this awareness might translate into advocacy or political pressure for better funding and social programs for disadvantaged children." In much the same way, another respondent observed that the Fraser Institute's report card may facilitate school improvement "perhaps politically, but the schools themselves need internal change and Boards themselves need internal change, real change that is about effective practices that impact real children, not lip service to effective practice." Likewise, another participant

[364] Cowley, P. Easton, S. Thomas, M. (2012). p. 3.

reported that the improvement that the Institute's report card provides should be "based on funding, [because] all schools are funded equally, when you have a poorly performing school perhaps they could be given more funding to try and bridge the gap. Things like healthy snacks, lending library for kids etc. should be provided."

Although they are highly critical of standardized testing, Jones, Jones and Hargrove note that testing programs in the United States "have also focused public attention on schools with low-achieving students and, as a result, have made these students more visible and less likely to slip between the cracks and fall further behind."[365] It therefore may seem that the teachers who agreed that the Fraser Institute's rankings lead to school improvement might be on the right track. However, as Berliner and Biddle point out, all too often the media reports the outcome of standardized achievement testing without providing adequate contextual information.[366] Given the strong link that exists between socioeconomic gradients and standardized test scores, it would seem that the Fraser Institute's report card results cannot adequately drive change if important pieces of the story are missing.

With the exception of one teacher who provided a neutral answer, the remaining teachers who took part in this survey all reported that they did not agree with the Fraser Institute's claim that publicly identifying low performing schools encourages them to improve. As with many of the previous questions, the teachers indicated that the Institute's report card is not useful in affecting change because it is not reflective of all of the indicators that contribute to a school's successfulness. For example, one teacher stated that, "schools/students perform poorly for a number of reasons. Testing provides only a snapshot and is not inclusive of the students or environment." Likewise, another noted that "many

[365] Jones, G., Jones, B. D., & Hargrove, T. Y. (2003). p. 161.
[366] Berliner, D., & Biddle, B. (1999). 9.

factors that affect testing are not included in the report." These teachers' opinions align with those expressed by the Canadian Psychological Association and the Canadian Association of School Psychologists who jointly assert that:

> Comparisons of simple, unadjusted test scores from one year to the next or across different schools or districts [within a given year] do not provide a valid indicator of the performance of the teachers, schools, or school districts unless the differences in scores are very large compared to what might be accounted for by changing demographic or family characteristics. This is rarely the case; so, any use of unadjusted test scores to judge or reward teachers or schools will inevitably misjudge which teachers and schools are performing better.[367]

Alongside concerns of incompleteness, the teachers who disagreed with the Fraser Institute's capacity to enact positive change indicated that they felt this way because they believe the report card actually discourages low performing schools. As a case in point, one teacher mentioned that the Institute's report card "undermines the efforts of the school and the teachers. It adds additional stress and if gains are not made and if rankings fall this can lead to humiliation." Similarly, another teacher noted that "teachers and building administrators of all schools already are motivated to improve student achievement, it would be ridiculous to think otherwise. I believe the act of publicly rating and ranking ends up having an adverse impact on schools and communities."

As discussed previously, standardized testing is often seen to undermine best teaching practices.[368] According to a study conducted by Ryan and Weinstein in 1999, "some educators and researchers claim that the high-stakes testing environment has had a negative effect on student's achievement by causing teachers to focus on low-level

[367] Simmer, M. (2000). p. 7.
[368] Ryan, R., & Weinstein, N. (1999). Undermining Quality Teaching and Learning: A Self-Determination Theory Perspective on High-Stakes Testing. *Theory and Research in Education , 7* (2), 224-233. P. 228.

knowledge and skills, resulting in less depth of understanding and less focus on higher-order thinking skills."[369] While the teachers surveyed in this research did not specifically speak to this problem, it is applicable here given that improved test scores do not necessarily equate to improved student knowledge. Consequently, it is possible that teachers who feel pressure to increase their Fraser score may attempt to do so at the expense of actual learning.

Overall, it can be seen that the teachers who took part in this research disagreed with the Fraser Institute's assertions that publicly rating schools generates attention that facilitates improvement. Reasons for this disagreement include the belief that morale in low ranking schools is lowered by the public nature of the Fraser Institute's report card and the lack of context in the Fraser Institute's ratings. Highlighting both concerns, one teacher commented that:

> The Institute's report card has the opposite impact. Instead of stating the positives and negatives about a school that may be struggling (and both exist upon a continuum from positive to negative) it focuses only on a negative. Schools rated poorly will attempt to improve out of fear and shame, not out of a desire to strive for the actualization of self and others. When 'rating' a student, a good teacher looks at a student as a whole and we should do likewise when rating a school.

Finally, speaking passionately about the fact that a school's success should be measured by more than the results of standardized tests, one respondent fervently stated that:

> If anything, the ranking of schools achieves the exact opposite. Education at the elementary panel is not a competition requiring a motivation to succeed. It is also not a "business" [with] based scores being the equivalent of profit. It quite frankly is sad what rankings like this serve to do to create more social stigma for poorer areas. It tugs at my heart sometimes to think that as my own children grow, I see so much is being lost in the public education system

[369] Jones, G., Jones, B. D., & Hargrove, T. Y. (2003). p. 40.

> at the elementary level - trained music teachers, trained art teachers, trained HPE [Health and Physical Education] teachers, ridiculous kindergarten class sizes (up to 30 at my school), smaller school yards, reduced outdoor experience […] I suppose there is little point in going on. There is so much that could be added to this list. Every decision in education as in any "business" (that feels like a swear word when associated with elementary education) has trade-offs. It is unfortunate how closely education is following the very definition of what economics is all about - "The study of the efficient use of scarce resources.

It therefore appears that the Fraser Institute's capacity to enact positive change is greatly hindered by the lack of variables measured in its report card calculations. Supporting this assertion, Erika Shaker concludes that the Institute's report cards are "not about improving education for all students – it is about creating a measuring stick that ranks schools on a narrow criteria in order to facilitate a move toward a market-driven education system."[370]

IS THE REPORT CARD REFLECTIVE OF THE QUALITY OF CLASSROOM INSTRUCTION?

The Fraser Institute contends that "it will come as no great surprise to experienced parents and educators that the data consistently suggest that what goes on in the schools makes a difference to academic results and that some schools make a greater difference than others."[371] Despite this, the Institute does not explicitly call on deficits in classroom instruction as being indicative of poor report card ratings. However, with regard to socioeconomic indicators and differences in gender based performance, the Fraser Institute contends that its report card can "provide evidence that successful teachers overcome such impediments."[372] I therefore asked the teachers who took part in this research to respond - on a five point scale which ranged from strongly disagree to strongly disagree - to the

[370] Shaker, E. (2004). p. 204.
[371] Cowley, P., Easton, S., & Thomas, M. (2012). p. 3.
[372] Cowley, P., Easton, S., & Thomas, M. (2012). p. 6.

following statement: The Fraser Institute's Report Card on Ontario's Elementary School's is representative of the quality of classroom instruction being offered to students. Not surprisingly, 95% of the teachers surveyed noted that they either strongly disagreed or disagreed with this statement.

All of the teachers who indicated that they did not agree that the Fraser Institute's report card was reflective of classroom instruction remarked that they believed that the Institute's report card does not provide enough data to judge teaching abilities. For example, one teacher mentioned that "the Report provides absolutely no information about classroom instruction," while another remarked that "the Report Card does not include enough data to accurately be representative of classroom instruction." The opinions expressed by these teachers are similar to those expressed by Barnie Froese-Germain who argues that while standardized tests may be useful in sorting students, they do not effectively measure student learning or development. As such, Forese-Germain asserts that "standardized tests tend to measure what is easy to measure (lower-order recall), and penalize higher-order thinking – analyzing, synthesizing, forming hypothesis, and problem solving."[373] Due to this, it can be seen that effective classroom instruction could even prove detrimental to standardized achievement scores given that "there might be three logical answers to a multiple choice question, but only one will be marked right because there is no opportunity to explain one's answer."[374] Given this, a classroom that fosters creativity and complex thinking may inadvertently produce poor test takers.

Further, several of the teachers who took part in this research also indicated that the socioeconomic makeup of a school is highly influential in school performance regardless of

[373] Stewart, M. (2004). p. 178.
[374] Ibid.

teaching ability. This is evidenced in one teacher's comment that "student performance is not always indicative of best practices. There are many factors outside of the classroom which also contribute to student success, such as parent income, time spent with children (recreational and academic), extra-curricular participation, etc." Writing specifically about test preparation, Jones, Jones and Hargrove indicate that teachers are motivated to teach to the test by a series of factors including a "desire for their students to do well on the test, a competitive interest in making sure their school and class scores are high relative to others, a fear of being embarrassed by low scores, and interest in receiving salary bonuses and public recognition, and a desire to gain a measure of control over externally mandated testing." While Canadian teachers' salaries are not directly affected by standardized testing, it can be seen that the remaining reasons to emphasize test preparation are applicable to Canadian schoolteachers. Consequently, some Ontario teachers may increasingly find themselves teaching test-taking strategies and limiting classroom instruction to those types of learning activities that are directly tested.[375] And, while this type of instruction may indeed serve to increase test scores, these scores may not be representative of quality teaching or increased student learning. This means that the Fraser Institute's school report cards may in some cases rank student preparedness rather than student learning.

Interestingly, speaking about teacher training, one teacher perceptively noted that "the Fraser Institute in no way evaluates the quality of teaching. In fact, it is quite possible that schools at the very top of the ranking have quite poor teaching standards; those schools who reliably score well on EQAO receive less professional development than OFIP schools." Given the foregoing, the teachers who took part in this study strongly believe that there is a lot more to effective teaching than what the Fraser Institute is currently measuring.

[375] Jones, G., Jones, B. D., & Hargrove, T. Y. (2003). p. 75.

This assertion is similar to that expressed by David Johnson who contended in our interview that a classroom full of brighter than average students would demonstrate high achievement levels regardless of effective or ineffective teaching practices. Moreover, the responses that this research generated are similar to a survey conducted by the Alberta Teachers' Association in 2001, where roughly half of teacher respondents indicated that standardized testing does not appropriately assess actual learning.[376]

HOW DO ELEMENTARY TEACHERS FEEL ABOUT THEIR OWN SCHOOL'S FRASER INSTITUTE RATING?

After asking the teachers who took part in this research more general questions about the Fraser Institute, I wanted to know how they felt about their own school's Fraser Institute rating. I asked them to describe their reaction to reading their school's Fraser Institute report card rating/ranking.

In total, 29% of the teachers who completed the survey indicated that they do not think that the report card rankings are important and, as such, they do not pay attention to them. For example, one respondent stated that she "pays no attention to the Fraser Report," while another said "do not find it valuable," and yet another stated "I haven't read my schools rating." One respondent further explained, "I have only ever looked once at my school's ranking. The only reason I did so was because after speaking to a parent who said that they had moved to the community so that their children would attend the school, I was curious as to how the school actually ranked." Similarly, a third teacher remarked, "We ranked well, but I did not take the rankings to heart because I do not believe that a test score gives enough valid and reliable information on a school." Due to this, one could question

[376] Hyman, C. 2004. 176.

the effectiveness of the Fraser Institute in meeting its mandate of fostering school improvement given that nearly a third of the teachers who participated in this research do not even read the school ratings published by the Institute.

Many of the teachers surveyed also stated that they were not surprised by their school's ratings and attributed this to the fact that they are well aware of their school's demographic. Thus, one teacher stated, "I was not surprised as many of our students included in the survey are identified as struggling learners." Similarly, another teacher noted, "I am unsurprised. The dynamic of our school has changed in that we have a more diverse school climate - a few years ago we had very strong students who usually had one parent home with them to support them as needed. Now, we have dual income families, ELL students and students from lower socioeconomic backgrounds." Further, another teacher highlighted the lack of context in the Fraser Institute's report card by wryly commenting, "We did better than last year. Why? Oh yeah, we had a different group of students. It plays no impact on instructional practice."

An additional trend is apparent when the responses provided by teachers are sorted by OFIP status. As previously stated, 27% of the teachers who participated in this research identified their schools as having produced low enough EQAO scores to qualify for OFIP funding. I therefore presumed that these teachers work in schools that have scored low on the Fraser Institute's report card. While some of these teachers' comments indicate that they were not surprised by their school's Fraser Institute rating, several of these teachers also indicated that they were upset or disappointed by them. For example, one teacher describes his/her reaction as follows:

> "Heartbroken. I worry that my students think they attend a bad school. Angry. The Fraser Institute claims to account for parental income, but

> I am certain that they are using the wrong data for our school population because we have learned, through the research of our public health nurse, that that data is actually not available. If they had accurate data I'm sure we would have ranked much higher. Still angry. I know that our school is outstanding in terms of the quality of teaching and the richness of extracurricular programming. The Fraser Report captures none of this."

Still another teacher in an OFIP school described her reaction to her school's Fraser Institute report card rank as "shock, because of the power that they have in labeling a community, school, staff, and students without setting foot into schools." Picking up on the same point, that the Fraser Institute never visited the school, a third respondent from an OFIP school stated:

> I was very disappointed because I don't really understand how the report rating was calculated. I didn't see, meet, or talk with anyone to demonstrate the quality instruction my students receive on a daily basis. I think it is based primarily on EQAO, which is a test that doesn't properly assess student performance. Our school has a small population and has the results counted for students who do not write (parental decision) and students who are in life skills placements. As a result the data is skewed and unreliable. I would think that the higher authorities who implement this test would use better judgment and statistics collections. In my mind the results are useless because they also only show the students at or above grade level. They don't demonstrate the hard work of the students who get high level 2's. This makes the students efforts look pitiful. Shame on the Fraser Report for overlooking all of the hard working students.

Conversely, however, two of the teachers from non-OFIP schools reported that they were happy with how well their school performed on the Fraser Institute's report card. For example, one teacher stated that her reaction to reading her school's score was "Yeah, we did it again! Our techniques still work." Likewise, another teacher reported feeling "Thrilled. [Because] we were one of the top schools in our Board." Thus, for some educators who are at the high end of the ranking, it appears that the report cards may have the ability to bolster the morale in high-ranking schools.

TEACHERS, PARENTS AND FRASER INSTITUTE RATINGS

When I began this research, I was curious as to whether or not the parents of elementary school children discussed the Fraser Institute's ratings with their children's teachers. To collect this data, I asked survey respondents if they were aware of any parents who had expressed opinions or reactions to the rating/ranking their school received from the Fraser Institute.

Close to half, 45%, of the teachers who took part in this research testified that they knew of parents who had made comments regarding their school's Fraser Institute rating. Unfortunately, the majority of respondents answered this question with a simple yes or no. Thus, it is hard to determine if a trend exists in the kinds of comments that parents make. Nonetheless, several teachers did indicate that they feel that the Fraser Institute's ranking may lead parents to overlook other factors that comprise successful schools. For example, one teacher stated, "I have heard more reaction about the ranking of one of our feeder schools (we are French Immersion) that is doing so poorly. I know for a fact that there is exceptional teaching going on in that building and take offence to the fact that all the hard work they are doing there is not captured within the report." Similarly, another teacher stated that parents "were upset because they saw our ranking and think it counts for everything. As a result they don't look at all of the great things happening at our school."

Additionally, I asked the teachers who completed my survey to indicate if a parent had ever spoken to them about their school's Fraser Institute ranking and its relationship to the teaching abilities of school staff. Although 18% of the teachers surveyed said that parents had made comments that linked the Fraser Institute's report card rankings and teaching abilities, this survey question was faced with a similar problem as the previous

question given that the majority of respondents provided a binary yes or no answer. As such, more in-depth analysis is not possible with my current data set.

TEACHER MORALE IN CONTEXT WITH THE FRASER INSTITUTE'S REPORT CARD RATINGS

In order to determine whether or not teachers believe that the Fraser Institute's report card ratings have an effect on teacher morale, I asked respondents to rate – on a five point scale ranging from very negatively to very positively – how the public unveiling of the Fraser Institute's annual report card affects teacher morale in high and low ranking schools. Based on the previous survey questions analyzed for this report, I was not surprised to discover that the majority of respondents associated a high ranking with a positive effect on morale and a low ranking with a negative effect on morale. As can be seen in the figure 11, none of the teachers who participated in this research indicated that the Fraser Institutes rankings had a positive effect on teacher morale in low ranking schools or a negative effect in high ranking schools. However, a portion of the teachers surveyed did indicate that they feel that the rankings have no effect on teacher morale in low ranking schools (18%) or high ranking schools (36%).

Smith's 1991 research concerning the ways standardized tests affect teachers and found that "the publication of test scores produces feelings of shame, embarrassment, guilt, and anger in teachers and the determination to do what is necessary to avoid such feelings in the future."[377] As can be seen in figure 11, many of the teachers who participated in this research indicated similar experiences and stated that low Fraser Institute ratings negatively impact teacher morale. To expand on this, one teacher stated that;

[377] Smith, M. (1991). p. 9.

> "As a teacher in a low-ranking school, it makes me feel beaten down and hopeless. My colleagues and I are committed to working with a needy population. We love these kids and think they're worth the extra effort. We don't ask for recognition or extra compensation. But we could do without what is essentially public criticism."

While another stated, "What's to explain. If you look bad then it kills morale. Pretty self explanatory." In a similar fashion, while acknowledging that the ratings are unimportant, another teacher explained that ratings nonetheless impact morale by stating that "Teachers don't put a lot of stock in the ranking, however if you're rated negatively it has to affect morale."

Several respondents also made similar comments which compared the kind of impact that a high or a low score can have on teacher morale. One teacher stated that, "It is a relief that you placed high, it is completely demoralizing to know how hard you are working and still are ranked low," while another observed that "if you are a high ranking school, of course you will be happy that it has been publicly announced, however, if you are in a low ranking school and have applied all the new teaching strategies and your population doesn't score well, it looks badly on the school." And another teacher said that "Obviously, it's a nice boost if your school rates well. When your school doesn't rate well, it's a bummer!"

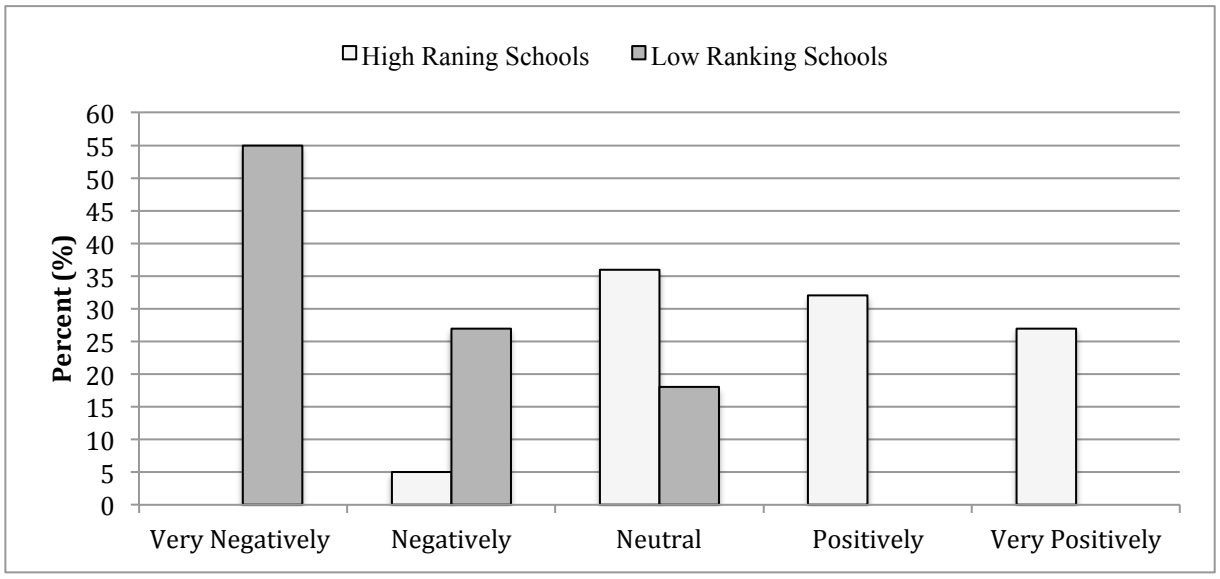
While the teachers who took part in this research clearly relate the publication of poor standardized achievement scores to a decrease in teacher morale, research also indicates that standardized testing has caused teachers to feel less respected as professionals given that they believe the tests are akin to an accusation that they can't be trusted to do their jobs.[378] Likewise, it has also been argued that "in the name of standardization and equity […] teachers are being asked to make themselves interchangeable."[379] It therefore follows that

[378] Jones, G., Jones, B. D., & Hargrove, T. Y. (2003). p. 142.
[379] Westheimer, J. (2011). p. 3.

standardized testing can be seen to hurt more than just teacher morale on the day the newspaper runs their scores. This is because it has also been seen to undermine their professional autonomy and diminish the value attributed to their profession.

Moreover, figure 11 also indicates that a significant portion of the teachers surveyed for this research took a neutral position when asked about the impact that the Fraser Institute's ratings have on low and high ranking schools. Based on their comments, many of these teachers seem to have answered this way because they believe they are aware of the shortcomings of the Fraser Institute rankings and do not take them to heart given that they represent an incomplete picture of school performance. However, it is interesting to note that the majority of teachers who felt the rankings would have no effect on teacher morale came from higher ranking schools. Additionally, as noted in the section above on teacher's responses to their own school rankings, the comments from teachers who work in high ranking schools are full of pride and elation, while the comments from teachers who work in low ranking schools are full of disappointment.

Figure 11. Teacher opinions regarding how the public unveiling to the Fraser Institute's annual report card affects teacher morale in high and low rankings schools.



HOW DO ELEMENTARY TEACHERS FEEL ABOUT RATING/RANKING ELEMENTARY SCHOOLS?

Finally, I asked the elementary teachers who took part in my research to indicate how they feel about the practice of rating and ranking elementary schools. Interestingly, only two respondents stated that they do not feel that the practice is beneficial. The remaining teachers provided similar comments which noted that, if done properly, they were not against school rankings. As with many of the previous questions discussed above, the majority of the teachers who were surveyed for this research observed that, if there was a way to include context into school ratings and rankings, they may serve a purpose. However, as one teacher stated, "until a method of data collection that accurately represents the students and students' achievement is found, ranking really only benefits the Fraser Institute and its founders." Summarizing many of the teachers' opinions, another teacher mentioned that "under the present system, I don't like it. Education is about student achievement and knowing our students. This can't be fully rationalized or realized through the data used to compile the rankings. Please let teachers teach and focus their energy on the people that matter and not create an unproductive atmosphere."

INTERVIEW WITH HELEN RAPTIS

Helen Ratpis is an Associate Professor in the Faculty of Education at the University of Victoria. Although her scholarly and professional interests vary from the social and historical foundations of education in British Columbia to First Nations and minority education, Raptis has also conducted relevant research regarding school effectiveness and

school improvement.[380] In this capacity, Raptis has published important research concerning the impact of, and discourse surrounding, the Fraser Institute's school ratings in British Colombia. I contacted Raptis early in my research with the hope that her insight could help inform my study.

I met with Raptis during the annual Canadian Society for the Study of Education conference held in April, 2012. I began our conversation by asking Raptis if she believed that the public puts too much faith in the Fraser Institute's ratings or rankings. She stated that "speaking from the B.C. context, yes they do." She went on to explain that she felt this way because she was aware of parents who use the rankings to choose schools as well as to decide where to buy or rent homes. Further, she explained that she was even aware of realtors who use rankings to assist new home buyers when choosing an area to live in. This assertion aligns with the research presented here given that parents indicated using the Fraser Institute's ratings in similar ways.

Raptis went on to talk about a research study she is participating in that involves underachieving, low income schools, and explained that the "principals expressed extreme dismay at what happens when the results come out; usually the high ranking children get transferred to other schools." Interestingly, Raptis explained that public schools in B.C. receive funding for every student that they register and that this funding moves with the student if they change schools. Therefore, even though B.C. has a similar application process to Ontario, with regard to out-of-district transfers, the funding formula in B.C. provides a large incentive for schools to accept students and simply erect portables to meet increased demand. Therefore, Raptis explained that the Fraser Institute's ratings and

[380] University of Victoria. (2012). *"Dr Helen Raptis – Curriculum Vitae.* Retrieved from http://education2.uvic.ca/Faculty/hraptis/

rankings have an increased impact on the B.C. school system. While it may or may not be more difficult to attend an out-of-district school in Ontario, the parents who participated in this research did indicate that they use the Fraser Institute's ratings to help select a school for their child, so it can be concluded that, to one degree or another, the situation Raptis described is also happening in Ontario elementary schools.

Next, I asked Raptis if she had any insight into the reason why it appears that the general public does not question the school ratings published by the Frater Institute. In response, Raptis explained that she believes that the public is "under the mistaken impression that the rankings are based solely on large scale provincial testing." She further explained that this misconception is understandable given the way the Fraser Institutes report card has been marketed as well as the rhetoric used to shape the discussion in the media. Essentially, she stated that the public has been misled by the Fraser Institute's contention that its ratings are "based on test scores" as they have assumed that the Fraser Institute's rankings and provincial standardized test results are one and the same. Importantly, Raptis is speaking specifically about the Fraser Institute's report cards in British Columbia, which are calculated using a slightly different equation than those in Ontario. While this research has demonstrated that the overall ratings that the Fraser Institute has assigned to schools in the OCDSB closely parallel EQAO results, they are nonetheless not exact equivalents. Further, Raptis' assertion that the public is unclear about how the Fraser Institute actually derives its school ratings is evidenced in the research presented here as none of the parents who took part in this research were able to correctly identify the indicators that the Institute uses to calculate its ratings.

To follow this question, I asked Raptis why it appears that academics have failed to

question the legitimacy of the Fraser Institute's school ratings and ranking. In response, she remarked: "academics have expressed dismay and a number of people I know have attempted to set the record straight in the newspaper, but we're up against a lot of different forces." Raptis went on to explain that the "notion of media objectivity" is a hurdle that academics struggle to overcome when contesting the Fraser Institutes rankings. Thus, the media's tendency to portray the Fraser Institute's rankings as a "controversial issue" rather than a "distortion of test scores" relegates academic opinion to merely one side of a legitimate story.

Further, Raptis noted that "educators are not particularly media savvy so they don't know how to make their point in a way that the public will understand." While she argues that the "key point is that the test scores and the rankings are two different things," academics speaking about the Fraser Institute's rankings struggle to convey this message to the public in an accessible way.

Lastly, I asked Raptis if she thought that school ratings or rankings could ever be beneficial. She responded passionately, stating "No. Not at all. Never." Raptis explained that she believes that "schools have different things to offer. [They] all follow the curriculum and attempt to emphasize or deemphasize different elements […] but that does not make one better than another." In conclusion, Raptis added that she does "believe in school choice [and that] parents should have the right to choose a school that is a 'best fit' for their child." However, echoing the teachers who participated in this research, she maintained that this choice should not be based on the ratings published by the Fraser Institute as they fail to account for context.

A Discussion of Teacher Perceptions with Peter Cowley

Given that many of the teachers I surveyed for this research indicated that the Fraser Institute fails to provide an improvement plan, in my interview with Peter Cowley I inquired as to why the Institute's report card does not provide suggestions for improvement. He stated that the report card is merely an analysis of assessment data. However, despite this fact, Cowley went on to say that comparison is the first step to school improvement as it serves to identify successful schools. Cowley asserted that the Fraser Institute's report card does indeed support school improvement. I subsequently asked Cowley if he felt that the public nature of the report cards is in any way discouraging to the teachers in low scoring schools. Although he did not respond directly to this question, Cowley went on to speak about a talk he recently gave at a rural school board in which he convinced agitated teachers of the merits and usefulness of the Institute's school report card.

Speaking about the impact of school ratings in low income areas, Cowley commented that many teachers who work in marginalized areas are not adequately trained to meet the needs of their student population. As such, he highlighted what he deems to be an insufficient level of teacher training at several points throughout our interview and attributed the low school rankings in poorer areas to this fact. Further, Cowley noted that he believes that teachers who work in schools with a history of poor report card scores fall into what he calls a 'teacher trap.' According to Cowley this happens when teachers believe that they are faced with an insurmountable problem because they are doing everything they possibly can to teach their students. Therefore, they attribute their school's low scores to external influences and forget to ask if they themselves have an adequate level of skill or training to do their job effectively. As such, Cowley contends that teachers can benefit from the school

report cards given that they provide them with a means to assess their performance in relation to that of similar schools.

In this chapter I have analyzed the various ways the elementary teachers who took part in this research perceived the Fraser Institute's school report cards. I found that these teachers were all too aware of the potential predictive role the missing demographic indicators could play in predicting how poorly or favourably a school's Fraser Institute overall rating may be, that they did not see school improvement or school selection potential inherent in the Institute's report card, and that they felt that the report card may discourage teachers working in low ranking schools. In the next chapter I will analyze the qualitative findings of my research with regard to the way that the parents of elementary school aged children understand and use the Fraser Institute's report card.

CHAPTER 7 - HOW DO THE PARENTS OF ELEMENTARY SCHOOL AGED CHILDREN UNDERSTAND AND USE THE FRASER INSTITUTES REPORT CARD?

As discussed in a previous section, the parents who took part in this research were recruited through four unspecified YMCA/YWCA-based After School Care Programs. I visited these programs and distributed paper surveys to parents as they picked their children up throughout the evening. It was important to me that I was there personally to invite parents to participate in my research, to reassure them of anonymity, and also to answer any questions they might have about my research. I provided parents who did not have time to complete the survey on the night I distributed it with the option of either mailing their completed survey to me, at the address on the consent form, or returning it to the YMCA/YWCA program and placing it in a sealed envelope that I would collect at a later date. While I did not receive any completed surveys by mail, several parents did opt to seal their surveys inside the envelopes I provided and entrust their completed forms to the very helpful YMCA/YWCA staff.

Delays in attaining ethics approval from the Research Ethics Board at the University of Ottawa to distribute my survey to parents through the YMCA/YWCA's programs resulted in a very short data collection window. Much like the survey I distributed to teachers, I distributed my survey to parents during the third week in June. As such, parents were presumably busy making plans for their children's summer vacations and contending with highly excitable children. While I personally distributed 100 paper surveys, only 20 were returned. Accordingly, the data analyzed in the following sections is limited by a relatively low number of respondents. Nonetheless, I believe that it provides valuable insight into how parents use the Fraser Institute's elementary school report card as well as how they

understand it.

Perhaps not surprisingly, 79% of the parents who completed my survey identified themselves as female. Further, all of the respondents were between 31 and 55 years of age and 58% of the respondents were between 31 and 40 years of age. Importantly, all of the parents who took part in this research had elementary aged children enrolled in a publicly funded elementary school. Therefore, it can be seen that these parents represent the primary audience that the Fraser Institute is striving to reach with its elementary school report card.

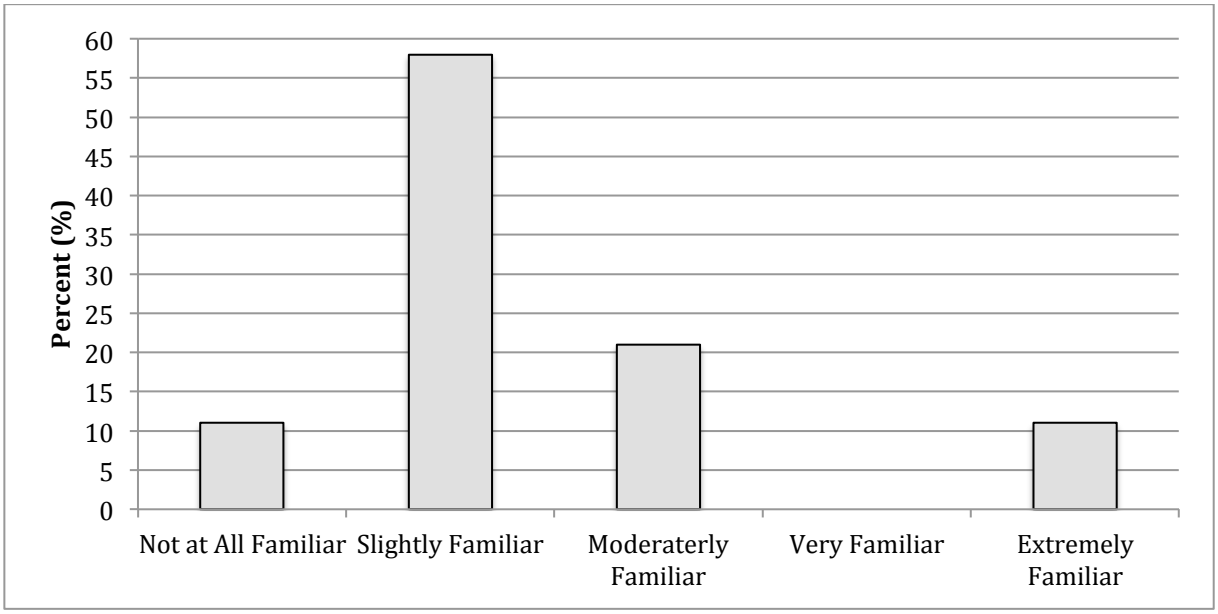
WHY DO PARENTS USE THE FRASER INSTITUTE'S ELEMENTARY SCHOOL REPORT CARD?

In order to ascertain how parents use the Fraser Institute's elementary school report card, it was important that I first address whether or not they were familiar with the Fraser Institute in general. Consequently, I asked parents to rate their familiarity with the Fraser Institute on a five point scale which ranged from not at all familiar to very familiar.

In total, 89% of the parents who took part in this research indicated that they had at least some degree of familiarity with the Fraser Institute. As can be seen in figure 12, 57% of the parents surveyed reported that they were slightly familiar with the Fraser Institutes, 21% stated that they were moderately familiar and the final 11% noted that they were extremely familiar. However, the remaining 11% of the sample of parents I surveyed noted that they were not at all familiar with the Fraser Institute. Because unfamiliarity with the Fraser Institute does not necessarily equate to unfamiliarity with the school ratings the Institute publishes, I decided that the responses provided by these parents should not be eliminated from my data analysis. Further, the data I collected regarding parental understandings of the Fraser Institute's Detailed School Reports does not require past

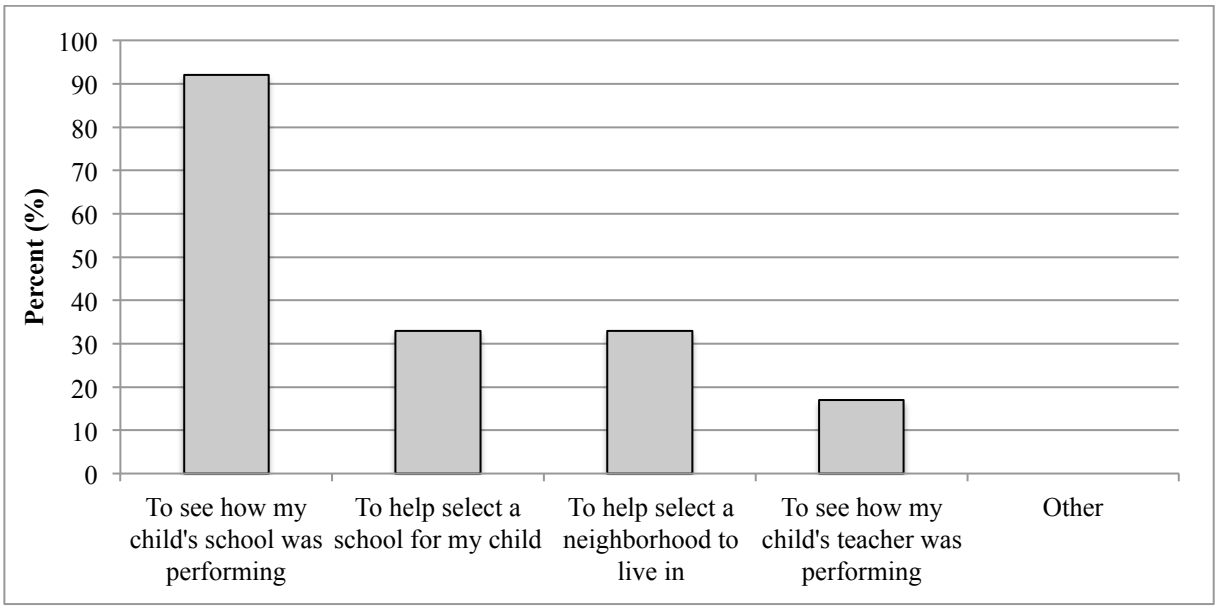
experience with the Fraser Institute or its report card publication. As a result, the responses provided by all 20 participants are included in the following data analysis.

Figure 12. Participant Familiarity with the Fraser Institute.



After asking parents to rate their familiarity with the Fraser Institute, I asked them if they had ever read the elementary school ratings or rankings published by the Fraser Institute. In total, 63% of the parents surveyed indicated that they had. I asked these parents to further indicate why they read the Fraser Institute's school ratings/rankings. As can be seen in Figure 13, an overwhelming 92% reported that they had read the Fraser Institute's ratings/rankings to see how their child's school was performing. In addition, 33% stated that they read the ratings/rankings to help select a school for their child as well as to help select a neighborhood to live in. Lastly, 17% of the parents indicated that they had read the Fraser Institute's elementary school ratings and/or rankings to see how their child's teacher was performing.

Figure 13. Why Respondents Reported Reading the Fraser Institute's School Ratings and/or Rankings.



The Fraser Institute asserts that its elementary school report card has been purposefully compiled "into one, easily accessible public document so that anyone can analyze and compare the performance of individual schools." [381] Although representative of only a small sample of parents, the results of this research indicate that parents are indeed using the Fraser Institute's report card as the creators intend. This is evidenced in the fact that almost all of the parents who indicated that they have read the report card also indicated that they used it to see how their child's school was performing.

The Fraser Institute asserts that in situations "where parents can choose among several schools for their children, the *Report Card* provides a valuable tool for making a decision." [382] With a third of the report card readers who took part in this research indicating that they read the school ratings to either help select a school for their child or a neighborhood to live in, it again appears that parents are using the report card as the Institute

[381] Cowley, P., Easton, S., & Thomas, M. (2012). p. 3.
[382] Ibid.

intends. That said, research on school choice programs in the United States and, to a lesser extent Canada, has found that affluent, well-educated parents tend to take advantage of these types of initiatives resulting in more choice for those who already have a myriad of choices.[383] While the Fraser Institute may indeed be providing parents with an increased ability to choose, one is left wondering if it is possible for this choice to be equitably enjoyed by all. In a similar fashion, contending that schools cannot be adequately compared based on the results of standardized tests, Jones, Jones and Hargrove argue that "the winners in these types of comparisons may only be the realtors and any others who seek to profit by using assessment information to sell homes."[384] While parents may indeed use the Fraser Institute's rankings to help select a school for their child, the benefit may be much smaller than the cost.

Finally, while the Fraser Institute does not explicitly contend that teacher performance is directly correlated to a school's report card performance, it has chosen to label the indicators that comprise a school's overall rating "indicators of effective teaching."[385] The Fraser Institute explains that, because variations in academic achievement cannot be fully explained by any one external indicator, "it seems reasonable, therefore, to include the average test marks […] as indicators of effective teaching'."[386] However, the reasonable nature of this assertion is again called into question by David Johnson's comment that above average children will attain high marks regardless of effective or ineffective teaching practices. Similarly, like many other researchers, Jones, Jones and Hargrove argue that "comparisons among schools and school districts are often meaningless, and scores tend

[383] Tremblay, S., Ross, N., & Berhelot, J. (2004). Ontario Grade Three Achievement. In M. Moll, *Passing the Test; The False Promises of Standardized Testing.* Toronto: Canadian Center for Policy Alternatives. p. 202.
[384] Jones, G., Jones, B. D., & Hargrove, T. Y. (2003). p. 157.
[385] Cowley, P., Easton, S., & Thomas, M. (2012). p. 3.
[386] Ibid. p. 6.

to reflect differences in socioeconomic levels of the families and communities."[387] As a result, it may be a stretch for the Fraser Institute to attribute a variable they cannot adequately explain to effective teaching. However, despite this reality, the results of this research demonstrate that nearly one fifth of parents indicated that they use the school ratings published by the Fraser Institute to see how their child's teacher is performing. It can therefore be seen that all of the primary uses that the Fraser Institute uses to support its ongoing elementary school report card publication are, to some degree, being realized by the parents they are targeting.

WHAT DO PARENTS KNOW ABOUT THE FRASER INSTITUTE?

When I designed this survey, I assumed that a large percentage of parents would be familiar with the Fraser Institute and the school ratings and rankings it produces. However, I was curious to find out whether or not they would be familiar with the Fraser Institute's role with regard to its operation. I asked parents to indicate whether they believed the Fraser Institute was a branch of the Ministry of Education by selecting true, false or don't know. Although 32% of respondents did answer this question correctly, by indicating false, 63% indicated that they didn't know and 5% incorrectly answered that this statement was true. Given that the Fraser Institute asserts that parents are the primary audience of its report card, it is troubling to note that roughly 2/3 of the parents who took part in this research did not know that the Institute operates independently from government.

I also asked parents to indicate whether they believed that the Fraser Institute is responsible for the administration of provincial standardized testing by selecting either true,

[387] Tremblay, S., Ross, N., & Berhelot, J. (2004). p. 157.

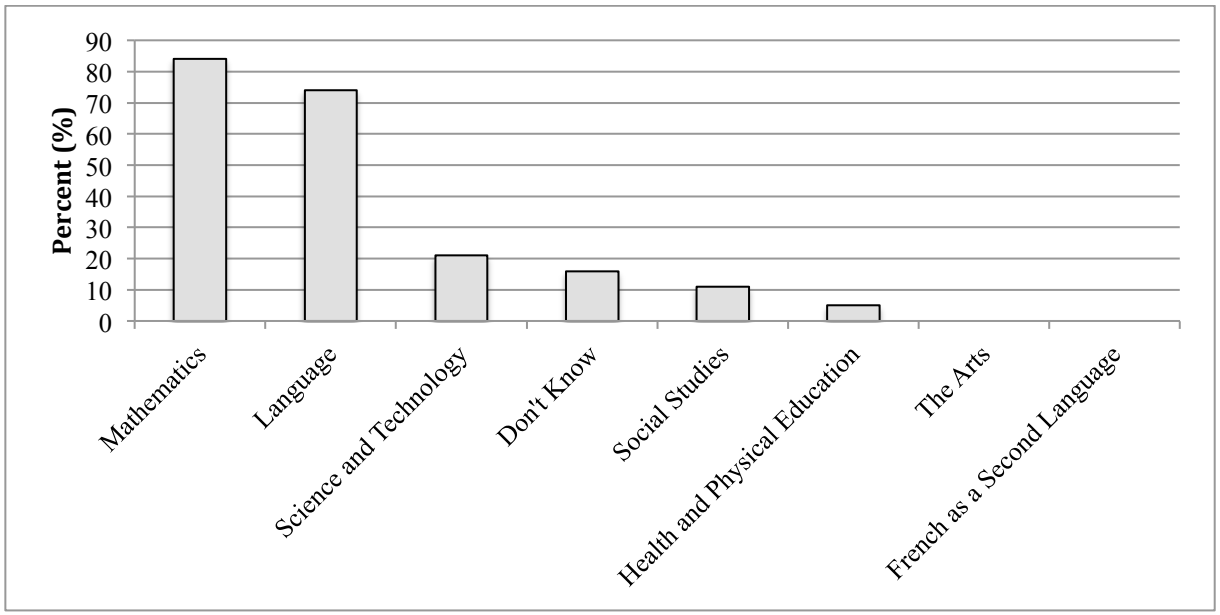
false or don't know. While a higher percentage of parents, 42% answered this question correctly by indicating that this statement is false, 47% indicated that they didn't know and 11% answered incorrectly. This is again somewhat troubling given that if parents think that the Fraser Institute's work is government sponsored, they may misunderstand the Fraser Institute's report card origin. Given that several recent studies indicate a troubling tendency on the part of the media to overlook issues of credibility and reliability when reporting think tank findings,[388] it is concerning to note that many parents appear to use the Fraser Institute's school ratings without properly vetting the source.

Whether or not parents understand the kind of organizational structure that the Fraser Institute is built upon, I was curious to see if they at least understood the subject areas that the Fraser Institute addresses in its school ratings. To do this, I provided parents with an inclusive list of all elementary school subject areas and asked them to select the ones that the Fraser Institute addresses. As can be seen in figure 14, a high percentage of parents selected language and mathematics among the subject areas that the Fraser Institute uses to calculate its overall ratings. However, only 42% of the parents who selected these subject areas selected them exclusively. Given that the Fraser Institute derives its ratings from EQAO scores, and that EQAO only assesses mathematics and language, it follows that these two subject areas are addressed exclusively by the Fraser Institutes report card. Accordingly, the fact that parents think that other subject areas are included in this evaluation is again troubling and indicates that they do not fully understand what the Fraser Institute's report card truly evaluates. Nevertheless, given that Abelson notes that a think tank's media exposure is often seen to equate to its influence in the realm of public policy,[389] the fact that

[388] Yettick, H. (2009). p. 4.
[389] Abelson, D. (2009). p. 92.

the Fraser Institute is a well known Canadian institution may lead parents to incorrectly assume that its findings are legitimate. Moreover, given that the news media has the power to influence public perceptions,[390] parents may mistakenly assign value to the Fraser Institute's rankings give that they commonly appear in well-respected local and national newspapers.

Figure 14. The Curriculum Subject Areas that Participants Believe the Fraser Institute Addresses in its School Ratings and Rankings.

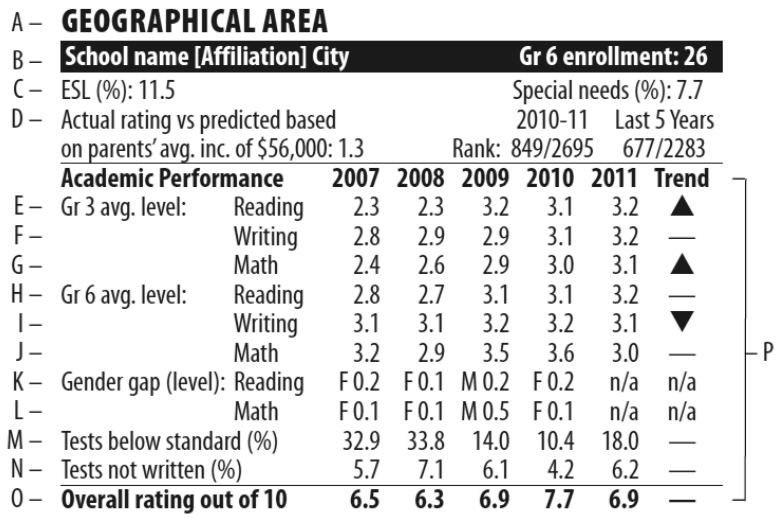


HOW DO PARENTS INTERPRET THE FRASER INSTITUTE'S DETAILED SCHOOL REPORTS?

Before undertaking this research, I found the Detailed School Reports published by the Fraser Institute to be complex and difficult to understand. Given this, I set out to uncover whether or not parents would have the same trouble. Thus, I included a sample Detailed School Report, figure 15, on my survey and asked parents to refer to it to answer the following questions.

[390] Haas, E. (2007). p. 63.

Figure 15. Sample Fraser Institute Detailed School Report Used on Parent Survey.



A – **GEOGRAPHICAL AREA**

B –	**School name [Affiliation] City**						**Gr 6 enrollment: 26**	
C –	ESL (%): 11.5						Special needs (%): 7.7	
D –	Actual rating vs predicted based						2010-11	Last 5 Years
	on parents' avg. inc. of $56,000: 1.3						Rank: 849/2695	677/2283
	Academic Performance		**2007**	**2008**	**2009**	**2010**	**2011**	**Trend**
E –	Gr 3 avg. level:	Reading	2.3	2.3	3.2	3.1	3.2	▲
F –		Writing	2.8	2.9	2.9	3.1	3.2	—
G –		Math	2.4	2.6	2.9	3.0	3.1	▲
H –	Gr 6 avg. level:	Reading	2.8	2.7	3.1	3.1	3.2	—
I –		Writing	3.1	3.1	3.2	3.2	3.1	▼
J –		Math	3.2	2.9	3.5	3.6	3.0	—
K –	Gender gap (level):	Reading	F 0.2	F 0.1	M 0.2	F 0.2	n/a	n/a
L –		Math	F 0.1	F 0.1	M 0.5	F 0.1	n/a	n/a
M –	Tests below standard (%)		32.9	33.8	14.0	10.4	18.0	—
N –	Tests not written (%)		5.7	7.1	6.1	4.2	6.2	—
O –	**Overall rating out of 10**		**6.5**	**6.3**	**6.9**	**7.7**	**6.9**	**—**

P

Source: The Fraser Institute's "Report Card on Ontario's Elementary Schools 2012"

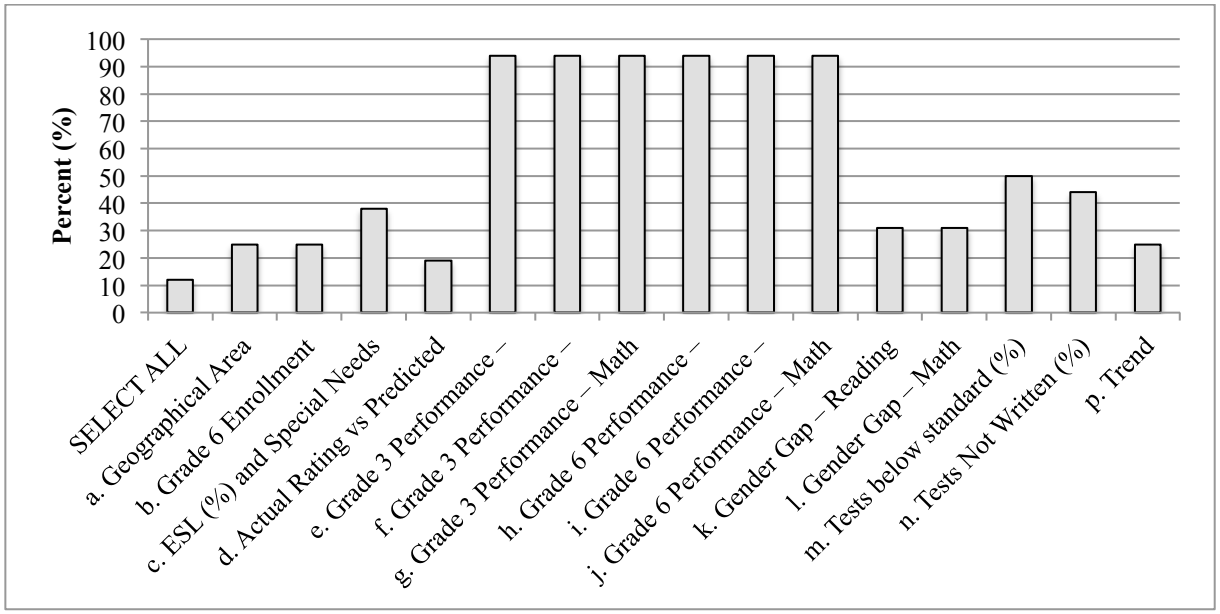
To begin, I asked parents to rate, on a five point scale - which ranged from not at all difficult to extremely difficult - how easy they found the Fraser Institute's Detailed School Report to understand. Given that I found it extremely difficult to understand, I thought that parents would indicate that they felt the same way. This, however , was not the case as only 11% of the parents surveyed indicated that they found the Detailed School Report extremely difficult to comprehend. While a further 22% of the parents surveyed indicated that they found it very difficult to understand, 11% stated that they found it moderately difficult and the majority of parents, 39%, stated that the Detailed School Report was only slightly difficult to understand. Additionally, 17% of the parents who completed the survey said that they found the Detailed School Report not at all difficult to understand. Although these responses were not what I expected, further questions which speak to parents' actual understanding paint a different story.

As previously discussed, only 42% of the parents surveyed for this research were able to correctly identify the two subject areas, language and mathematics, which are

assessed by the Fraser Institute. In a similar manner, I wondered if parents could correctly identify which of the indicators appearing on the Fraser Institute's sample Detailed School Report are actually used to calculate a school's overall rating out of 10. I therefore asked participants to select from an inclusive list of indicators those which they believed were used by the Fraser Institute in its overall rating calculation.

While 94% of parents were able to correctly identify the six performance indicators, the tests below standard indicator was only identified 50% of the time and the two gender gap indicators were only selected 32% of the time. Equally important to note is the fact that none of the parents who participated in this research were able to correctly identify all nine indicators used by the Fraser Institute to calculate its overall ratings. I also found that a significant number of the parents surveyed mistakenly believe that the Fraser Institute takes contextual indicators such as ESL, special needs and parental income into account when compiling their school ratings. Due to this I concluded that, while the majority of the parents who took part in this research indicated finding the Fraser Institute's Detailed School Report only slightly difficult to understand, their actual understandings of the indicators that the Institute uses to calculate its overall ratings are far from correct given that the ratings are actually based on performance indicators 'e' through 'm'.

Figure 16. The Fraser Institute Report Card Indicators that Participants Believe are used to Calculate the Institute's Overall Ratings.



I next asked parents to explain what they thought it meant for a school, like the one featured in the Detailed School Report, to have an overall rating of 6.5/10. Although only 15 parents took the time to respond to this short answer question, 40% of respondents associated this Fraser Institute rating with the actual percentage of students at the school to have met or exceeded the provincial standard. Hence, one parent commented that a score of 6.5/10 means that "only 65% of the students at that school are meeting standard requirements in core subjects." Likewise, another parent commented that an overall rating of 6.5 means that "65% of the school's population (Grade 3 or Grade 6) are performing at or above the predicted average rating," while a third parent commented that this rating "gives an indication of students meeting provincial standards in math and language." Importantly, this is a misconception, given that the Fraser Institute's scores are "derived from EQAO

scores but are not directly equivalent to them."[391]

A further 20% of the parents surveyed indicated that an overall rating of 6.5 is an average or a moderate score while an additional 20% indicated that this is a low score. Moreover, 13% of the parents commented about the 6.5 rating in context with those of the previous years included on the sample Detailed School Report. These parents contended that the school's performance was decreasing as the school had attained higher scores in previous years. The Fraser Institute does not provide a scale indicating what score out of 10 constitutes a poor, good or exceptional rating. Consequently, this type of interpretation is left up to readers to determine and it is therefore interesting to note the variety of interpretations provided by the parents who completed this survey.

The EQAO results used by the Fraser Institute pertain exclusively to grade three and grade six students. It therefore follows that the test results of grade three and grade six students are factored into each school's overall rating. However, the Fraser Institute provides only the number of grade six students enrolled at a school in its contextual indicator on its Detailed School Report s. Due to this, I wanted to determine how many parents mistakenly assumed that the Fraser Institute was only basing their overall ratings on the results of grade six students exclusively. To do this I asked them how many students' test results they thought were factored into the overall rating of the school on the sample detailed report. While parents provided a variety of incorrect answers to this question, two thirds of respondents, 66% indicated that they believe the overall rating was based on the 26 students mentioned in the grade six enrolment statistic located on the Detailed School Report while an additional 13% of respondents simply stated that they did not know. Finally, one parent provided a number of unknown origins. It can therefore be seen that only one respondent

[391] Cowley, P., Easton, S., & Thomas, M. (2012). p. 5.

correctly identified the fact that they did not know the number of grade three students commenting that they "don't know for Grade 3 [but] for Grade 6 it says there are 26 enrolled but in 2011 6.2% didn't write."

Next, I asked parents what they thought the gender gap indicator referred to. This indicator represents the "the difference between male and female students in their average levels of achievement"[392] in math and reading, however, only 25% of the parents surveyed provided answers that indicated that, to some degree, they understood this. For example, one parent observed that the gender gap refers to "the average degree of difference in performance in each category based on the students gender," while another noted that "it's the difference between girls reading/math levels and boys levels." Conversely, another 25% of the parents surveyed indicated that they did not know what the gender gap indicator referred to, and 25% more associated it with the number of male and female students. I believe that this is evidenced in parental comments indicating that the gender gap refers to "how many females vs. males [are] in each grade," or "the percentage of males and females in [the] testing group." Finally, the remaining quarter of respondents failed to link gender and achievement in their explanations of their understandings of the gender gap indicator.

Lastly, I asked parents to explain what they thought the Fraser Institute meant by the indicator labelled 'actual rating vs predicted based on parents' average employment income'. Surprisingly, 60% of the parents surveyed answered this question in a way that implies that they understood that "this statistic compares the school's actual overall rating out of 10 with the rating that is predicted by the average parental employment income in each student's family."[393] However, 27% of the parents who took part in this research indicated that they

[392] Ibid.
[393] Ibid. p. 12.

did not know what this indicator refers to and the remaining 13% provided incorrect answers to this question.

Although this survey does not address whether parents truly need to comprehend the Fraser Institute's Detailed School Reports in order to use them, it nonetheless demonstrates that the majority of parents are unclear as to the actual indicators being measured by the Fraser Institute as well as the portion of students the Institute's report refers to and the specific meanings of several of the indicators. I conclude that, despite the confidence demonstrated by many of the parents who took part in this research, the Fraser Institute's Detailed School Reports are in actuality not that easy for average parents to understand and, in fact, this misunderstanding may result in a misinterpretation of the Fraser Institute's data and rankings.

In an effort to address the misunderstanding that plagues the public reporting of EQAO data in the media, the Canadian Psychological Association and the Canadian Association of School Psychologists has drafted a sample note that they recommend appear in a prominent position alongside any school-by-school publication of test results. The suggested wording is as follows:

> Because children are not randomly assigned to schools, it is impossible to determine the cause of any differences in test results that occur between schools without access to further information. Although (name of the paper) publishes the following results as a service to the public, we strongly discourage the public from making unwarranted comparisons that may lead to erroneous conclusions.[394]

Similar research conducted at the University of Colorado suggests that when publishing think tank research, the media should, at the very least, include full disclosure and label any

[394] Simmer, M. (2000). p. 13.

non-peer-reviewed research it publishes as such.[395] It can therefore be seen that the problems inherent in parental misunderstandings of the Fraser Institute's report card data have been identified by others in academia.

HOW DO PARENTS FEEL ABOUT RANKING ELEMENTARY SCHOOLS?

The final question that I asked the parents who took part in this research was to indicate their reaction to ranking elementary schools. In total, 40% of the parents who responded to this question pointed out that they are in favour of ranking elementary schools as demonstrated by a parent who stated that ranking "should be done," "is very useful," and that "it gives an idea about school's students in comparison with other schools and if they meet provincial standards/how strong they are in math and language and it urges schools to improve their methods of education." Further, speaking in favour of school rankings, one parent passionately noted:

> I think it's essential - and I hate how you can't choose what school to place your child in based on that. My child is going to a Catholic school next year when I'd like him to go to a public school, but the FI rating for the public school is 3.4 compared to 7.8 for the Catholic school. For a parent it's a no-brainer!! Would you willingly and knowingly send your child to a less-effective school when you could send them to a better school where you know (even if just on EQAO results) they are meeting their requirements? As a parent, you want to do what is best for your child. I do realize that special needs students are factored into these assessments and will lower in some cases the results of the schools because they are not equipped to handle these needs - but statistically there can't be that many to pull a school down into the less than 4 range!!!!

Despite this strong show of support for school rankings, an additional 40% of the parents who provided their opinions on school rankings indicated that they were in favour of them in

[395] Yettick, H. (2009). p. 15.

theory, however, they stated that they believe that the current practice needs to be modified. One parent observed that "with better public understanding of what and how [schools] are being evaluated, I think it can be a valuable tool." In a similar manner, another parent stated that they believe "multiple rankings should be used to be more precise." Similarly, a third parent expanded on these ideas stating:

> I think that it can be a good tool for determining how well the children are learning based on a number of factors. However, I think a HUGE part of how well a student learns is the ability of each child's teacher to connect with their students individually and work with their strengths and weaknesses. I have had four children in the elementary school system and I have seen a varying degree of both wonderful teachers that have an extremely positive impact on my child's learning and those who should have chosen a different profession.

Finally, the remaining 13% of the parents who provided their opinions on the ranking of elementary schools stated that they did not think it was a good idea. Among these parents, one noted that the rankings are "difficult to interpret and put into practice," while another stated "I don't believe in it... the teachers at our school specifically prepare and practice the Gr 3 and 6 students to write the provincial tests... hardly a reflection of where they are truly at in their education and knowledge base." These results suggest that parents seem to be split with regard to their opinions regarding the practice of ranking our elementary schools.

While is not the intent of this thesis to determine whether or not the practice of ranking elementary schools is valuable or invaluable, it can be concluded from the findings of this research that if we are to rank our schools, we need to develop a more relative scale upon which to rank them. Speaking to the value of relative performance measures, David Johnson argues that "if we can identify schools where good practices are making a difference, we can, in turn, identify those good practices."[396] However, it appears that designing a system that adequately takes external environmental factors into account

[396] Johnson, D, (2005). p. 5.

presents a complex and troubling reality. Therefore, given that school rankings are inconsistent with EQAO's mandate, it seems erroneous that the results of this organization's testing be used in this manner. Further, given the potentially negative impacts associated with standardized testing practices, Jones, Jones and Hargrove contend that the "potential impacts of testing should be disclosed to participants and the public [given that] honest assessments of the impacts of testing allow test results to be used appropriately and keep abuses of testing to a minimum."[397] As a consequence, one wonders if parents would feel differently about practices of school ratings if they were explicitly made aware of their potential liabilities for students, teachers, schools and school boards.

This chapter has demonstrated that the parents who took part in this research use the Fraser Institute's elementary school report card to judge school quality without fully understanding what the report card is measuring. There is no doubt that this is a problematic reality given that parents who use the Fraser Institute's report card to choose a school for their child, or to see how their child's school is fairing, may be led astray by confusing indicators on individual school reports. In the following and final chapter, this research is concluded and a discussion of the limitations and contributions of this research is provided.

[397] Jones, G., Jones, B. D., & Hargrove, T. Y. (2003). p. 159.

CHAPTER 8 - CONCLUSION

LIMITATIONS OF THE STUDY

There are limitations to the findings of most small-scale research studies. The research presented here is no different in this regard due in part to the fact that extraneous variables, such as school fundraising, extracurricular activities or even teaching style may affect the academic standing of a school. However, as Nagy explains, "many of these factors can only be gauged through a school visit and discussion with teachers, principals and students."[398] Given that the OCDSB did not grant me permission to do research in their schools, individual school visits were not a possibility for this research. Given this, the regression statistics that I have generated do not account for all possible independent variables. Further, it is unclear whether the quantitative findings generated by this study are representative of all Ontario elementary school boards or boundaries within the OCDSB. Additionally, external validity may also be a limitation of this study given the relatively small population of teachers and parents that I gathered quantitative data from as well as the fact that I collected data from a 'convenient' sample of parents. However, despite these inherent flaws, I believe that this research has generated meaningful and relevant data that explores the Fraser Institute's school ratings in context with student demographic indicators, teacher perceptions and parental understanding.

CONTRIBUTIONS TO KNOWLEDGE

This research has clearly demonstrated that standardized test results cannot stand independently of class and other demographic factors to produce a valid point of school

[398] Shaker, E. (2004). p. 203.

comparison. In contrast to the Fraser Institute's *No* response to the question *isn't the report card just a way to distinguish the "have" schools from the "have not" schools?*, this research clearly demonstrates a strong relationship between the Fraser Institute's elementary school report card scores, school zone demographics and/or student body characteristics.

This research provides evidence that teacher perceptions regarding the public unveiling of the Fraser Institute's annual Report card on Ontario's elementary schools are quite negative. Additionally, this research demonstrates that individual teacher opinions closely align with the negative public opinions expressed by numerous teachers' federations.

For the most part, this thesis offers evidence to demonstrate that parents, for the most part, do not clearly understand how the Fraser Institute rates and ranks elementary schools. Further, while it is evident that parents use the published rankings to evaluate and choose schools for their children, it is also evident that these decisions are based on poorly understood information.

Finally, this research indicates a strong need for additional research and inquiry into measures of school performance. Given that school reform is often rooted in measures of school performance, this research highlights the fact that any measurement must be conducted in an equitable fashion if it is to produce effective change.

THESIS CONCLUSION

At the onset of this report I referenced the ninth frequently asked question that appears on the School Performance Section of the Fraser Institute's website which asks "Isn't the report card just a way to distinguish the 'have' schools from the 'have not' schools?" Although the Fraser Institute does admit that "it is sometimes easier for schools to

successfully teach children who enjoy many advantages at home," [399] it contends that in disadvantaged areas, "successful teachers overcome such impediments." [400] Further, in our conversation, Peter Cowley reiterated this position by stating that low income/high needs schools may perform poorly because they lack successful and well-trained, qualified teachers. However, based on the quantitative analysis presented in this report, school performance is correlated with much more than the effectiveness of its teaching pedagogy. The student demographic indicators analyzed in this report account for roughly two thirds of the variation in the Fraser Institute's Overall Ratings for elementary schools in the OCDSB. As such, it can be seen that the Fraser Institute's School Ratings do, to some degree, separate the 'have schools' from the 'have not' schools.

The Fraser Institute asserts that its Report Card "provides a detailed picture of each school that is not easily available elsewhere."[401] Yet the research presented here clearly indicates that the Fraser Institute's Overall Ratings are strikingly similar to the overall percentage of a school's students meeting or exceeding the provincial standard on grade 3 and grade 6 EQAO reading, writing and mathematics assessments. Thus, it can be seen that the Fraser Institute's Elementary School Report card is, at essence, a repackaging of EQAO assessment data. Consequently, very similar information can be obtained from the source given that EQAO provides school, school board and provincial results on its website. Further, the School Reports published by EQAO include student demographic data not considered by the Fraser Institute and clearly indicate that readers should consider the challenges presented by a school's student population. Thus, given the redundancy of the

[399] Fraser Institute. (2013). *School Performance: Frequently Asked Questions.* Retrieved from http://www.fraserinstitute.org/report-cards/school-performance/frequently-asked-questions.aspx#q9
[400] Cowley, P., Easton, S., & Thomas, M. (2012). p. 6.
[401] Cowley, P., Easton, S., & Thomas, M. (2012). p. 3.

Fraser Institute's School Ratings, and the extra information provided in EQAO's School Reports, it would seem that the Fraser Institute's objective to create a publically accessible school performance document has already been met by EQAO.

Moreover, the Fraser Institute's choice to omit demographic indicators from its Overall Ratings can be seen as an unsanctioned use of EQAO's assessment data given the importance EQAO places on context with regard to the interpretation of the achievement results it collects. As such, it would seem that EQAO ought to take a stronger stance educating the public about the incomparability of its assessment results.

The parents who took part in this research demonstrated a clear lack of understanding regarding the Fraser Institute, the Fraser Institute's Individual School Reports and the Fraser Institute's Overall Rating calculations. While Cowley contends that additional explanatory information is available to parents who seek clarification, it can be seen that this information is not being sought. Therefore, parents may be basing fundamental decisions regarding their children's education on information they do not fully understand.

Further, the elementary teachers who took part in this research demonstrate a clear hesitancy regarding the usefulness of the Fraser Institute's school ratings to help parents select a school for their children or to facilitate school improvement. Based on their responses, this hesitancy can be largely attributed to the lack of context factored into the Fraser Institute's Overall Ratings. Additionally, because context is not considered, the teachers who participated in this research indicated that that the Fraser Institute's school report card is not reflective of quality of classroom instruction. Additionally, none of these teachers saw the Fraser Institute's Report Card on Ontario's Elementary Schools as

positively affecting morale in low ranking schools. Thus, the ability of the Institute's report card to motivate poorly performing schools is somewhat questionable.

With regard to the results of EQAO testing, The Dufferin-Peel Catholic District School Board asserts that:

> It is important to emphasize that the assessment results should not be used to rank schools, they should be used to improve teaching and learning. Ranking provides no information about why scores are high or low; it invites simplistic and misleading comparisons that ignore the particular circumstances affecting achievement in each school and it distracts from addressing the more critical issues of how to improve learning for all students.[402]

The results of this study fully support this position. Overall, the research presented here suggests that the Fraser Institute's Report Card on Ontario's Elementary Schools is difficult for parents to understand, doubted by teachers, and little more than a repackaging of EQAO assessment results. Thus, it would seem that the Fraser Institute may want to leave the assessment of Ontario's elementary schools in the hands of EQAO given that both organizations are working to meet the same objectives.

[402] Dufferin-Peel Catholic District School Board. (2008). *EQAO*. Retrieved from http://www.dpcdsb.org/CEC/Schools/EQAO.htm

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APPENDICES

Appendix 1: An Explanation of the Indicators Found in the Fraser Institute's Detailed School Report

A. Geographical area The schools are grouped into geographical areas. To find a school's results, find its location in the "List of cities and geographical areas" and note its geographical area. Find the geographical area in the "Index of geographical areas" and note the page on which its results begin. Within each geographical area, the schools are listed in alphabetical order.

B. (left) School name, affiliation, and city The school name, its affiliation—public, Catholic, or private—and the city in which the school is located.

B. (right) Grade-6 enrollment The number of students eligible to participate in the grade-6 tests. Indicator results for schools with small enrollments tend to be more variable than do those for larger schools. For this reason it is particularly important to consider previous results as well as those for the most recent year.

C. ESL (%); Special needs (%) These statistics report the percentage of the students for whom English is a second-language and the percentage of students with special needs. When you want to compare academic results, these statistics can be used to find other schools were the student body has similar characteristics.

D. (left) Actual rating vs predicted based on parents' average employment income This statistic compares the school's actual Overall rating out of 10 with the rating that is predicted by the average parental employment income in each student's family. A positive difference suggests that the school is effective in enabling its students to succeed regardless of their family's characteristics.

D. (right) Rank The school's overall academic rank in the province for 2010/2011 and for the most recent five years. The rankings show how the school has done academically compared to the other schools in the Report Card. A high ranking over five years indicates consistently strong results at the school.

E to J. Gr 3 avg score and Gr 6 avg score The average level achieved by the students on the grade-3 and grade-6 EQAO tests. The EQAO assigns a level of achievement to each completed test. Achievement at Levels 1 and 2 suggest that the student has not yet met the provincial standard. Level 3 is considered the provincial standard and Level 4 represents achievement well above the expected level. Thus, achievement at Level 3 or 4 suggests that students are well prepared for work at the next grade. In order to calculate the average level, a numerical value was given to each level of achievement. Thus, Level 1 was given a value of 1 for purposes of determining the average; Level 2, a value of 2; Level 3, a value of 3; and Level 4, a value of 4. In those cases where a student completed the test but did not demonstrate sufficient understanding to be assigned achievement Level 1, the test was given

a value of 0.

K & L. Gr 7 gender gap The difference (in average level of achievement) between girls and boys in the grade-6 reading and mathematics tests. Where the difference favours the girls, the value is preceded by an F. Where boys are favoured, the value is preceded by an M. An E means that there is no difference between the girls and the boys on this measure. Smaller differences indicate that the school is doing a good job for all its students.

M. Tests below standard The percentage of all the completed tests written by students at the school that were judged to be below Level 3. A low percentage of Tests below standard (%) indicates that the school is successful in ensuring that most of its students are meeting or exceeding the provincial standard of performance for the grade.

N. Tests not written (%) The percentage of the tests that could have been completed by the school's students but which were not assigned an overall score. The percentage, Tests not written, takes into account tests not written by students for whom no results were received by the EQAO or who were exempt from writing the tests.

O. Overall rating out of 10 *The Overall rating out of 10* takes into account the nine indicators described in E through M above to answer the question, "In general, how is the school doing academically compared to other schools in the Report Card?"

P. Trends An upward-pointing arrow at the end of an indicator row means that the school is probably improving on that indicator. A downward-pointing arrow means that the school is probably getting worse. The researchers had to be at least 90% sure that the changes were not just random before indicating a trend. A dash indicates that there is no significant change. Where insufficient data were available, "n/a" appears in the column. Note that for the two Gender gap indicators, Tests not written, and Tests below standard a downward trend in the data will lead to an upward-pointing arrow in the trend column. For example, a decreasing Tests below standard (%) indicates improvement and so an upward-pointing arrow is displayed.

Source: The Fraser Institute's "Report Card on Ontario's Elementary Schools 2012," pg 10 - 13.

Appendix 2: Teacher Survey

1. Your Profile: Please select all information that describes you.

Gender	Current Teaching Division	Current Teaching Grade			Language of Instruction
☐ Male	☐ Primary/Junior	☐ JK/SK	☐ 3	☐ 6	☐ Core French
☐ Female	☐ Junior/Intermediate	☐ 1	☐ 4	☐ 7	☐ French Emersion
		☐ 2	☐ 5	☐ 8	☐ English

2. Experience: How long have you been teaching?

☐ 1-5 Years	☐ 11-15 Years	☐ 21-25 Years
☐ 5-10 Years	☐ 16-20 Years	☐ 25+ Years

3. Your School: Is your school designated as an OFIP school?

☐ Yes ☐ No

4. Fraser Institute: The Fraser Institute uses EQAO data to produce its yearly *Report Card on Ontario's Elementary Schools*. Please rate your responses to the statements below.

	Strongly Agree	Disagree	Neutral	Agree	Strongly Agree
A. The *Report Card on Ontario's Elementary Schools* assists parents when they choose a school for their children.	☐	☐	☐	☐	☐

Please explain your answer:

_____

_____

	Strongly Agree	Disagree	Neutral	Agree	Strongly Agree
B. The *Report Card on Ontario's Elementary Schools* encourages and assists all those seeking to improve their school.	☐	☐	☐	☐	☐

Please explain your answer:

_____

_____

(Abelson, 2009) (Alreck & Settle, 2003) (Anderson & Jaafar, 2006; Au, 2009)

	Strongly Agree	Disagree	Neutral	Agree	Strongly Agree

C. The act of publicly rating and ranking schools attracts attention that provides motivation for poorly performing schools to improve.	☐	☐	☐	☐	☐

Please explain your answer:

	Strongly Agree	Disagree	Neutral	Agree	Strongly Agree
D. The *Report Card on Ontario's Elementary Schools* is representative of the quality of classroom instruction being offered to students.	☐	☐	☐	☐	☐

Please explain your answer:

5. School Ranking: Please describe your reaction to reading about your school's ranking in Fraser Institute report.

6. School Ranking: Have any parents expressed opinions or reactions to the ranking of your school in the Fraser Institute report?

7. School Ranking: Have any parents commented on the Fraser Institute's school rankings and its relationship to the teaching abilities of your school's staff?

☐ Yes ☐ No

Please explain your answer:

8. Opinion: Based on your experience, pleaser rate how the public unveiling of the Fraser Institute's annual report card affects teacher morale in the following schools:

	Very Negatively	Negatively	Neutral	Positively	Very Positively
A. High-Ranking schools	☐	☐	☐	☐	☐
B. Low-Ranking schools	☐	☐	☐	☐	☐

9. Opinion: What is your view on ranking elementary schools?

☐ Positive	☐ Negative	☐ No Reaction

Please explain your answer:

---

10. Interview: Would you be willing to take part in a one-hour interview session, where your identity would be confidential and known only to the researcher, to discuss your views of the Fraser Institute's annual *Report Card on Ontario's Elementary Schools*?

☐ Yes ☐ No

If YES → Please send a brief email indicating your willingness to participate to the researcher, Katrina Isacsson, at kisac015@uottawa.ca

Appendix 3: Parent Survey

1. Your Profile: Please select all information that describes you.

Your Gender:

- ☐ Male
- ☐ Female

Your Age:

- ☐ Under 20
- ☐ 21 – 25
- ☐ 26 – 30
- ☐ 31 – 35
- ☐ 36 – 40
- ☐ 41 – 45
- ☐ 46 – 50
- ☐ 51 – 55
- ☐ 56 – 60
- ☐ Over 60

Child's Grade *(If more than one child, select multiple grades)*

- ☐ JK
- ☐ SK
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7
- ☐ 8

2. Familiarity: Please rate your current familiarity with the Fraser Institute.

Not at All Familiar	Slightly Familiar	Moderately Familiar	Very Familiar	Extremely Familiar
☐	☐	☐	☐	☐

3. Familiarity: Have you ever read the elementary school ratings/rankings published by the Fraser Institute?

☐ Yes ☐ No

If YES → Please check why you read the Fraser Institute's school ratings/rankings *(check all that apply)*.

- ☐ To see how my child's school was performing
- ☐ To see how my child's teacher was performing
- ☐ To help select a school for my child
- ☐ To help select a neighborhood to live in
- ☐ Other:_____

4. Familiarity: With respect to the statements below, please rate your responses as true, false or don't know.

	True	False	Don't Know
a. The Fraser Institute is a branch of the Ministry of Education.	☐	☐	☐
b. The Fraser Institute is responsible for the administration of provincial standardized testing.	☐	☐	☐

5. Familiarity: To the best of your knowledge, please select the curriculum subject areas the Fraser Institute addresses in its elementary school rankings *(check all that apply)*.

- ☐ Science and Technology
- ☐ Language
- ☐ The Arts
- ☐ French as a Second Language
- ☐ Social Studies
- ☐ Mathematics
- ☐ Health and Physical Education

Fraser Institute School Rating: Below is a sample of the *Detailed School Report* that the Fraser Institute publishes for each of the Ontario schools that they rate. After reviewing the sample, please answer the questions below.

A – **GEOGRAPHICAL AREA**

B –	**School name [Affiliation] City**						**Gr 6 enrollment: 30**	
C –	ESL (%): 10.0						Special needs (%): 23.3	
D –	Actual rating vs predicted based on parents' avg. inc. of $40,000: 1.1						2009-10 Rank: 1114/2733	Last 5 Years 465/2327
	Academic Performance		**2006**	**2007**	**2008**	**2009**	**2010**	**Trend**
E –	Gr 3 avg. level:	Reading	3.0	2.7	2.8	2.3	2.4	▼
F –		Writing	2.8	2.9	3.2	2.7	2.8	—
G –		Math	2.9	3.3	3.2	3.0	3.0	—
H –	Gr 6 avg. level:	Reading	2.6	2.8	2.8	2.9	3.0	▲
I –		Writing	2.8	2.9	2.9	2.9	2.9	—
J –		Math	2.7	3.0	2.9	3.0	2.8	—
K –	Gender gap (level):	Reading	E	n/a	F 0.1	F 0.4	n/a	n/a
L –		Math	E	n/a	F 0.1	E	n/a	n/a
M –	Tests below standard (%)		28.1	18.7	20.8	23.5	28.2	—
N –	Tests not written (%)		14.4	11.0	11.5	0.0	0.0	▲
O –	**Overall rating out of 10**		**7.0**	**8.2**	**7.9**	**6.7**	**6.5**	—

P

6. Detailed School Report: In your opinion, how easy is the Fraser Institute's Detailed School Report to understand?

Not at All Difficult	Slightly Difficult	Moderately Difficult	Very Difficult	Extremely Difficult
☐	☐	☐	☐	☐

7. Detailed School Report: Each of the indicators listed below appear on the Fraser Institutes detailed school report. Please check the indicators that you believe the Fraser Institute uses to calculates a school's *overall rating out of 10*.

- ☐ All
- ☐ Geographical Area
- ☐ Grade 6 Enrollment
- ☐ ESL (%) and Special Needs (%)
- ☐ Actual Rating vs Predicted Based on Parents' Avg. Inc.
- ☐ Grade 3 Performance – Reading
- ☐ Grade 3 Performance – Writing
- ☐ Grade 3 Performance – Math
- ☐ Grade 6 Performance – Reading
- ☐ Grade 6 Performance – Writing
- ☐ Grade 6 Performance – Math
- ☐ Gender Gap – Reading
- ☐ Gender Gap – Math
- ☐ Tests below standard (%)
- ☐ Tests Not Written (%)
- ☐ Trend

8. Detailed School Report: Use the sample detailed school report (located above) to answer the following questions. Please be as detailed as possible in your answers.

a. In your **own words**, what do **you think** it means for a school to have an overall rating of 6.5/10?

b. To the **best of your knowledge**, how many students' test results are factored into this school's overall rating?

c. What do **you think** indicator K (gender gap) refers to?

d. Indicator D is labeled "actual rating vs predicted based on parents' average employment income." To the **best of your knowledge**, what do **you think** this means?

9. Opinion: What is your reaction to ranking elementary schools?

Appendix 4: Fraser Institute's Overall Rating Formula

The *Overall rating out of 10* is intended to answer the question, "In general, how is the school doing academically compared to other schools in the Report Card?" The following is a simplified description of the procedure used to convert the data received from the Ministry of Education into the *Overall rating out of 10*.

1. Subject by subject, the *Average levels* and *Tests below standard* values for each school were standardized by calculating *Z*, which is defined by:

$$Z = (X - \mu) / \sigma$$

where X is the individual school's result, μ is the mean of the all-schools distribution of results, and σ is the standard deviation of the same all-schools distribution.

2. The subject-by-subject standardized data for *Tests below standard* were then aggregated to produce a weighted average standardized value. The weighting used was the number of student writers in each subject relative to the total number of student writers of the relevant tests.

3. This weighted average result for *Tests below standard* was then re-standardized.

4. The *Gender gap* values in grade-6 reading and mathematics were each calculated by determining the absolute value of the difference in the level of achievement of male students and female students at the school. The results for each subject were then standardized.

5. The nine standardized indicator results were then combined to produce a weighted average summary standardized score for the school. The weightings used in these calculations were: *Average level* for each of the six tests—8.3%; *Gender gap* for each of the grade-6 reading and grade-6 mathematics tests: 10%; *Tests below standard*—30%. For schools for which there were no gender gap results, the weightings used were: *Average level* for each of the six tests—10.4%; *Tests below standard*—37.5%.

6 This summary standardized score was re-standardized.

This standardized score was converted into an overall rating between 0 and 10 as follows:

7 The allowable maximum and minimum standardized scores were set at 2.2 and –3.29 respectively. Scores equal to, or greater than, 2.2 receive an overall rating of 10. This cut-off was chosen because it allows more than one school in a given year to be awarded 10 out of 10. Scores of equal to, or less than, –3.29 receive the lowest overall rating of 0. Schools with scores below –3.29 are likely to be outliers, a statistical term used to denote members of a population that appear to have characteristics substantially different from the rest of the population. We chose, therefore, to set the minimum score so as to disregard such extreme differences.

8. The resulting standardized scores were converted into *Overall ratings out of 10* according to the formula:

$$OR = \mu + (\sigma * StanScore)$$

where *OR* is the resulting *Overall rating out of 10*, μ is the average calculated according to the formula:

$$\mu = (ORmin - 10\ (Zmin / Zmax)) / (1 - (Zmin / Zmax))$$

where σ is the standard deviation calculated according to the formula:

$$\sigma = (10 - \mu) / Zmax$$

and StanScore is the standardized score calculated in (6) above and adjusted as required for minimum and maximum values as noted in (7) above. As noted in (7) above, *ORmin* equals zero, *Zmi*n equals −3.29; and *Zmax* equals 2.2.

9. Finally, the derived *Overall rating out of 10* is rounded to one place of the decimal to reflect the significant number of places of the decimal in the original raw data.

Note that the *Overall rating out of 10*, based as it is on standardized scores, is a relative rating. That is, in order for a school to show improvement in its *Overall rating out of 10*, it must improve more than the average. If it improves, but at a rate less than the average, it will show a decline in its rating.

Source: The Fraser Institute's "Report Card on Ontario's Elementary Schools 2012," pg 227-228.

Appendix 5: Regression Outputs

Regression Statistics – Average Family Income	
Multiple R	0.72
R Square	0.52
Adjusted R Square	0.51
Standard Error	1.29
Observations	68.00

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1.00	118.74	118.74	71.85	0.00
Residual	66.00	109.07	1.65		
Total	67.00	227.81			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	2.08	0.50	4.15	0.00	1.08	3.08	1.08	3.08
Average Family Income	0.00	0.00	8.48	0.00	0.00	0.00	0.00	0.00

Regression Statistics – Some University	
Multiple R	0.75
R Square	0.57
Adjusted R Square	0.56
Standard Error	1.22
Observations	68.00

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1.00	128.79	128.79	85.83	0.00
Residual	66.00	99.03	1.50		
Total	67.00	227.81			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	1.57	0.51	3.07	0.00	0.55	2.59	0.55	2.59
Some University	0.08	0.01	9.26	0.00	0.07	0.10	0.07	0.10

Regression Statistics – No High School	
Multiple R	0.60
R Square	0.36
Adjusted R Square	0.35
Standard Error	1.49
Observations	68.00

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1.00	81.73	81.73	36.93	0.00
Residual	66.00	146.08	2.21		
Total	67.00	227.81			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	7.16	0.25	28.62	0.00	6.66	7.66	6.66	7.66
No High School	-0.21	0.03	-6.08	0.00	-0.28	-0.14	-0.28	-0.14

Regression Statistics – University Degree	
Multiple R	0.76
R Square	0.57
Adjusted R Square	0.57
Standard Error	1.22
Observations	68.00

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1.00	130.20	130.20	88.04	0.00
Residual	66.00	97.61	1.48		
Total	67.00	227.81			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	2.05	0.46	4.49	0.00	1.14	2.96	1.14	2.96
University Degree	0.08	0.01	9.38	0.00	0.06	0.10	0.06	0.10

Regression Statistics – English Language Learners	
Multiple R	0.50
R Square	0.25
Adjusted R Square	0.23
Standard Error	1.61
Observations	68.00

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1.00	55.99	55.99	21.51	0.00
Residual	66.00	171.82	2.60		
Total	67.00	227.81			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	7.16	0.30	23.95	0.00	6.56	7.75	6.56	7.75
English Language Learners	-0.05	0.01	-4.64	0.00	-0.07	-0.03	-0.07	-0.03

Regression Statistics – Special Education Students	
Multiple R	0.48
R Square	0.23
Adjusted R Square	0.22
Standard Error	1.63
Observations	68.00

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1.00	52.34	52.34	19.69	0.00
Residual	66.00	175.48	2.66		
Total	67.00	227.81			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	8.19	0.51	16.11	0.00	7.17	9.20	7.17	9.20
Special Education Students	-0.11	0.03	-4.44	0.00	-0.16	-0.06	-0.16	-0.06

Regression Statistics – English Language Learners and Special Education Students	
Multiple R	0.70
R Square	0.49
Adjusted R Square	0.48
Standard Error	1.34
Observations	68.00

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2.00	111.92	55.96	31.38	0.00
Residual	65.00	115.90	1.78		
Total	67.00	227.81			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	9.34	0.46	20.24	0.00	8.42	10.26	8.42	10.26
English Language learners	-0.05	0.01	-5.78	0.00	-0.07	-0.03	-0.07	-0.03
Special Education Students	-0.12	0.02	-5.60	0.00	-0.16	-0.08	-0.16	-0.08

Regression Statistics – English Language Learners	
Multiple R	0.50
R Square	0.25
Adjusted R Square	0.23
Standard Error	1.61
Observations	68.00

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1.00	55.99	55.99	21.51	0.00
Residual	66.00	171.82	2.60		
Total	67.00	227.81			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	7.16	0.30	23.95	0.00	6.56	7.75	6.56	7.75
English Language Learners	-0.05	0.01	-4.64	0.00	-0.07	-0.03	-0.07	-0.03

Regression Statistics – Special Education Students	
Multiple R	0.48
R Square	0.23
Adjusted R Square	0.22
Standard Error	1.63
Observations	68.00

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1.00	52.34	52.34	19.69	0.00
Residual	66.00	175.48	2.66		
Total	67.00	227.81			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	8.19	0.51	16.11	0.00	7.17	9.20	7.17	9.20
Special Education Students	-0.11	0.03	-4.44	0.00	-0.16	-0.06	-0.16	-0.06

Regression Statistics – English Language Learners and Special Education Students	
Multiple R	0.70
R Square	0.49
Adjusted R Square	0.48
Standard Error	1.34
Observations	68.00

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2.00	111.92	55.96	31.38	0.00
Residual	65.00	115.90	1.78		
Total	67.00	227.81			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	9.34	0.46	20.24	0.00	8.42	10.26	8.42	10.26
English Language learners	-0.05	0.01	-5.78	0.00	-0.07	-0.03	-0.07	-0.03
Special Education Students	-0.12	0.02	-5.60	0.00	-0.16	-0.08	-0.16	-0.08

Regression Statistics – Average Family Income, English Language Learners ad Special Needs Students	
Multiple R	0.80
R Square	0.64
Adjusted R Square	0.62
Standard Error	1.13
Observations	68.00

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	3.00	146.09	48.70	38.13	0.00
Residual	64.00	81.73	1.28		
Total	67.00	227.81			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	6.22	1.09	5.70	0.00	4.04	8.41	4.04	8.41
Average Family Income	0.00	0.00	3.46	0.00	0.00	0.00	0.00	0.00
English Language Learners	-0.02	0.01	-1.58	0.12	-0.04	0.00	-0.04	0.00
Special Needs Students	-0.11	0.02	-4.56	0.00	-0.15	-0.06	-0.15	-0.06

Regression Statistics – University Degree, English language Learners and Special Education Students	
Multiple R	0.84
R Square	0.71
Adjusted R Square	0.69
Standard Error	1.02
Observations	68.00

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	3.00	161.30	53.77	51.74	0.00
Residual	64.00	66.51	1.04		
Total	67.00	227.81			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	5.89	0.80	7.40	0.00	4.30	7.48	4.30	7.48
English Language Learners	-0.03	0.01	-3.03	0.00	-0.04	-0.01	-0.04	-0.01
Special Needs Students	-0.09	0.02	-4.59	0.00	-0.14	-0.05	-0.14	-0.05
University Degree (Parent)	0.05	0.01	5.41	0.00	0.03	0.07	0.03	0.07

Appendix 6: Electronic Research Invetation - Teacher

Project Title: "If It Matters… Measure It" – The Fraser Institute, Socioeconomics and School Performance

Dear Sir or Madam:

You are invited to participate in the above mentioned research study conducted by Katrina Isacsson and supervised by Professor Lorna McLean.

The purpose of the study is to evaluate the Fraser Institute's ability to compare schools based on the results of provincial standardized testing, to better understand how elementary teachers perceive the public unveiling of the Fraser Institute's annual Report Card on Ontario's Elementary Schools and to determine the degree to which parents comprehend the meaning of these rankings.

Your participation in the study will consist of completing a brief questionnaire that will take approximately ten minutes to complete. The questionnaire will be conducted anonymously will be used only for the purposes explained above. Any information you share will remain strictly confidential.

Your participation in this study will allow the researcher to collect data that will be used ascertain how elementary teachers perceive the public unveiling of the Fraser Institute's annual Report Card on Ontario's Elementary Schools. It will also allow the researcher to publish the results of this study for the benefit of educators, academics and the general public.

You are under no obligation to participate in this study. If you choose to participate, you may withdraw from the study at any time. However, given the anonymous nature of this survey, should you choose to withdraw, any data you have provided will remain in the study. You may refuse to answer any questions, without suffering any negative consequences.

If you would like to take part in this research, you can do so by clicking the link below. The link will direct you to a digital survey regarding your perceptions of the Fraser Institute's school rankings. Please note, before taking the survey, you will be required to provide informed consent.

http://fluidsurveys.com/s/fraser-institute-teacher-survey/

If you have any questions about the study, you may contact the researcher, or the researcher's supervisor, at the coordinates listed below.

Researcher: Katrina Isacsson, Faculty of Education, University of Ottawa

Supervisor: Prof. Lorna McLean, PhD, Faculty of Education, University of Ottawa

If you have any ethical concerns regarding your participation in this study, you may contact the Protocol Officer for Ethics in Research, University of Ottawa, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5, (613) 562-5387, ethics@uottawa.ca

You may print a copy of this email for your reference.

Appendix 7: Survey Consent Form – Teacher

Title of the Study: "If It Matters… Measure It" - The Fraser Institute, Socioeconomics and School Performance

The purpose of the study is to evaluate the Fraser Institute's ability to compare schools based on the results of provincial standardized testing, better understand how elementary teachers perceive the public unveiling of the Fraser Institute's annual Report Card on Ontario's Elementary Schools and to determine the degree to which parents comprehend the meaning of these rankings.

Your participation in the study will consist of completing a brief questionnaire that will take approximately fifteen minutes to complete. Additionally, if you indicate that you are interested, you may also be contacted for an interview. This interview will take approximately one hour to complete and will be scheduled at a time and place that best suits you.

The information you share will remain strictly confidential. The contents of the questionnaire and interview session will be used only for the purposes explained above. Your confidentiality will be protected as surveys will be conducted anonymously and interviewees will not be identified.

Your participation in this study will allow the researcher to collect data that will be used to determine how elementary teachers perceive the Fraser Institute's school rankings. It will also allow the researcher to publish the results of this study for the benefit of educators, academics and the general public.

Electronic survey data will at first be stored online in the researcher's password protected FluidSurvey account. Once data collection is complete, this information will be digitally downloaded from FluidSurvey and immediately removed from their server. A copy of the digital data will then be kept by the research supervisor in a password-protected file on a University of Ottawa campus computer. Additionally, a copy of the data will also be kept on the researchers computer in a password-protected file. All data will be securely destroyed five years after the completion of this research project.

By filling out and submitting the questionnaire you consent to participate. However, are under no obligation to participate in this study. If you choose to participate, you may withdraw from the study at any time. However, given the anonymous nature of this survey, should you choose to withdraw, any data you have provided will remain in the study. You may refuse to answer any questions, without suffering any negative consequences.

If you have any questions about the study, you may contact the researcher, or the researcher's supervisor, at the coordinates listed below.

Researcher: Katrina Isacsson, Faculty of Education, University of Ottawa

Supervisor: Prof. Lorna McLean, Faculty of Education, University of Ottawa

If you have any ethical concerns regarding your participation in this study, you may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5, (613) 562-5387, ethics@uottawa.ca

You may print a copy of this form for your reference.

(Participants were asked to click accept or decline – Participants who declined were terminated from the survey)

- ☐ **Accept:** I ***agree*** to participate in the above research study conducted by Katrina Isacsson of the Faculty of Education. This research is under the supervision of Professor Lorna McLean.
- ☐ **Decline:** I ***do not wish to participate*** in the above research study conducted by Katrina Isacsson of the Faculty of Education. This research is under the supervision of Professor Lorna McLean.

Appendix 8: Research Invitation Letter – Parent

Title of the Study: "If It Matters… Measure It" - The Fraser Institute, Socioeconomics and School Performance

Dear Sir or Madam:

You are invited to participate in the above mentioned research study conducted by Katrina Isacsson and supervised by Professor Lorna McLean.

The purpose of the study is to evaluate the Fraser Institute's ability to compare schools based on the results of provincial standardized testing, to better understand how elementary teachers perceive the public unveiling of the Fraser Institute's annual Report Card on Ontario's Elementary Schools and to determine the degree to which parents comprehend the meaning of these rankings.

Your participation in the study will consist of completing a brief questionnaire that will take approximately fifteen minutes to complete. The contents of the interview session will be used only for the purposes explained above and the information you share will remain strictly confidential.

Your participation in this study will allow the researcher to collect data that will be used to determine the degree to which parents use and comprehend the Fraser Institutes school rankings. It will also allow the researcher to publish the results of this study for the benefit of educators, academics and the general public.

The information you share will remain strictly confidential. The contents of the questionnaire will be used only for the purposes explained above. Your confidentiality will be protected and names will not be collected on surveys.

You are under no obligation to participate in this study. If you choose to participate, you may withdraw from the study at any time. However, given the anonymous nature of this survey, should you choose to withdraw, any data you have provided will remain in the study. You may refuse to answer any questions, without suffering any negative consequences.

If you have any ethical concerns regarding your participation in this study, you may contact the Protocol Officer for Ethics in Research, University of Ottawa, 550 Cumberland Street, Room 159, Ottawa, Ontario K1N 6N5, (613) 562-5841, ethics@uottawa.ca.

If you have any questions about the study, you may contact the researcher, or the researcher's supervisor, at the coordinates listed below.

Researcher: Katrina Isacsson, Faculty of Education, University of Ottawa

Supervisor: Prof. Lorna McLean, PhD, Faculty of Education, University of Ottawa

If you have any ethical concerns regarding your participation in this study, you may contact the Protocol Officer for Ethics in Research, University of Ottawa, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5, (613) 562-5387, ethics@uottawa.ca

Appendix 9: Survey Consent Form – Parent

Title of the Study:	"If It Matters… Measure It" - The Fraser Institute, Socioeconomics and School Performance
Researcher:	Katrina Isacsson, Faculty of Education, University of Ottawa, kisac015@uottawa.ca, (613) 889-2142
Supervisor:	Prof. Lorna McLean, PhD, Faculty of Education, University of Ottawa, lrmclean@uotawa.ca, (613) 562-5800 ext 4045
Invitation to Participate:	You are invited to participate in the above mentioned research study conducted by Katrina Isacsson and supervised by Professor Lorna McLean.
Purpose of the Study:	The purpose of the study is to evaluate the Fraser Institute's ability to compare schools based on the results of provincial standardized testing, to better understand how elementary teachers perceive the public unveiling of the Fraser Institute's annual Report Card on Ontario's Elementary Schools and to determine the degree to which parents comprehend the meaning of these rankings.
Participation:	Your participation in the study will consist of completing a brief questionnaire that will take approximately fifteen minutes to complete.
Benefits:	Your participation in this study will allow the researcher to collect data that will be used to determine the degree to which parents use and comprehend the meaning of the Fraser Institutes school rankings. It will also allow the researcher to publish the results of this study for the benefit of educators, academics and the general public.
Confidentiality and Anonymity:	The information you share will remain strictly confidential. The contents of the questionnaire will be used only for the purposes explained above. Your confidentiality will be protected as no names will be collected on surveys.
Conservation of data:	The research supervisor will keep original questionnaires in a locked file on University of Ottawa campus. Additionally, copies of the questionnaires will be kept in a locked file in the researchers home. Questionnaires will be kept for five years after the completion of this project and then destroyed.
Compensation:	There is no compensation for participating in this study.
Voluntary Participation:	You are under no obligation to participate in this study. If you choose to participate, you may withdraw from the study at any time. However, given the anonymous nature of this survey, should you choose to withdraw, any data you have provided will remain in the study. You may refuse to answer any questions, without suffering any negative consequences.

If you have any questions about the study, you may contact the researcher, or the researcher's supervisor, at the coordinates listed above.

If you have any ethical concerns regarding your participation in this study, you may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5, (613) 562-5387, ethics@uottawa.ca

There are two copies of the consent form, one of which is mine to keep.

Accept: I, _____, **agree to participate** in the above research study conducted by Katrina Isacsson of the Faculty of Education. This research is under the supervision of Professor Lorna McLean.

Participant's signature: _____ Date: _____

Researcher's signature: _____ Date: _____

Appendix 10: Interview Consent Form

Title of the Study:	"If It Matters… Measure It" - The Fraser Institute, Socioeconomics and School Performance
Researcher:	Katrina Isacsson, Faculty of Education, University of Ottawa, kisac015@uottawa.ca, (613) 889-2142
Supervisor:	Prof. Lorna McLean, PhD, Faculty of Education, University of Ottawa, lrmclean@uotawa.ca, (613) 562-5800 ext 4045
Invitation to Participate:	You are invited to participate in the above mentioned research study conducted by Katrina Isacsson and supervised by Professor Lorna McLean.
Purpose of the Study:	The purpose of the study is to evaluate the Fraser Institute's ability to compare schools based on the results of provincial standardized testing, to better understand how elementary teachers perceive the public unveiling of the Fraser Institute's annual Report Card on Ontario's Elementary Schools and to determine the degree to which parents comprehend the meaning of these rankings.
Participation:	Your participation will involve taking part in a telephone interview that will take approximately thirty minutes to complete and will be scheduled at a time and place that best suits you.
Benefits:	Your participation in this study will allow the researcher to better understand the Fraser Institute's annual Report Card on Ontario's Elementary Schools. It will also allow the researcher to publish the results of this study for the benefit of educators, academics and the general public.
Confidentiality and Anonymity:	The contents of the interview session will be used only for the purposes explained above. However, your confidentiality and/or anonymity will not be protected.
Conservation of data:	Interview notes will be transcribed into a text document. At your request, a password-protected copy of your interview will be sent to you for review. Transcriptions will be kept with the research supervisor in a password-protected file on a University of Ottawa campus computer. Additionally, a copy of the data will also be kept on the researchers computer in a password-protected file. All data will be securely destroyed five years after the completion of this project.
Compensation:	There is no compensation for participating in this study.
Voluntary Participation:	You are under no obligation to participate in this study. If you choose to participate, you may withdraw from the study at any time. Should you choose to withdraw, any data you have provided will be deleted. You may refuse to answer any questions, without suffering any negative consequences.

If you have any questions about the study, you may contact the researcher, or the researcher's supervisor, at the coordinates listed above.

If you have any ethical concerns regarding your participation in this study, you may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5, (613) 562-5387, ethics@uottawa.ca

There are two copies of the consent form, one of which is mine to keep.

Accept: I, _____, **agree to participate** in the above research study conducted by Katrina Isacsson of the Faculty of Education. This research is under the supervision of Professor Lorna McLean.

Participant's signature: _____ Date: _____

Researcher's signature: _____ Date: _____

Appendix 11: Ethics Approval

File Number: 03-12-01 Date (mm/dd/yyyy): 06/01/2012

Université d'Ottawa University of Ottawa
Bureau d'éthique et d'intégrité de la recherche Office of Research Ethics and Integrity

Ethics Approval Notice

Social Science and Humanities REB

Principal Investigator / Supervisor / Co-investigator(s) / Student(s)

First Name	Last Name	Affiliation	Role
Lorna	McLean	Education / Education	Supervisor
Katrina	Isacsson	Education / Education	Student Researcher

File Number: 03-12-01

Type of Project: Master's Thesis

Title: "If It Matters…Measure It" - The Fraser Institute, Socioeconomics and School Performance

Approval Date (mm/dd/yyyy)	Expiry Date (mm/dd/yyyy)	Approval Type
06/01/2012	05/31/2013	Ia

(Ia: Approval, Ib: Approval for initial stage only)

Special Conditions / Comments:
This certificate is valid for the portion of the research conducted in schools that belong to the Halton District School Board, the Waterloo District School Board, and at the YMCA-YWCA Before and After School Care Programs.

550, rue Cumberland 550 Cumberland Street
Ottawa (Ontario) K1N 6N5 Canada Ottawa, Ontario K1N 6N5 Canada
(613) 562-5841 • Téléc./Fax (613) 562-5338
http://www.research.uottawa.ca/ethics/index.html
http://www.recherche.uottawa.ca/deontologie/index.html