United States and Canada:

The Impact of the Socioeconomic Gap on Education Performance

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Abstract

This study began by exploring what can be learned from international success in education that will be helpful in understanding the deficient performance in the United States and Tennessee scores. The purpose further examined why the socioeconomic gap affects student performance on PISA in the United States differently than it effects student performance in Canada. It does this by answering the following research questions: Are the United States and Canada effective comparator units of analysis? Do their similar income indicators produce similar educational performance? What are the policy similarities and differences between the United States and Canada? Is a neoliberal frame appropriate for education policy analysis? Upon answering these questions the study found that the United States and Canada are a good comparison based on their similar levels of income stratification, decentralized democratic government structure and history of multiculturalism; income impacts student performance in the United States far more than it impacts students in Canada; both nations are enacting education reforms justified by neoliberal principals, but the most powerful reform efforts may lie in reforms to living standards which will translate to better performance in the classroom; reform strategies situated in the greater discussion on social policy are the best avenue to achieve meaningful, long term change; neoliberalism is an appropriate conceptual framework to view education reform policies.

There have been countless reports published over the past fifty years documenting the flaws and inequities of the American education system. The 1966 publication popularly known as the "Coleman Report" put the flaws of the American school system into full view of the public, for one of the first times. With this publication began a new era of education reform efforts in the United States which culminated with the 1983 National Commission on Excellence in Education's report, "A Nation at Risk." This report once again acknowledged some of the difficulties faced by the American school system and how it was fairing in comparison to changes with economic globalization at the time. Once again reforms were enacted in response to the data presented in this report and the American public education system has continued to sputter along in this manner throughout the modern era.

Tennessee has been one of the states during this tumultuous era of education reform that has continually underperformed its peers. Through national standardized test, such as the National Assessment of Educational Progress (NAEP) which began testing in 1990, states can see how their students are performing in comparison to students from other states. Though Tennessee has consistently ranked in the lowest ten performing states, the real crisis event was the 2007 report *Leaders and Laggards* produced by U.S. Congress ranking and evaluating states' education systems (Finch, 2012). Of nine possible grades, in this report, Tennessee received three F's, one D, three C's and two B's (Commerce, 2007). With scores and evaluations such as these it becomes apparent that Tennessee needs to find ways to improve the public education it is providing to its students. Because students across the United States and specifically in the state of Tennessee are still not performing up to the standards of their peers, it is time they look beyond their borders to see what nations who have thriving schools are doing to be successful. The purpose of this study is to explore what can be learned from international success in

education that will be helpful in understanding the deficient performance in the United States and Tennessee scores.

The first step in discovering what it takes to operate a successful school system is to identify what are the correlating factors outside of the classroom that influence student performance. The contributing factors are: "income per household per capita, levels of education among the adult population, the prevalence of single-parent female-headed households and the percentage of households in which English is a second language" (Ferguson, 1991, p. 471). All of these factors interact making education a complex system and limiting the number of causal relationship that can be determined. However, a correlating relationship can be established between these factors and student performance (OECD, 2010a, 2010b). This study has chosen to explore the effects of income levels on student performance. More specifically, this study compares the effects that different income levels have on students' performance based on the country in which they live.

This study chose to use income as its contributing factor because poverty is oftentimes overlooked when evaluating student performance because schools and the education attained within them are seen as the great equalizer in American society (Berliner, 2006). However there is evidence that although this is the perception, this is not in fact the reality for U.S. students. This could not be stated more clearly than by Jean Anyon who states, "The structural basis for failure of inner-city schools is political, economic, and cultural and must be changed before meaningful school improvement projects can be successfully implemented" (J. Anyon, 1995, p. 88). There is also evidence that increasing income allows young children who were previously poor and performing poorly to perform as well as their middle class peers (Taylor, 2004) which

is another reason this study chose to focus on income. By focusing on income, the study naturally led itself to a neoliberal framework.

Neoliberalism is a theory of political economy practices which states the advancement of human well-being lies in liberating individual entrepreneurial freedoms and skills (Harvey, 2005). Based on the neoliberal ideals shaped by Friedrich Hayek ("Friedrich August Hayek," 2008), institutions must provide a framework which supports: strong private property rights, free markets and free trades. In theory the role of the state is to guarantee the quality and integrity of money which allows for business to function. It then must provide a military, defense and police presence and legal structures to protect property rights and the function of markets. Finally, it must create markets where they don't exist and then immediately minimize its intervention once the market is created (Harvey, 2005).

As a society our views on the "proper and improper roles of government in ameliorating the problems that confront us in our schools, the ways in which a market economy is supposed to work, what constitutes appropriate tax rates for the nation, and individualism" (Berliner, 2006, p. 954) are all shaped by America's role in creating modern day neoliberalism. Three characteristics describe neoliberalism: deregulation, privatization and withdrawal of the states (Harvey, 2005). American society's emphasis on these three characteristics shape citizens' perceptions on the appropriate channels to confront issues in the public sector.

Neoliberalism becomes a good theoretic framework for this study for a couple of reasons. The first reason lies in what type of theory neoliberalism is, "political economy practices." This study is looking at education policy which is the political side of the theory and income levels which are the economic side of the theory. Discussions about education are oftentimes situated in "relation to preparation of workforce and competition with other countries" (Levin, 2001, p.

12). Not only are these discussions framed in this manner, but are frequently involving as many, if not more, business leaders than representatives from the education community. Finally, framing education policy reform in a neoliberal lens allows us to see the "impoverished" nature of our efforts in education reform (Berliner, 2006). Now that a conceptual framework has been established, it begs the question, who is performing well in education?

PISA – MEASURING LEARNING AND THE ECONOMIC IMPACT

The Program for International Student Assessment (PISA) is an international study administered by the Organization for Economic Co-operation and Development (OECD) which "aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students" (OECD PISA, n.d.). The assessment is administered every three years beginning in 2000 and evaluates students' knowledge of reading, math and science. Each three year cycle tests all three subjects, but chooses one to emphasize.

The PISA is not curriculum based and tests students' ability to critically think and "apply their knowledge to real-life situations and be equipped for full participation in society" (OECD PISA, n.d.). Because it is not curriculum based, PISA can be seen as more than an assessment of academic knowledge, it gauges socio-economic inclusion and school offering. Thus, PISA scores for the United States can inform on more than just the struggles of American schools, but can shine light on the "troublesome income distribution and its troublesome housing segregation, resulting in schools that serve the poor poorly, and the rich separately, and quite well" (Berliner, 2011). Although this is a valid criticism of the scores produced from the PISA, it reinforces why PISA was used as the assessment for this study. This study seeks to explore why the socioeconomic gap affects student performance on PISA assessments differently depending on their country of origin.

Now that the limitations of PISA have been discussed it begs the question, which countries are performing well on this assessment, and how are the United States' scores faring in comparison to its peers? From year to year and subject to the rankings shift a little bit but generally speaking the top tier consists of Hong Kong China, Finland, South Korea, Canada and New Zealand or Singapore, all of whose students' scores rank statistically significantly higher than the OECD countries' average. However, these countries all rank lower than the U.S. in GDP per capita as seen in Figure 1 which is interesting given that income is a driver of educational performance (OECD, 2010a). The United States on the other hand hovers around the sixteenth ranking in the world falling around the OECD countries' average. From the six high performing education systems, this study chose to compare the United States to Canada. Canada stood out as an effective unit of comparison to the U.S. and on a local level Ontario to Tennessee because of similarities economically, demographically, culturally, and educationally.

PURPOSE OF THE STUDY AND RESEARCH QUESTIONS

The purpose of this study seeks to explore why the socioeconomic gap affects student performance on PISA in the United States differently than it effects student performance in Canada. It will do so by answering the following research questions:

1. Are the United States and Canada effective comparator units of analysis?
2. Do their similar income indicators produce similar educational performance?
3. What are the policy similarities and differences between the United States and Canada?
4. Is a neoliberal frame appropriate for education policy analysis?

LITERATURE REVIEW

Research Question 1: United States and Canada as comparator units

This study chose to compare the United States to Canada because the two countries are similar on both a macro level of society as a whole and on a micro level in regards to their efforts and attitudes towards education. The two nations are similar on a macroeconomic level because they both hold international positions which make them susceptible to the pressures of economic globalization (Davies & Guppy, 1997) and share similar levels of GDP per capita, gini coefficient, and child poverty rates. Figure 1 indicates that both countries are close in comparison to the OECD average GDP per capita (OECD, 2009, p. 88).

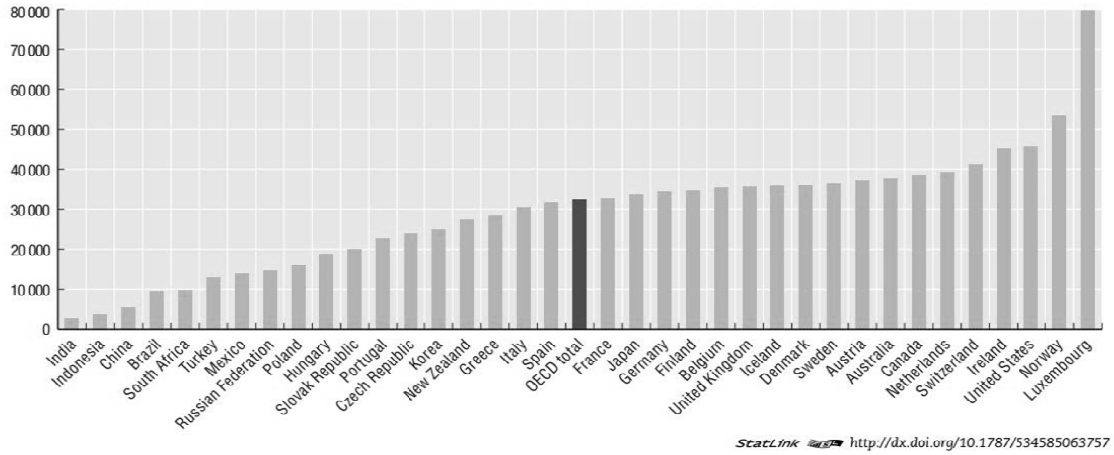

Figure 1. **GDP per capita of OECD countries in 2007. This figure illustrates the U.S. and Canada's rank comparatively to the rest of the OECD countries.**

A common indicator of income inequality is the gini coefficient which is "based on the comparison of cumulative proportions of the population against cumulative proportions of income they receive, and it ranges between 0 in the case of perfect equality and 1 in the case of perfect inequality" (OECD, 2009, p. 88). The rankings of the United States and Canada rankings can be seen below in figure 2.

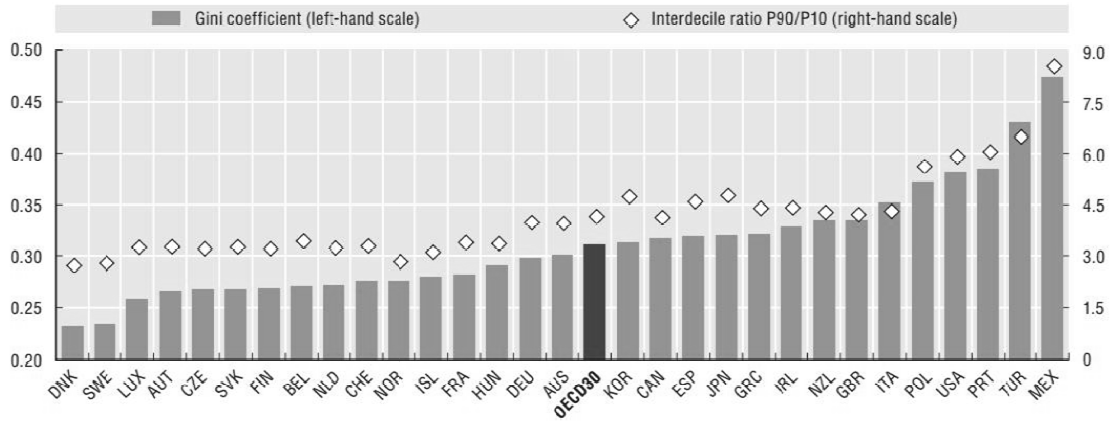

Figure 2. Gini coefficient of OECD countries. This figure illustrates the U.S. and Canada's levels of income stratification in comparison to other OECD countries.

The United States and Canada are both below the OECD average gini coefficient and relatively close on the spectrum on income distribution within the OECD. The final indicator in which the United States and Canada share similarities is the percentage of children living in poverty (UNICEF, 2012).

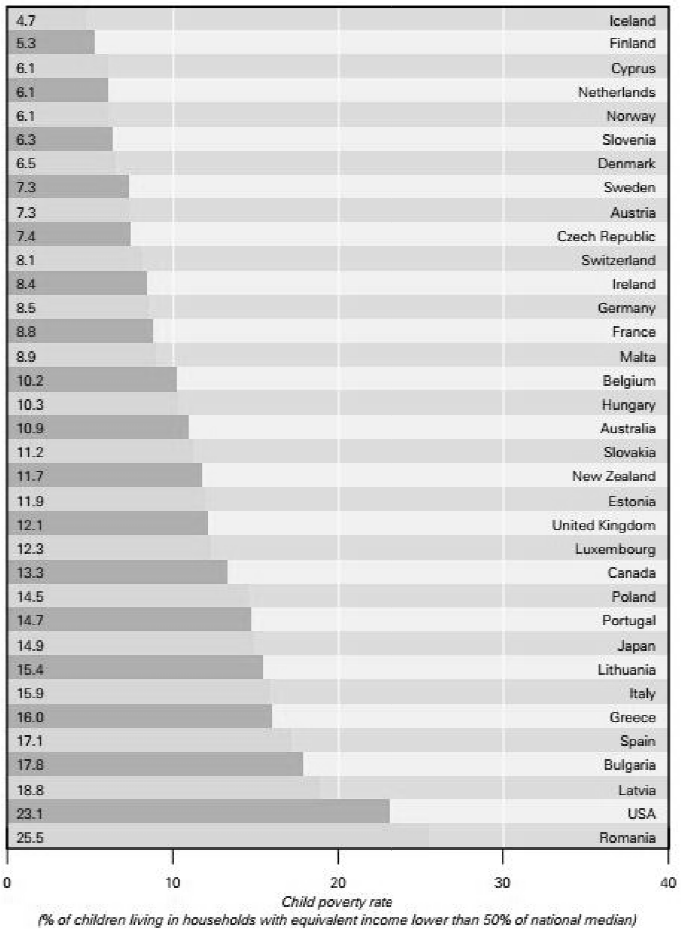

Figure 3. Child poverty rates in wealthy nations. This figure illustrates the U.S. and Canada's child poverty rates in comparison to other wealthy nations.

It is evident from these three indicators that the United States and Canada are similar on a macroeconomic level making them a good comparison.

Culturally the two nations match up nicely and create a good comparison (Davies & Guppy, 1997; Levin, 2001). They share a language and have a similar form of government with power being decentralized and in the hands of local state or provincial actors (Davies & Guppy, 1997). Secondly, the two nations have many multicultural issues which stem from a similar immigration pattern. The two countries have historically dealt with this influx of cultures in different ways. The United States maintains a "melting pot" culture where new immigrants are

assimilated into American society. Canada on the other hand historically has perceived itself as a mosaic of ethnicities (Hargreaves & Goodson, 2006).

Although these are the two perceptions in both nations, both perceptions are flawed and the reality paints a different picture. In the United States "neighborhoods are highly segregated by social class, and thus, also segregated by race and ethnicity" (Berliner, 2011, p. 951). In Canada there is also evidence that there is racism in their society and, although this does not necessarily mean there is "racial discrimination when it comes to other social benefits such as residence, access to public facilities and the extreme forms of discrimination that have characterized some other societies, our evidence leads us to conclude that there is some considerable level of racial discrimination in Canada in terms of financial rewards for educational achievement" (Lian & Matthews, 1998, p. 476). Though problems with race might not exist on the same level in the two societies, both societies must deal with the complexities of multiculturalism.

On a micro level within education the two are also a good comparison based on a variety of factors. First and foremost both countries have a similar context surrounding education, meaning there is a dominance of economic rationales for change within schools in both nations, there is an overall climate for criticism of schools, an absence of additional funding to support change, and a growing importance of diversity in thinking about education policy (Levin, 2001). Both countries have also shown similar strategy initiatives in regards to education reform over the past two decades. The American and Canadian school systems have both decentralized the operating authority to schools and created school or parent councils to share in the authority, increased achievement testing with publication of results and its corollary, more centralized curriculum, and both systems offer various forms of choice or other market-like mechanisms.

The two nations also become a good comparison because despite all of the similarities between the two, they are seeing very different results in their students' performance. As previously mentioned, Canada is consistently in the top five performing education systems while the United States sits around the sixteenth place in performance. All indicators point toward the United States and Canada performing similarly on the PISA, however this is not what is happening. Because the two societies are so similar economically, politically, and demographically it makes comparatively studying the two education systems simpler.

Research Question 2: Income

Thought the two nations should be performing similarly on the PISA the data below, presented in figures 3-5, shows Canadian students consistently outperforming American students.

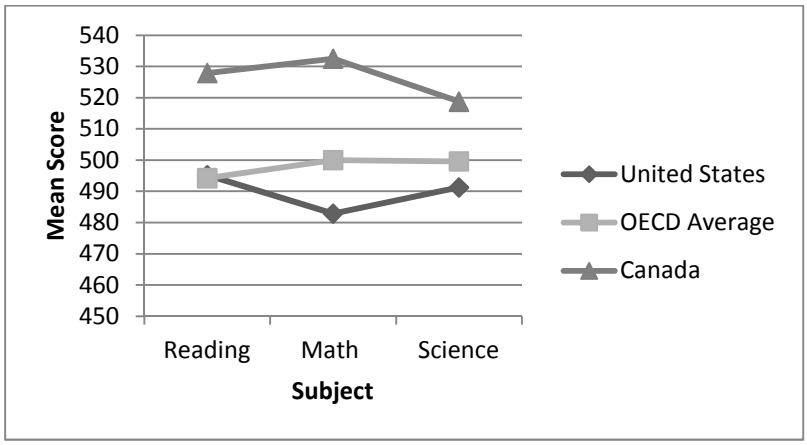

Figure 4. 2003 PISA scores. This figure compares the United States, OECD average and Canada's mean scores in reading, math and science in the year 2003.

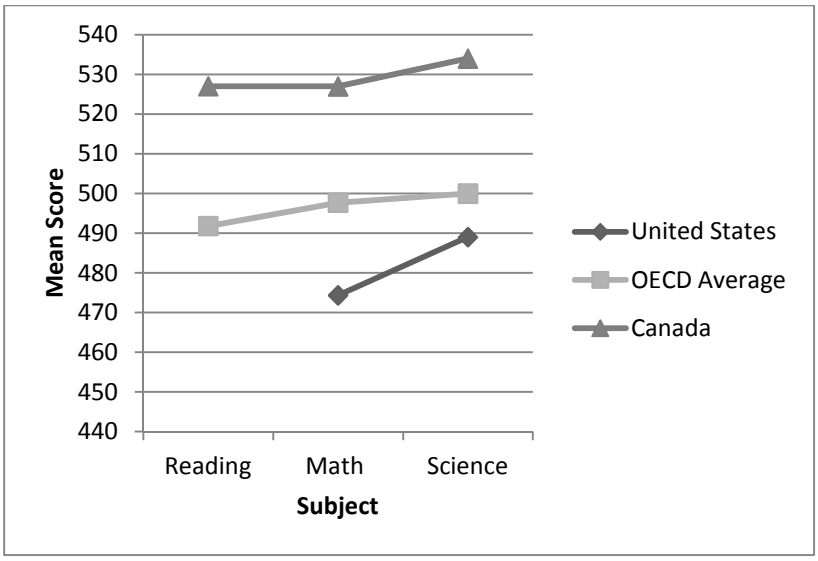

Figure 5 2006 PISA scores. This figure compares the United States, OECD average and Canada's mean scores in reading, math and science in the year 2006.

An important note to make when looking at the 2006 data is the lack of data for the reading scores for the United States. There was an error in the test distribution in the United States of the reading portion of the test (OECD, 2007). This is why there is no data available for the 2006 testing cycle.

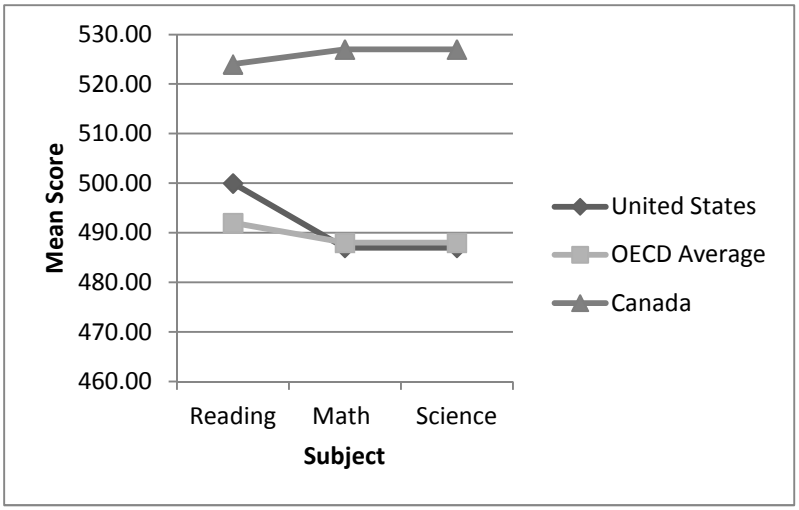

Figure 6. 2009 PISA scores. This figure compares the United States, OECD average and Canada's mean scores in reading, math and science in the year 2009.

Part of what accounts for the difference in scores from the United States and Canada is the ability for income to impact students' performance in the two countries. Despite the similarities of macroeconomic indicators, including similarities in stratification of income indicated by the gini coefficient, Canadian students are able to overcome these factors and perform well while American students' scores are heavily dependent on their socioeconomic status (OECD, 2010a). PISA gathers background socioeconomic data on the students who take the assessment which allows for them to run an analysis on what impact socioeconomic factors have on student performance across education systems. Figure 7 shows the findings from that data collection.

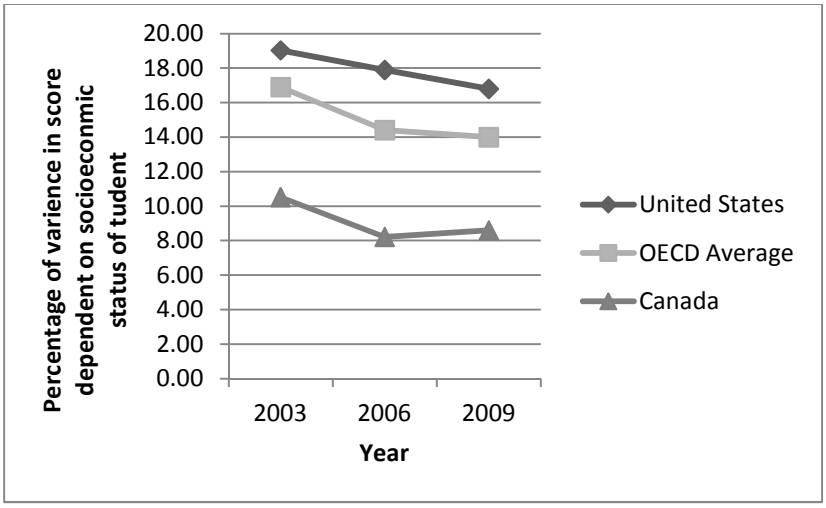

Figure 7. Score variations dependence on socioeconomic factors. This figure illustrates the percentage of variance of students' scores that is dependent on socioeconomic factors in the United States, OECD and Canada.

One of the main factors which accounts for the difference in the two nations scores is that 8% of the variance in student scores in Canada is dependent on socioeconomic factors whereas in the United States 16% of variance in student scores is dependent on socioeconomic factors. Despite the similarities in societal characteristics, Canadian students are able to overcome income disparities and perform on the PISA more so than their U.S. Peers.

For this study there are two key factors that have been briefly mentioned in the macroeconomic comparison section, but deserve a more in-depth analysis because of their direct impact of education performance in both countries. Below in table 1 is a direct comparison between the United States and Canada's median income levels and gini coefficients based on total income. As stated earlier, income levels have a direct impact on education performance. From the information noted earlier the two nations have an income level which is close, however Canada consistently is recording lower levels of median income. Although their citizens are earning less income, their students are outperforming American students.

Table 1

Median Income and Gini Coefficient in the United States and Canada in 2003 & 2009

Country	United States				Canada			
Year	2003		2009		2003		2009	
	Factor	Margin of Error	Factor	Margin of Error	Factor	Coefficient of Variance	Factor	Coefficient of Variance
Median Income	$48,451	(+/-) 82	$51,425	(+/-) 105	$45,117	0-2%	$46, 286	0-2%
Gini Coefficient based on total income	.464	(+/-) .001	.469	(+/-) .002	.427	0-2%	.43	0-2%

Because the two countries are getting remarkably different education performance outcomes as noted earlier by the mean PISA scores and impact of socioeconomic factors on education

performance this leads to an exploration of policy initiatives in the two countries to see if the explanation for the differences in student performances lies in policy enacted by the United States or Canada.

As previously mentioned, both the United States and Canada have decentralized democratic systems meaning many of the policy initiatives involving education happen at the state or province level. Therefore, this study's specific policy comparison focuses on Tennessee and Ontario. Tennessee was chosen because it is one of the worst performing states in the United States. Ontario was chosen because it is one of the best performing providences in Canada. Comparing the best performing system in Canada to one of the worst in the U.S. was expected to reveal potential improvement strategies.

First, similarly to how this study began to compare the United States and Canada, it will look at Tennessee and Ontario from a macroeconomic level, thus validating the selection of these subunits. The two measures of comparison will be median income, which will be the corresponding measure to GDP per capita previously used for the national level, and the gini coefficient which was previously explained. Table 2 below shows these two economic characteristics for the two locations.

Table 2

Median Income and Gini Coefficient in Tennessee and Ontario in 2003 & 2009

	Tennessee				Ontario			
	2003		2009		2003		2009	
	Factor	Margin of Error	Factor	Margin of Error	Factor	Coefficient of Variation	Factor	Coefficient of Variation
Median Income	$40, 315	(+/-) 425	$58,540	(+/-) 252	$48,528	0-2%	$47,942	0-2%
Gini Coefficient	.468	(+/-) .004	.47	(+/-) .003	.428	0-2%	.428	0-2%

As can be seen by the data provided, Tennessee has a lower level of median income and a higher level of income stratification then Ontario. Not only that, but Tennessee is below the United States national median income level, while Ontario falls above the Canadian national median income level. It is a similar distribution with the gini coefficient with Tennessee having higher levels of income stratification then the national level and Ontario having lower levels of income stratification than the Canadian national level. As previously mentioned, income levels have a proven effect on student performance, and this data reinforces this notion. Within a state with income levels lower than the national level, students are performing below the national average. Similarly in Canada, a providence that has higher income levels than the national average has students performing at a higher level than the national average.

Unfortunately, the PISA data is not broken down by providence level in Canada or by the state level in Tennessee. This limits the comparisons that are able to be made when comparing the two local actors directly to the national PISA mean scores. The ranking of Ontario as one of the top performing providences and Tennessee as one of the worst performing states was based off of internal assessments that occurred within the two nations.

Research Question 3: Policy Review

At the federal level the two countries are structured differently in regards to jurisdiction of education. The United States has a Federal Department of Education which was formed in 1979 under the Carter administration. Although the Department was not formed until the late 1970s, the federal government has always played various roles in education since the middle of the 19th century (Stallings, 2002). Conversely, in Canada there is no federal Ministry of Education and the federal government has never had a role in education. According to the Canadian Constitution "in and for each Province the Legislature may exclusively make Laws in relation to Education" ("Canadian Constitution Acts 1867, art. VI. § 93.,"). Furthermore, "Canadian constitutional law does not generally permit the federal government to legislate over matters that fall under provincial jurisdiction" (Law Library of Congress, 2007) which reemphasizes the provincial power in governing education. This difference in government structure slightly weakens the argument that the United State and Canada are a good comparison.

Although the Canadian federal government does not have a role in education, it is important to highlight the education legislation passed in the United States at the federal level. The No Child Left Behind Act (NCLB) was passed with the purpose of ensuring "that all children have a fair, equal and significant opportunity to obtain a high quality of education and reach at minimum, proficiency on challenging state academic achievement standards and state

academic assessments" ("No Child Left Behind Act of 2001, 107-110, 107th Cong. (2002),") Although not overtly stated in the purpose, NCLB was passed as an "anti-poverty program because it is based on an implicit assumption that increased educational achievement is the route out of poverty for low-income families and individuals" (J. a. K. G. Anyon, 2007, p. 157) which makes it a neoliberal policy. It is neoliberal because it reinforces the neoliberal notion that the role of education is to make connections between curriculum and the wider economy (Armstrong, 2010). Not only is NCLB an inherently neoliberal policy, but it is also one which failed to accomplish the goals in which it set out to attain. According to studies done by Lee and Braun the NCLB policy had little to no impact on closing the racial and income achievement gaps in the United States (Braun, Chapman, & Vezzu, 2010; Lee, 2008). Unfortunately, not only is NCLB not accomplishing its goals, it is also having unintended consequences as well. Because of the forced implementation of high-stakes testing, students become less motivated and begin to value memorization for the test instead of valuing the knowledge they learn (Mead, 2012). All three of these studies point to the multiple failures of the NCLB legislation.

Additionally, to build on the three previous studies mentioned, the median reading scores on the PISA for the United States also demonstrate the failures of NCLB. In 2000 the first PISA test was administered. The results from this test showed the U.S. with a mean reading score of 504 and ranking 16th out of OECD countries (OECD, 2001). The 2009 results are the latest to have been made public and show the most comprehensive effects of the implementation of NCLB. On the 2009 PISA American students had a mean score of 500, ranking them 14th out of OECD countries and 17th overall (OECD, 2010b). These results reconfirm the notion that NCLB failed to achieve its goals and was an ineffective policy effort.

Although NCLB was implemented in the United States and recently under the Obama Administration Race to the Top legislation was passed, in both the United States and Canada education is mainly an issue for the states and the providences. It is here at the state and provincial level where most of the impactful classroom legislation historically has come from state level actors.

Although students from Ontario are outperforming students from Tennessee, both governments have implemented education reform policies with neoliberal components. A policy can be neoliberal in two ways. First, it can be neoliberal if it hints towards privatization or deregulation and thus is inherently neoliberal. Secondly, it can be neoliberal if it is justified or explained in economic terms. Below, table 2 summarizes the policies implemented and how they can be classified as neoliberal.

Table 3
Policy summaries in Tennessee and Ontario with neoliberal components

Tennessee			Ontario		
Policy	Summary	Neoliberal component	Policy	Summary	Neoliberal component
Basic Education 2.0	Funding formula allocating funds for schools which are delivered to the counties	Funding formula is inherently an economic policy Equalization formula which attempts to equalize the allocation of funds across counties in Tennessee	Success for Students	• Primary class size reduction • Literacy/numeracy strategy	"The overall skill and knowledge level of Ontario's students must continue to rise to remain competitive in a global economy." Attempts to close the achievement gap because of personal, cultural or academic barriers
Tennessee Diploma Project	Higher standards and assessments for Tennessee students	Objective: "Raise Tennessee standards and curriculum to better prepare students to be college and career ready."	Strong people, strong economy	• Specialist high skills majors • Expansion of co-operative education • Dual credits for apprenticeship training or college courses	"A strong publically funded education will help ensure the long-term success of the province's economy"
Expanded School Choice	2002 authorization of 50 charter schools	Market like mechanisms for students attending schools which failed to make Adequate Yearly Progress			

As can be seen by the strategies presented, both actors are trying to make the school experience relevant to their students' future careers, whether it be through hands on apprenticeships or internship, or specialized classes. Not only are the education systems attempting to become relevant to business markets, they are also justifying a need for stronger education systems to maintain competitiveness not only in the national economy, but the global economy. Finally, policies such as expanded school choice in Tennessee are creating market like conditions such as increased supply to create higher levels of competition and thus greater performance by schools.

The most interesting and frankly surprising finding from the comparative analysis of policy initiatives between Tennessee and Ontario is that there was not a radical difference between the types of policies the two enacted. Both actors seemed to be implementing strategies that sought to enhance their students' competiveness in the workforce. Because they are implementing similar strategies but achieving very different results, it seems as if simple education policy reform differences does not seem to be the explanation for the differences in student performances. A hint as to how to account for the differences in student performance possibly lies in the higher income levels in Ontario than Tennessee.

There have been a few studies conducted on the power of policy to enact change within a classroom, most notably a study by Braun et. alt on the effects of NCLB on the racial achievement gap in the United States. The most significant finding to come out of this study was that "the association between policy and outcomes was stronger for the overall policy ranking than for any of the individual policy levers. This suggests that states should adopt a comprehensive reform strategy rather than relying on one that is narrowly focused" (Braun et al., 2010, p. 42).

Braun is not the only academic making an argument for the value of comprehensive reform efforts. Levin also cites a study by Bracey (2004) in which it was proven that "sustained improvement over time in high poverty schools is highly unusual" (Levin, 2006, p. 405) and goes on to suggest that the answer to sustainable change in high poverty schools may lie in changes within the community such as repainting apartments so children are less likely to suffer from lead poisoning which negatively impacts their ability to learn.

This sentiment is echoed by Berliner who reiterates the impact that poverty has on student achievement. He explains how health issues and the neighborhood environment uniquely affect the poor. He then goes on to purpose that increases in minimum wage, equal pay for women, and universal medical coverage can all be equally impactful education policy initiatives as demanding higher standards and better teachers for our students (Berliner, 2006). All of these studies and scholarly articles are suggesting a more comprehensive approach to education reform in order to achieve high levels of impact which are sustainable for long periods of time and would allow for students to overcome their socioeconomic background and reduce the effects it had on their education performance.

A longitudinal study was conducted by Hargreaves and Goodson which analyzed the long-term patterns of education reform in Ontario, Canada and Minnesota, United States and what characteristics came out of the education reform which occurred from the 1970s until the early 2000s (Hargreaves & Goodson, 2006). Specifically they found that there are "waves of education reform" which effect actors in education differently depending on the role of the actor such as teachers or administrators. "Cycles of change for policy makers last no more than five years defined by electoral cycles. For teachers, they last almost a lifetime" (Hargreaves &

Goodson, 2006, p. 17) This leads to teachers experiencing reforms that are oftentimes contradictory to previous reforms which were implemented.

The second pattern, "Periodization of Change" classifies reforms into three time periods, "periods of optimism and innovation, complexity and contradiction, and standardization and marketization" (Hargreaves & Goodson, 2006, pp. 28-30). The period of optimism and innovation ran up to the mid to late 1970s and was characterized by booming demographics, a buoyant economy and an ethnically and racially homogenous student population in Canada and a more socially mixed population in America. This period gave way in the late 1970s to a period of complexity and contradiction which lasted until the mid-1990s. This period was marked by the decline of the traditional social democracy and transition to the age of smaller state investment and a free market economy which led to contradictory reform measures for teachers in the classroom. The third period emerged from the mid-1990s as an era of standardization and marketization in the classroom which seem to erode teacher autonomy. Marketization; is a term often associated with neoliberalism and will be defined here as "a set of understandings influenced by the discourses of human capital, school improvement, standardization and performity" (Grimaldi, 2012, p. 1132). This period's student population was also remarkably different than that of the first period with the student population in Canada more culturally diverse, while the American student population is more ethnoculturally and socioeconomically concentrated and segregated.

The time frames of these three periods align nicely with other characteristics of educational change mentioned in studies by Jaekyung Lee and Maida Finch. Lee focuses on the racial and ethnic achievement gap and set a similar time line as the periods outlined by Hargreaves and Goodson. Up to the mid to late 1970s racial and ethnic achievement gaps

narrowed, then until the mid-1990s they began to widen once again, and finally from the mid-1990s on the gap have remained consistent (Lee, 2002).

Finch conducted a study which analyzed the policy environment in Tennessee that preceded their application for the Race for the Top award which was framed by the arena model theory. The arena model conceptualizes the precursors to policy innovation. Finch mapped out school finance on a similar timeline as the previous two studies. During the first period states addressed school finance litigation so that inequitable distribution of resources to schools could be eradicated (Finch, 2012). The second period was characterized by cuts in federal spending which "necessitated reductions in staff" (Finch, 2012, p. 577) and a growing concern over the economy. During the final period, the importance of the federal role in funding education was acknowledged, but there was an agreement that the education governance should remain state led.

Research Question 4: Neoliberal Lens

In all three of the authors and periods previously discussed, neoliberal characteristics are implied which reaffirms the use of neoliberalism as the theoretical framework for a study analyzing education policy. Neoliberalism redefines the role of the state because it dismantles the historically guaranteed social provisions provided by the welfare state, defines consumerism and profit-making as the essence of democratic citizenship, and equated freedom with the unrestricted ability of markets to govern economic relations free of government regulation (Giroux, 2009). Not only does neoliberalism redefine the role of the state, but it redefines the role of education. Under the neoliberal era, there has been a shift in education's historical role which was to maintain social democracy by creating literate and informed citizens (Codd, 2005) to one in which it not only makes connections between the curriculum and the requirements of

business, industry and the wider economy but includes competition, choice and monetary pressures and incentives as central components to the education system (Armstrong, 2010). This shift in role has led to shifts in policies.

The second period represented the shift from a welfare state to a neoliberal state, there was a policy shift which occurred "in the enactment of the policy from a contextualized multidimensional and critically understanding of social justice, inequality and exclusion to a perspective focused on credentials and standards, and placing the burden for educational success only on schools and individuals" (Grimaldi, 2012, p. 1133). This is evident by the characteristics explained by Lee and Finch which resulted in the widening of the racial and ethnic achievement gap during this period and the diminishing of funding provided to schools. Finally, because of this shift away from comprehensive reform because of the neoliberal policies enacted, the policies which are enacted such as school effectiveness, standardization, meritocracy and performativity do not have the capacity to "address any of the wider structural inequalities causing different forms of exclusion" (Grimaldi, 2012, p. 1133). Although all of the research is pointing towards comprehensive reform strategies, governments are unable or unwilling to initiate efforts of comprehensive reform because they are bound by neoliberal ideology.

FINDINGS

Research Question 1: United States and Canada as comparator units

In summary, the United States and Canada provide for a good comparison for a variety of reasons. First, they are comparable on a macroeconomic level with similar levels of income based off GDP per capita and similar levels of income stratification based off of the gini coefficient. Secondly, they have similar challenges with multicultural issues which stem from a rich history of immigration in both nations. The two countries also share the same national

language and have a similar democratic structure. One of the most important similarities in this structure is the decentralized power which is given to the states or providences.

Research Question 2: Income

Although the two nations share all of these characteristics, they are achieving quite different results in regards to education performance. Canadian students in general are performing much better than their American peers. Not only are Canadian students on average outperforming their American peers, but Canadian students are able to overcome the socioeconomic factors they might face and still perform well on the PISA. Whereas, American students are dramatically impacted by the socioeconomic factors they face and perform poorly on the PISA because of these factors.

Research Question 3: Policy Review

In both the United States and Canada the majority of impactful education policy is enacted at the local state or provincial level. Although Tennessee is one of the worst performing states in the United States and Ontario is one of the best performing providences in Canada, the two offer a good comparison because of the justification of policy reforms they both use and because their income levels and income stratification align with the later argument made that the focus needs to be on comprehensive reform. In both Tennessee and Ontario the education policy reforms enacted are justified by neoliberal rationale or have neoliberal components to the legislation. Not only do both local actors use neoliberal rationale as justification, but there are not stark differences between the policies created to improve the education systems in Tennessee and Ontario.

This leads to the argument that the best solutions for students to be able to overcome socioeconomic factors and perform on average or above average may lie outside of the

classroom. The leading research shows that there is a need to focus on comprehensive reform strategies that address inequitable access to health care and income as well as strategies whose objective is to improve schools. Comprehensive reforms will help students be able to overcome the hardships faced by income stratification and allow them to perform as well as their peers.

Research Question 4: Neoliberal Lens

Finally, neoliberalism is a good frame to analyze education policy. It is a useful frame because neoliberalism has changed the role of government in both the United States and Canada. Not only has it changed the role of government, but also changed the role of education. Neoliberalism has also limited the governments' abilities to offer comprehensive reform efforts because one of the main principals of neoliberalism is limiting the role of the state. As a result of the limited role of the state, the state has been unable to enact policies which combat issues of exclusion in our society. Because neoliberalism is the driver of these changes, it is a good lens to look at education policy through.

LIMITATIONS

This study has some limitations to it for multiple reasons. The first is that it is an extensive literature review, but does not test the hypotheses presented throughout the study. Secondly, though it offers an in-depth literature review it is by no means an exhaustive list. On that note, another limitation is that PISA is the only assessment used to judge whether a education system is successful. This limit is further emphasized with the analysis of Tennessee and Ontario because the PISA data is not currently broken down to state level results of the assessment. The final limit is that there are multiple factors interacting at the same time to create a complex system of analysis and making it difficult to isolate the effects of one factor such as income.

DISCUSSION

Based on the similar economic, governmental, demographic and cultural characteristics discussed throughout this article it is my belief that Canada functions as the best country of comparison for the United States. Although the research taking place in the other top performing education systems, such as Finland, provide valuable insight into the characteristics of a successful system, Canada provides results which are easier to adapt culturally back to the United States. There is not a one size fits all solution to the discrepancy of education performance, but Canada allows the United States to see strategies in action that are effectively providing their students with a meaningful education experience.

A unique aspect in both American and Canadian societies is the presence of racism in these countries. Although there is not a history of blatant racism in Canada like there is in the United States, there is evidence that racism still plays a role in Canadian society (Lian & Matthews, 1998). This is an important component to the fight to provide meaningful education despite income levels. People of color are disproportionally earning lower incomes than their white peers (J. Anyon, 1995; Berliner, 2006). This also plays into this discussion and deserves further analysis.

Not only does Canada offer a good comparison to the United States, but their students are overcoming discrepancies in income and are able to perform well. The research shows that income is a powerful dictator of educational outcomes and that by increasing family income slightly it can lead to large jumps in education performance (Berliner, 2006). As a result it is important for the United States to look at unique education reform strategies that are not typically thought of as education policies. For example, looking at the minimum wage laws in the United States to see if they are actually a livable wage and how to address the bias of people

earning minimum wage, or addressing issues of inadequate housing for children that can lead to led paint poising which negatively impacts students' mental capacities (J. Anyon, 1995; Berliner, 2006). These strategies will be comprehensive in nature, meaning they will address issues of structural violence that run deeper than those that exist within the educational system, but will have a resoundingly powerful impact on students' abilities to perform in the classroom.

Finally, it is important to look at the impact of neoliberal policies on economic and social exclusion within our country. The results of these findings will have an impact across the board on public policy as a whole. Since the decline of the Keynesian Welfare State the United States has been operating under the assumption that the most effective way for American citizens' to be successful is by government deregulation and privatization (Hargreaves & Goodson, 2006; Harvey, 2005). It is time that there be a serious analysis of the impacts of these policy initiatives and see how these results correspond with the ever changing education landscape within the country.

FUTURE RESEARCH

The hypotheses created by this study have led to other interesting research projects which can confirm the hypothesis created or prove their incorrectness. The first project elaborates on the fact that the United States and Canada are good comparisons. It would take this notion a step further and define Canada as the best comparison to the United States. The second research project would be a longitudinal study of social inclusion policies in the United States and Canada during the three periods defined by Hargreaves to see if there is a correlation between the reducing role of the state and the lack of progress made in shrinking the socioeconomic impact on education performance. The final study would compare the best performing states in education and the worst in America. It would look at both education policies implemented as

well as the levels of economic inclusion and the policies in place promoting economic inclusion to see if there is a correlation between the two. The United States needs to begin to look at other countries that are having success and are also similar in societal and governmental structure and look comprehensively at their policy initiatives relating to education reform instead of seeing schools as the fix-all for economic inclusion.

This study began by exploring what can be learned from international success in education that will be helpful in understanding the deficient performance in the United States and Tennessee scores. The purpose further examined why the socioeconomic gap affects student performance on PISA in the United States differently than it effects student performance in Canada. It does this by answering the following research questions: Are the United States and Canada effective comparator units of analysis? Do their similar income indicators produce similar educational performance? What are the policy similarities and differences between the United States and Canada? Is a neoliberal frame appropriate for education policy analysis? Upon answering these questions the study found that the United States and Canada are a good comparison based on their similar levels of income stratification, decentralized democratic government structure and history of multiculturalism; income impacts student performance in the United States far more than it impacts students in Canada; both nations are enacting education reforms justified by neoliberal principals, but the most powerful reform efforts may lie in reforms to living standards which will translate to better performance in the classroom; reform strategies situated in the greater discussion on social policy are the best avenue to achieve meaningful, long term change; neoliberalism is an appropriate conceptual framework to view education reform policies.

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