Addressing Food Insecurity in the School Environment:

Multi-tier Approaches for Access and Education

By

Jung-Sun Song

A research paper submitted in conformity with the requirements
For the degree of Master of Teaching
Department of Curriculum, Teaching and Learning
Ontario Institute for Studies in Education of the University of Toronto

Copyright by Jung-Sun Song, April 2017
ABSTRACT

This Master of Teaching Research Project is a qualitative study that looks at how educators working in the Greater Toronto Area are addressing issues of food insecurity within the classroom environment. Food insecurity is an issue that affects a large number of children in Canada and has serious repercussions for their growth and development. My main research question for this topic was: How is a small sample of classroom teachers and community educators addressing the topic of food insecurity with students, and how do they create opportunities for students to learn about the multi-layered socio-political dimensions of food? Through semi-structured interviews with three educators dedicated to the cause of food justice, the data collected suggests that breaking the cycle of food insecurity is situated in multi-tier approaches for access and education. Findings show that students demonstrate growth with interventions that focus on engagement and empowerment such as having a food garden at school. While there are networks of support and examples of success, there are also many hurdles to the work being done that stem from a lack of awareness and low prioritization. Different sectors of society must work together to allocate proper time and resources to the issues that impact student health.

Key Words: food justice, food insecurity, school health, student health, food garden
ACKNOWLEDGEMENTS

I would like to express my gratitude to my research supervisors Dr. Angela MacDonald-Vemic and Dr. Sarah Cashmore who provided me with guidance and support throughout the MTRP process. I would also like to thank Dr. Hilary Inwood for her help in finding my wonderful participants and connecting me to various opportunities for professional development on the topic of addressing food insecurity.

This research project would not have been possible without my participants whose experience expands beyond teaching and into many adjoining avenues in the education system. Their commitment to student welfare has enabled them to gain crucial insights into how the education system can be utilized and has inspired me to continue their tireless engagement.

I am very grateful that I had the privilege to be part of an educative community of passionate peers and professors who have not only helped me with this research process but also find my voice in teaching. I leave with greater depth of understanding of the world around me that I hope to bring into my teaching. Lastly, thank you to all my family and friends for providing me with the support I needed to complete this research project.
TABLE OF CONTENTS

ABSTRACT .......................................................................................................................... ii

ACKNOWLEDGEMENTS ................................................................................................. iii

CHAPTER ONE - INTRODUCTION ................................................................................. 6
1.0 Introduction .................................................................................................................. 6
1.1 Research Problem ....................................................................................................... 7
1.2 Research Purpose ....................................................................................................... 8
1.3 Research Questions .................................................................................................... 9
1.4 Reflexive Positioning Statement .............................................................................. 10
1.5 Overview of Research .............................................................................................. 12

CHAPTER TWO - LITERATURE REVIEW ..................................................................... 13
2.0 Introduction ................................................................................................................ 13
2.1 Food Insecurity and its Significance ........................................................................ 13
  2.1.1 Definition and prevalence in the Canadian context ........................................... 13
  2.1.2 Prevalence of food insecurity in schools .......................................................... 15
  2.1.3 Impact of food insecurity on development and learning .................................. 16
2.2 Related Factors ......................................................................................................... 17
  2.2.1 Relationship between food insecurity and current socioeconomic factors ......... 17
  2.2.2 Relationship between food insecurity and minority groups .............................. 19
2.3 Food Insecurity Solutions in Schools ...................................................................... 20
  2.3.1 School’s role in fighting food insecurity ............................................................ 21
  2.3.2 Food programs focused on provision of food .................................................. 22
  2.3.3 Food education and innovative programs ......................................................... 24
  2.3.4 The role of teachers in food insecurity education .............................................. 27
2.4 Conclusion ................................................................................................................. 29

CHAPTER THREE - RESEARCH METHODOLOGY ...................................................... 30
3.0 Introduction ................................................................................................................ 30
3.1 Research Approach and Procedures ....................................................................... 30
3.2 Instruments of Data Collection ................................................................................ 31
3.3. Participants ............................................................................................................. 32
  3.3.1 Sampling criteria ............................................................................................... 33
  3.3.2 Sampling procedure & recruitment ................................................................... 34
  3.3.3 Participation bios .............................................................................................. 35
3.4 Data Analysis ............................................................................................................. 36
3.5 Ethical Review Procedures ....................................................................................... 36
3.6 Methodological Limitation and Strengths ................................................................ 37
3.7 Conclusion ................................................................................................................ 38

CHAPTER FOUR - FINDINGS ......................................................................................... 40
4.0 Introduction ............................................................................................................... 40
4.1 Teachers working against food insecurity find a wide range of support both within and outside of the school environment that help to make the work successful in a long term. .... 41
  4.1.1 Teachers receive help from non-profit food organizations that provide instructional and outreach support ......................................................................................... 41
4.1.2 Teachers are also supported by a school environment that assists them in implementing school-wide health initiatives and feeding programs.................. 42
4.1.3 Teachers find specific funding for combating food insecurity offered by various avenues. ................................................................. 43
4.2 Teachers working against food insecurity take multiple considerations regarding student needs and holistically approach the issues regarding access and education........ 44
4.2.1 Teachers consider the background of students regarding their socioeconomic status and understand the challenges of different populations. ................................. 45
4.2.2 Teachers attempt to create further access to food and economic opportunities to assist students struggling with food insecurity........................................... 46
4.2.3 Teachers attempt to engage their students through experiential learning and cross-curricular connections focused on encouraging changes in students............................................................... 47
4.3 Students exhibit personal growth from involvement and engagement with various work for the cause of food justice................................................................. 48
4.3.1 Students exhibit enjoyment and engagement in meaningful experiential learning .....49
4.3.2 Students show positive change in behaviour in and outside of class.................... 50
4.3.3 Students show personal growth that comes with empowerment and reflection........ 50
4.4 Teachers face barriers stemming from a lack of priority and awareness that impede their ability to initiate and continue beneficial food education and programs................. 51
4.4.1 Within the class, teachers faced various hurdles to take on the task of addressing food insecurity .............................................................................. 52
4.4.2 Difficulties of funding and dealing with bureaucracy also restricted the teacher involvement and prevented the program success ......................................................... 53
4.4.3 Beyond the individual programs, educators work against great systemic challenges that put food insecurity at low priority.............................................. 54
4.5 Conclusion........................................................................................................... 55

CHAPTER FIVE - DISCUSSION ........................................................................... 57
5.0 Introduction ....................................................................................................... 57
5.1 Overview of Key Findings and their Significance ........................................... 57
5.2 Implications ........................................................................................................ 59
5.2.1 Education community................................................................................... 59
5.2.2 My professional identity and practice ......................................................... 60
5.3 Recommendations ........................................................................................... 61
5.3.1 Governments ............................................................................................... 61
5.3.2 Faculties of education.................................................................................. 62
5.3.3 School boards ............................................................................................ 62
5.3.4 Teachers ..................................................................................................... 63
5.4 Areas for Further Research ........................................................................... 64
5.5 Concluding Comments ................................................................................... 65
References ............................................................................................................... 67
Appendix A: Letter of Consent for Interviews ...................................................... 74
Appendix B: Interview Protocol ........................................................................... 76
CHAPTER ONE - INTRODUCTION

1.0 Introduction

While many people may not associate widespread hunger and malnutrition with a developed country like Canada, a significant portion of children across the nation struggles with food insecurity (FI) on a daily basis (Pickett, Michaelson & Davidson, 2015; Tarasuk, Mitchell & Dachner, 2012). In 2012, 4 million individuals in Canada including 1.15 million children experienced some level of food insecurity, representing 13% of Canadian households (Tarasuk, Mitchell & Dachner, 2012). Household food insecurity has both a direct and indirect impact on the educational environment of our growing students in their formative years. A recent study has shown that up to 1 in 5 children report hunger while in their schools (Pickett, Michaelson & Davidson, 2015), which presents serious repercussions that call for greater examination.

Food insecurity is a complex socio-economic problem that affects a wide range of groups across Canada. The insecurity is especially tied closely to the high rate of poverty that affects many ethnic groups including Canada’s Aboriginal and immigrant populations (Gates, Hanning, Gates, McCarthy & Tsuji, 2011; Girard & Sercia, 2013). The issues of poverty for many have been exacerbated by the recent economic downturns and rise in the cost of living in some of the biggest Canadian cities. An increasing number of Canadian families are struggling to provide nutritious meals for their children due to the challenges and barriers they face in their communities (Sriram & Tarasuk, 2015).

All Ontario educators have a duty to follow the ethical standard of care to show the best commitment to our students’ wellbeing and learning (Ontario College of Teachers, 2006). As one of the insidious effects of the economic hardship and social inequities that are all around us, food insecurity is a serious issue that impedes the development of many young students in our
school system. For the growing students in their key developmental years, a lack of nutritional intake can have direct adverse effects on the cognitive capacities of cerebral functions, and indirect effects on physical and mental health (Roustit, Hamelin, Grillo, Martin & Chauvin, 2010). Since successful education is often seen as a key to breaking the cycle of intergenerational poverty that affects many communities across the country, teachers need to be aware of this challenge that many students face on a daily basis.

1.1 Research Problem

One of the biggest challenges of addressing food insecurity in school is the lack of a national framework structure for supporting child nutrition programs (Henry, Allison & Garcia, 2003). Canada is the only G8 nation without a national school-based feeding program (Picard, 2013). The Canadian Constitution Act of 1867 assigned exclusive authority for education to the provinces, but there is a lack of uniform guidelines for creation, maintenance, and assessment of food programs within it (Henry, et al., 2003). This lack of policy direction further fuels the debate over the role of the school in addressing food insecurity, which leads to unclear objectives.

For educators and researchers, there is a heightened need to pay closer attention to more vulnerable populations that are affected by poverty. Many struggling Aboriginal communities find that there is a lack of available nutritional food, funding, personnel, facilities, and equipment when dealing with food programs in their communities (Skinner, Hanning and Tsuji, 2006). Shortfalls of proper and sufficient nutrition are prevalent not only in often marginalized remote communities, but also in immigrant communities and inner-city neighborhoods where there is a food desert without easy access to affordable nutritious foods (Broughton, et al., 2006).

There are currently many ongoing breakfast and snack programs across the country that
attempt to fill the insufficient nutritional needs of students. Some common challenges associated with these programs are the increased workload for teachers, administrators and the difficulty incorporating food preparation into the curriculum; some cite the biggest constant struggle as the funding and facility issues with many pilot programs (Pratley, McPhail & Webb, 2014).

Beyond the food programs that simply feed students, this issue lacks education and empowerment. One research study found that it was hard for the people in a Fort Albany Aboriginal community, who struggled with food insecurity and lacked health knowledge due to low literacy levels amongst both adults and youth (Skinner, Hanning & Tsuji, 2006). As educators, we have the potential to bring awareness to the cause and educate our students about the importance of healthy eating for them to become more knowledgeable and involved in the process of becoming healthy active citizens.

1.2 Research Purpose

The purpose of this qualitative research study is to learn how a small sample of classroom teachers and community educators address the topic of food insecurity with students within their own schools and districts, and how they create opportunities for students to learn about the multilayered socio-political dimensions of food. Without meaningful structural exploration and interventions to stop the effects of serious societal problems such as poverty and food insecurity reaching our students, continuing challenges outside of schools are often repeatedly reproduced within the school environment.

In our modern Canadian society where wealth disparity continues to grow exponentially as the social security net for people keeps dwindling under the model of globalized capitalism and changing sociopolitical values, it is important to recognize the prevalence of food insecurity and its far-reaching ramifications: food insecurity often comes from poverty, and hinders student
development and academic performance. Our culture often esteems the role of education and academic performance as something that can break the transgenerational cycle of poverty while not fully addressing the fundamental hurdles to educational success. In the face of adversities these students face, educators and policymakers have the duty to create more equitable learning environments for our future generations. Understanding its prevalence, effects and currently available resources and interventions can help us be better foster development and the success of our students with a wide spectrum of needs.

1.3 Research Questions

The main question guiding my research is: How is a small sample of classroom teachers and community educators addressing the topic of food insecurity with students, and how do they create opportunities for students to learn about the multi-layered socio-political dimensions of food?

Subsidiary questions that will also be addressed include:

- What range of factors and resources support the teachers in this work?
- What range of considerations do teachers take into account when teaching about food insecurity and what teacher practices address this problem?
- How do the teachers’ students respond to learning about food insecurity?
- What are some of the current challenges they face?

My research plans to explore major sections of themes that include experiences and perceptions of the teachers, their educational methods and student reception to the approaches, and their current support and challenges. In order to understand their motivation for addressing the complex issues of FI, I will explore the teachers’ perceptions of a school’s role in addressing food insecurity and what experiences inform the teacher commitment to the topic. I will examine
the past and current school environment of the teachers, especially focusing on their education in teacher’s college about the issue of nutrition and poverty, and the socio-political climate of their current schools. Perhaps most importantly, the teachers’ ways of addressing and educating the complex dimensions of food and eating and how they gauge the student reception and success will be questioned. In addition to the support they receive from their environment, time will be spent on the challenges they face and their ways of overcoming the hurdles in order to illuminate some ways the educators can work towards better equity and growth of our students.

1.4 Reflexive Positioning Statement

As someone who comes from an immigrant family of moderate financial means, I have always had a strong interest in understanding and addressing the issues of social inequity due to socioeconomic status. From this first-hand experience, I have come to understand how challenging it can be for many immigrant parents to make ends meet because of the plethora of challenges they face everyday. For many underprivileged immigrant families, there are limitations on accessing help due to additional hardships such as the language barrier and varying cultural stigmas.

While working as a tutor in Vancouver in 2013, I became acutely aware of the current issues arising from FI affecting children upon seeing news coverage about Richmond, B.C. having the highest child poverty rate in Canada at 22 percent, with almost 40 children in one elementary school not able to bring lunch everyday (Bramham, 2013). The nearby city called Coquitlam where my family first settled to and lived for a few years was reported as having 16 schools in the district that are designated vulnerable because of students’ low socioeconomic status (Bramham, 2013). Some of the common factors between Richmond and Coquitlam are the strong presence of recent immigrants, a majority of them from Asia, who are often negatively
depicted in numerous areas. There has been troubling xenophobic discourse on the negative impact of the affluent Asian immigrants raising housing prices and Asian gangs causing crimes, but not a lot of light shed on some of the struggles of many low-income immigrants who labour intensely to provide a better future for their families under difficult circumstances. Furthermore, there has also been sporadic coverage on the plight of the northern Aboriginal communities fighting to have their basic needs met, but I have noticed that the matters in the spotlight are forgotten too soon while not much is done for their long-term betterment.

Poverty and its following ill effects have become such a taboo and neglected topic in our society where huge disparities of wealth and social injustice have been normalized. Two decades ago, my family and I immigrated to Canada from South Korea, a country known for its miraculous economic growth from poverty after the Korean War of 1950-1953. This growth was possible in many ways due to the indoctrination of the national ideology that if one worked very hard and became educated, it would lead to upward social mobility where even poor farmers’ sons could and did become the presidents of Korea. Coming from this belief, the affluent Korean students I have tutored in Canada mostly exhibited a very negative perception of the underprivileged in our society, believing their poverty came from their laziness and lack of interest in their own betterment. This type of stigma of poverty is still very prevalent in our Canadian society where we often tell our students to just stay in school and work hard without fully considering all the hurdles to their staying in school and gaining academic achievement. It assumes that all students start off with equal resources and food security, which social science tells us is simply not the case.

With this research project, I want to explore ways of being sensitive to and well informed of student needs for proper and sufficient nutrition that can play a huge role in setting the right
foundations for their future success. I believe that alongside disseminating knowledge and supporting behavioural changes, educators must be the activists for our children’s fundamental rights and encourage empowerment and agency for our students to become activists for their own rights.

1.5 Overview of Research

To respond to the research questions, I conducted a qualitative research study using purposeful sampling to interview 3 educators about their strategies for teaching about food insecurity in the classroom. In Chapter 2, I review the literature in the areas of food insecurity and its impact on school environment, current solutions and some of the challenges. In Chapter 3, I explain this research design that include elements such as my research procedure and sampling criteria for the research participants. In Chapter 4, I report my research findings and explore their significance in relations to the existing literature. In Chapter 5, I talk about the implications of the research findings for my own practice and suggest areas of future exploration.
CHAPTER TWO - LITERATURE REVIEW

2.0 Introduction

In this chapter, I review the literature in the areas of food insecurity that negatively impact many children in the Canadian school system. I look at the complex dimensions of the socio-political root causes of food insecurity and its heightened challenges that marginalized minority populations face across Canada. In the context of the institution of school, the traditional and alternative interventions and education being carried out by educators and community organizers to mediate the effects of food insecurity are examined.

2.1 Food Insecurity and its Significance

Best teaching practices often require not just knowing the curriculum but also applying the content to different student needs with thorough understanding of the context. In order to address the issue of food insecurity, it is important for the educators to define the problem of food insecurity affecting various Canadian communities and examine significance of the problem in the educational context. Awareness of food insecurity’s impact can be the foundations that lead to action.

2.1.1 Definition and prevalence in the Canadian context

Food insecurity is a complex problem that widely encompasses "multiple levels of individual, household, community, regional, national and world-wide" (McGuire, 2008, pg. 4). The World Health Organization (WHO) defines food insecurity as a socio-economic issue built on three pillars of food availability, access and use, when people do not have the means to obtain sufficient, safe and nutritious foods needed to maintain a healthy and active lifestyle (FAO, IFAD, & WFP, 2015). People who do not have access to sufficient amounts of food with adequate nutrition suffer the effects of food insecurity and face challenges such as disrupted
eating patterns, limited consumption and consumption of foods with reduced quality and limited
variety (Collings, 2016). Food insecurity has varying root causes that are not just rooted in
financial limitations, but also tied very closely to the geographical access to healthy food at
affordable prices and the amount of dietary and culinary knowledge and food literacy that
courage adequate and healthy consumption (Girard & Sercia, 2013).

While Food and Agriculture Organization of the United Nations (FAO) has found that the
global epidemic of hunger debilitating populations in the developing and third-world countries is
on a path of decline in recent years with the developing nations’ economic growth (FAO, IFAD & WFP, 2015), the prevalence of food insecurity has been increasing in Canada. In 2012, 4
million individuals in Canada including 1.15 million children experienced some level of food
insecurity, which represents 13% of Canadian households (Tarasuk, Mitchell & Dachner, 2012).
The rate is a growing problem, which has risen significantly from 11.3% in 2008 to 12.6% in
2012 (Sriram & Tarasuk, 2015). The rise in insecurity is reflected by an increase in the
percentage of people assisted by food banks in Canada by 24.5% from 2008 to 2014 (Roncarolo,
Adam, Bisset & Potvin, 2015). The highest rates of food insecurity were found in provinces such
as Prince Edward Island, Nova Scotia, Quebec, Saskatchewan, British Columbia and the
territories of Nunavut and Northwest Territories (Tarasuk, Mitchell & Dachner, 2012). The
different levels can be attributed to the diverse socio-economic landscape of each province with
its own government setting its own minimum wages, social assistance benefit levels and other
policies that are related to food insecurity (Tarasuk & Vogt, 2009). In addition, the fluctuating
rates are seen within a province; in the example of Ontario, Census Metropolitan Areas (CMAs)
found that insecurity rates ranged from 9.3% in Hamilton to 17.3% in Barrie (Sriram & Tarasuk,
2015). The varying levels of food insecurity that follow poverty are visibly apparent in
metropolitan cities such as Vancouver and Toronto with significant wealth disparity amongst its residents.

2.1.2 Prevalence of food insecurity in schools

With the statistic that up to 1 out of 5 children in Canada struggle with food insecurity (Pickett, Michaelson & Davidson, 2015), its prevalence and effects on the learning of our students need to be thoroughly examined. Even though growing children have physiological needs that are different from adults, many children suffering the effects of food insecurity come to school without adequate food throughout the day. Despite the clear physiological needs of growing children having a 2-fold higher utilization of brain glucose compared to adults and greater depletion of glycogen due to their greater sleep demands, 20-30% of children reportedly skip breakfast in developed countries (Ptomey et al., 2015). In 2013, news coverage reported on the problem of food insecurity affecting schools in British Columbia where teacher testimonials stated that “[f]orty children come to Richmond’s William Bridge Elementary hungry every day and bring nothing for lunch” (Bramham, 2013). The Globe and Mail also reported as many as one in seven children go to school hungry and some as high as half of the classroom in some of the poorer neighbourhoods in Canada (Picard, 2013). According to the 2006 Student Census by Toronto District School Board (TDSB), 51% of elementary school students and 68% of secondary school students in the historically struggling Jane and Finch neighbourhoods came to school without having breakfast everyday (Toronto District School Board, 2011). In a cross-sectional survey of 25,912 students aged 11-15 years from 436 Canadian schools, where 25% of participants reported feeling some hunger during school, while 4% reported to be often or always hungry (Pickett, Michaelson & Davidson, 2015).
2.1.3 Impact of food insecurity on development and learning

American psychologist Abraham Maslow has theorized the triangular model of seven levels of human needs based on the belief that people can reach the higher levels of intellectual achievement only when their fundamental levels pertaining to basic survival, emotional and physical safety are fulfilled, and this theory can be brought into class to help teachers comprehend student needs and its connection to motivation (Perks, 1999). The basic needs of having food, clothing and shelter are the key essential foundations for learning that is crucial for one’s success in education.

With limited access and means within a household struggling with food insecurity, food insecure children consume fewer servings of fruits, vegetables, and milk produce (Kirkpatrick & Tarasuk, 2008). There is also a higher inadequacy of protein, vitamins and magnesium in children or adolescents in Canadian food-insecure households (Kirkpatrick & Tarasuk, 2008). Along with the deficiencies in the nutrients, there is also higher energy density amongst some subgroups. In what is labeled as the obesity-hunger paradox, financial constraints of food insecure households lead to substituting low-cost, energy-dense meals for health foods, leading to substantial weight gain amongst the children (Howard, 2011). These types of metabolic stress from not having enough important nutrients and too much energy-dense meals have a serious impact on children’s development.

For growing students who are learning in the classrooms in their formative years, the lack of nutritional intake can have direct adverse effects on cerebral functions, which can shape their cognitive capacities, and produce indirect effects on physical and mental health (Roustit, et al, 2010). These harmful effects can affect children’s ability to concentrate and lead to disruptive behavior and aggressions (Broughton, 2006). These types of behavioral issues can create great
challenges for teachers managing their classrooms. In a study that looked at 5853 grade 5 students suffering from various FI in Nova Scotia, students experiencing moderate/severe FI had poorer diet quality, higher body mass index (BMI) and poorer psychosocial outcomes in comparison to the students with high food security (Kirk et al., 2014). Along these physical and behavioral problems, metabolic stress can lead to impairment of attention and memory amongst children aged 9-11 (Howard, 2011), which can be responsible for lower academic performance. In research that examines 5398 children between the ages of 6 and 16 in America, those with iron deficiency had lower standardized math test scores (Halterman et al., 2001).

2.2 Related Factors

This section explores the different conditions that, when combined, contribute to food insecurity for many Canadians. A major connection is food insecurity and low socioeconomic status, which determines the level of access to healthy food and education. This factor envelops an array of other marginalized demographic subsets that each has their own unique challenges to contend with. The struggles of food insecurity are heightened for ethnic minority groups battling with various intergenerational barriers. In order to create as holistic an understanding as possible, these socio-economic and political components of food insecurity are identified.

2.2.1 Relationship between food insecurity and current socioeconomic factors

Food insecurity is heavily affected by the political and economic climate of society that also influences and shapes the environment of our educational system. An individual’s socioeconomic status (SES) plays a huge role in directly determining the levels of food insecurity encompassing our society.

The increase in food insecurity in recent years has been linked to the effects of peak unemployment rates following the economic downturns of recent years, which has rendered
residents less able to obtain sufficient income to satisfy their food needs (Sriram & Tarasuk, 2015). This problem of food insecurity is expected to worsen as the food prices have been rising faster than inflation with the depreciation of the Canadian dollar in 2014, the recent droughts, and spread of contagious diseases amongst livestock in North America (Evans, 2014). In 2014, Canada faced a substantial economic downturn due to the crash in oil value, which has led to many layoffs and budget deficits for the various federal, provincial and municipal governments in Canada, which has an impact on funding for various social services.

In a study that looked at food insecurity in households with children aged 2-5 years, parents who had less access to food of reasonable quality, fewer appliances and cooking skills were more likely to experience food insecurity (Broughton, Hertzman, Innis & Frankish, 2006). There is often a ‘food desert’ in many low-income urban neighbourhoods in Canada, where parents without a vehicle do not have a lot of access to full-service grocery stores that sell affordable produce and are only left with small markets that offer foods of lower quality without a lot of nutritional value (Broughton, et al., 2006). In a research that looked at the case of London, Ontario, the findings show that low SES residents in inner-city neighbourhood have the poorest access to supermarket and the spatial inequalities in the access to the markets have increased over time in the areas of Central and East London (Larsen & Gilliland, 2008). Since the large-format supermarkets are being built on suburban lands, small grocers are rapidly disappearing and the structural and geographical changes in the business of retailing are one of the major contributors to food deserts (Larsen & Gilliland, 2008).

Food insecurity is more prevalent among tenant, single-person and single-parent households (Tarasuk & Vogt, 2009), many of whom are struggling with the very rapid increase in housing and rental prices in cities such as Vancouver and Toronto. While the food and the
housing rental prices are rising at an incredibly fast pace, wages of people lag behind, and these factors all play a role in the parents’ inability to provide sufficiently nutritious food for their children despite effort. Mark, Lambert, O’Loughlin and Gray-Donald (2012) have found that there is a direct link amongst income levels, food consumption and the physical development of Canadian youth. The study found that milk consumption was lower and sweetened beverage consumption was higher amongst youth from low-income households in comparison to their more privileged counterparts; the youth from low-income households were in lower-height percentile and girls from low-income households faced a higher prevalence of greater BMI (Mark, et al., 2012). These links show the direct challenges in development that are manifested from struggles with food insecurity linked with financial struggles.

2.2.2 Relationship between food insecurity and minority groups

While food insecurity is a prevalent condition affecting a considerable part of our population, it is more frequent and severe in some of the marginalized communities in Canada. Food insecurity is found more commonly amongst the Aboriginal population than the general population and the diet of these remote and marginalized populations "suffers when the price of market foods become more important determinant of food choice than nutritional value" (Gates, Hanning, Gates, McCarthy & Tsuji, 2011, p.70). The situation has become so alarming in recent years that Canada has been strongly criticized by the UN human rights committee for our failure to meet the basic needs of Aboriginal Canadians struggling with poverty (Vincent, 2015).

Aboriginal youth are more vulnerable to health problems than non-Aboriginals; 20% of Aboriginal youth aged 12 to 17 years are obese compared to the 9% in the general population due to the diet containing excess added sugar and fat (Gates, et al., 2011). In a study that took place in Northern Quebec, more than 80% of Aboriginal children consumed less than 2 servings
of milk and alternatives food on a daily basis (Gates, et al., 2011). In order to examine its root causes of the clamorous circumstance that many Aboriginal Canadian youth face, it is important to recognize the destruction of the traditional food culture by the effects of colonialism as "introduction of and reliance on industrial imported foods was correlated with significant declines in health" (Collings, 2015, p. 32) of the communities in Arctic Canada.

Beyond the Aboriginal populations, there are many segments of immigrant and migrant populations that suffer from food insecurity in Canada. This is in relation to the difficult challenges arising from issues related to income, food practices and lifestyles that many newcomers face (Girard & Sercia, 2013). A lot of highly educated, professionally skilled young immigrants are often forced to professionally downgrade due to many barriers they face (Girard & Sercia, 2013). Since immigrants to Canada come from a very wide spectrum of SES backgrounds from the most affluent to refugees sponsored from war-torn countries, varying immigrant communities are affected differently. Research has found that respondents from South America were most likely to experience FI and develop medical illness from the situation (Girard & Sercia, 2013). In a study that looked at newcomer immigrant and refugee children in Saskatchewan, the prevalence of inadequacy in calcium and vitamin D within the group was as high as 76% (Vatanparast, Nisbet and Gushulak, 2013), which demonstrates different health challenges the immigrant youth experience.

2.3 Food Insecurity Solutions in Schools

There have been various approaches to address food insecurity in schools. A major part of the approach has been increasing food access by providing snacks and meals at schools. Alongside efforts for food provisions, there has also been a growing movement that addresses food insecurity with hands-on education that is about changing mindsets and involving students
and their families into the food production and preparation. While undertaking this important work, teachers and schools face obstacles with the key underlying factor where a school’s role is not clearly defined.

2.3.1 School’s role in fighting food insecurity

The social conditions that children face elsewhere have opportunities to be minimized or equalized in schools (Hay, 2000). As one of the prominent environments for children’s growth, schools can play an important role in addressing food insecurity since they are "an ideal setting to support behavioural change; they can be a rich source of positive influences, including snack problem coordinators, teachers and administrators" (Gates, et al., 2011, p. 70). Schools can reach such a wide scope of children and create an environment where they can learn and practice healthy eating (Gates, et al., 2011) and the programs can even expose the children to things they would not otherwise eat (Hay, 2000). There are currently many ways that educators are trying to replace some pernicious eating habits with habits and routines that are more beneficial.

Due to the adverse effects from the declining health of our citizens, there have been various movements in different levels of society to address food insecurity affecting children and youth. In 2013, Ontario launched Healthy Kids Strategy and has invested 3 million dollars on Student Nutrition Programs that has started 200 breakfast programs in 2013-2014 (“School snacks and meals”, n.d.). In addition to such government initiatives, there are diverse resources of community-based programs in partnership with the government and schools to provide food and food education for children. Collective efforts of these organizations are attempting to disrupt the cycle of poverty affecting our population through immediate help and education that can lead to empowerment.

However, compared to the commitment by the federal government of the United States to
support a national child nutrition program, Canada lacks a strong national framework that support the programs that are largely "ad hoc response of local initiatives" (Henry, Allison & Garcia, 2003, p. 84). There is also the criticism of lacking stable funding and specialized resources, stressing the need to allow structural changes in the organization of environment that provide more sustainable school meal program (Henry, et al., 2003).

2.3.2 Food programs focused on provision of food

There are currently different types of school food programs that are run by the provincial governments, community organizers and private charity organizations that have been focusing on providing healthy meals in schools to reach students who do not have access to nutritious meals on a regular basis.

Student Nutrition Programs (SNPs) in Ontario have been established to provide healthy breakfasts, lunches and snacks in schools led by volunteers of teachers, community members and parents (Pratley, McPhail, & Webb, 2014). Many teachers and administrators are actively involved participants in these programs in place. Specific school districts can also run their own programs depending on the needs of the demographic area. After finding out the high prevalence of high school students coming to school without breakfast in the Jane and Finch neighbourhoods of Toronto, the TDSB launched a breakfast program in 2008 to get nutritious meals to students (Baluja, 2012). The success of the breakfast program was documented as procuring better performance of students and fewer dropouts (Baluja, 2012). In the United States, the seriousness of the problems of poverty and food insecurity have even extended to dinner programs where thirteen states started a pilot program to offer dinner in their schools (Farrell, 2012).

There have also been pilot school snack programs in remote First Nations, Metis and
Inuit communities in Northern Ontario, Canada, that have been facing some tough challenges. In an example, the snack programs in Kashechewan and Attawapiskat, helped to increase calcium intake after a week, but the improvements were not sustained at 1 year due to limited resources the program encountered (Gates, Hanning, Gates, McCarthy & Tsuji, 2011). The lack of clear improvements seen from these outcomes can exacerbate the situation by not giving clear support for more funding. A lot of these programs often deal with issues of funding and personnel that threaten the sustainability of the initiatives.

The crisis relating to the increase in food insecurity has also given a rise to various charitable organizations that focus on food programs in schools. Breakfast for Learning is one of the biggest organizations that run food programs in schools across Canada. The organization runs on charitable grants and donations from various organizations and corporations such as Loblaw Companies Limited who provided over 40 million meals in 2014 that reached 251,531 children across Canada (Breakfast for Learning, 2014). The websites for these charity organizations report statistics that showcase the success of their food programs.

While these many programs are working hard to provide food to children, there is also criticism of the programs as they fail to make more systematic, structural changes (Hay, 2000). One of the major criticisms is that such programs draws attention away from the main cause and de-politicizes the legitimacy of hunger as a matter relating to charity, not social justice (Raine, McIntyre & Dayle, 2003). The mandate of a lot of the food programs is solely to feed hungry children, which often produces the side effects of alienating, stigmatizing and wakening status of poor children and families (Raine, et al., 2003).

Furthermore, there is a lack of solid research done on the assessment of the school food program’s success beyond reporting on the websites of these charity organizations. The research
provided by the charity organizations can be seen as self-serving to legitimize their own cause. For example, the Breakfast for Learning website publishes statistics such as 88% of the participating teachers having found improvement in classroom behaviour and 83% seeing improvement in the student success (Breakfast for Learning, 2014). In the model of ‘the Fifth Estate’ that promotes the charitable model, these reports can be part of a way to justify the programmes as a way to sustain the services for those who run them (Raine, et al, 2003). Beyond the provision of food, educators and policy-makers need to explore the ways to create structural changes and empower the students in the matter of healthy eating that can contribute to encouraging long-term changes.

2.3.3 Food education and innovative programs

While schools can play a role in providing nutritious meals to reach students without access to nutritional food, many educators see that awareness and education about the socio-political dimensions of food and healthy eating are equally important. The goals of these programs include teaching kids about where food comes from, how it is grown and skills involved in cooking so that they are empowered to take action (Pratley, McPhail, & Webb, 2014). Encouraging such a mindset about food and eating can help to combat the problems of unhealthy eating that can often manifest into problems of childhood obesity and other chronic diseases afflicting many families with low SES.

Some school food programs have been created as a way to help address the food deserts present in the inner city communities in ways that can nurture the agency of students. Beyond just providing schools with produce, schools are trying to create healthy dietary habits for students with hands-on approaches that fully engage children. In recent years, school gardens have arose as a way of encouraging this habit to increase exposure to fruits and vegetables (FV),
and improve their relationship to the FV consumption. These food gardens can help address the concerns about children's diets and create access and exposure to locally grown produce that they are not easily exposed to (Harrison, 2008).

Studies show that there are possible synergies between dietary and academic outcomes that can arise from school-based interventions targeted to improve student health (Berezowitz, Yoder & Schoeller, 2015). Enhanced school engagement with community gardening helped to improve academic outcomes by developing student observational skills and giving them opportunities to have interdisciplinary concepts from the living lab (Berezowitz et al., 2015).

There are many organizations in Ontario that focus on bringing community gardening to schools. An organization called Green Thumbs offers an elementary program that focuses on nurturing children’s exploration of nature and healthy food that can be taught within class under the scope of Ontario Curriculum, or outside of class-time during breaks after school (“Green Thumbs”, n.d.). Through their main website, teachers can request consultation and workshops, and there are designated school locations where gardening is taking place throughout Toronto (“Green Thumbs”, n.d.). Another organization called Ecosource based in Ontario also helps to connect the community gardening to charity since individual plots and collective community plots help produce food for donation to local food banks, giving kids empowerment about solving some of the difficult social problems in society (“Ecosource”, n.d.). While doing so, teachers can elicit discussions about action-driven ways to fight poverty in order to bring attention to the issues of poverty that continuously affect our communities.

Besides community gardening, there have been attempts to educate children about food and eating in ways that empower the children. There have been efforts to create a program that tackles the issue in a more holistic approach that include several different types of interventions.
Cafeteria Power Plus was a cafeteria-based intervention implemented to increase the fruit and vegetable consumption amongst students (Perry et al., 2004). 21 schools in America participated in the program that was a combination of different interventions that included daily activities of increasing the availability and encouragement for fruit and vegetables and special events such as samplings and theatre production. The program significantly helped to increase the total fruit intake amongst the students and its outcome indicated the importance of multicomponent interventions that included changing cafeteria environment, classroom curriculum and parental involvement, which can help to create the best impact (Perry et al., 2004). Tackling such a significant social problem takes not one solution but a combination of different approaches.

Teachers can also implement projects such as food of the month or use social media campaigns to educate and raise awareness over the issues of food insecurity (Breakfast for Learning, 2014). In addition, there is a strong urgency to strengthen student media literacy to address the children’s bad eating habits that are frequently shaped by the media of ads that target children. In a study that looked at a total of 225 grade 1-6 children in different Canadian cities, children lacked the media literacy needed to make effective nutrition choices since they relied heavily on packages written and visual aspects such as colours, images and spokesperson to gauge the healthfulness of the products (Elliott & Brierley, 2012). Fostering better media literacy in both the students and parents would also be an important step as their parents often set children’s diets. Media literacy nutrition education intervention curriculum conducted by dietitians for parents in Head Start Programs in NYC had significant effects in the parents understanding television advertising, attitude about the ads and understanding of food labels (Hindin, Contento & Gussow, 2004).
2.3.4 The role of teachers in food insecurity education

It is a duty of the Ontario teachers to bring in education of healthy eating and nutrition to the class. The Ontario Curriculum for the subject of Health and Physical Development outlines that “teachers need to consider these realities and be aware of issues such as poverty, food allergies and sensitivities, disordered eating, and social and cultural practices in order to ensure that the learning is presented with sensitivity” (Ontario Ministry of Education, 2015, p. 37).

Ontario School Health and Physical Education Curriculum for grade 1-8 covers food and healthy eating education in the Strand C of Understanding Health Concept. Each grade has two expectations designed to "equip students with the knowledge and skills they need to make the healthiest eating choice they can" (Ontario Ministry of Education, 2015, p. 36). A lot of the expectations involve learning about the Canada’s Food Guide and talking about Health Choices. The Ontario Ministry of Education document (2015) contains some important expectations include the expectation of exploring how ads and media influences food choices in grade 5 and understanding of external factors that affect food choices and eating routines in grade 7.

However, some of the biggest challenges are a lack of strong curriculum support and varying perceptions of the role of teachers and schools in the matter. There is a question as to how much impact the curriculum expectations can have on children’s lives by teachers simply disseminating information from Canada’s Food Guide and different nutritional values of foods. Research has shown the difficulty of changing children's eating habits with school-based intervention that lack engagement and involvement (Bullen, 2004; Saltos, 1999; Veugelers & Schwartz, 2010). In the case of schools in the U.K, it was found that many of the lessons regarding nutrition and eating were too short and often emphasized knowledge that did not create behavioural change, highlighting the importance of working with individual needs to overcome
resistance to change (Bullen, 2004). Instead of just feeding information on nutrition that might seem arbitrary to the students, it is important to help them "develop an understanding of the food/health relationship which has both meaning and ownership for them" (Bullen, 2004, p. 55).

The education of food security should not happen just in the curriculum of Health and Physical Development because it is also a social issue. In the rights education of children exploring social justice in subjects such as Social Studies, teachers have opportunities to look at the social issues from food insecurity and poverty from intersectional perspectives that combine anti-racist and oppressive lenses. Furthermore, there appears to be a lack of food education programs that fully recognize the significant economic barriers of eating healthy. Helping students and families to figure out the ways to eat healthy on a limited budget would be a very important practical skill to teach and such a skill could be developed with simultaneously strengthening mathematical and research inquiry capabilities.

There are currently many hurdles to teachers engaging children in these ways that can lead to in-depth examination of the issue and important behavioral changes. Teachers face challenges such as increased workload the difficulty incorporating food preparation into the curriculum that often evolves around the funding issues (Pratley, McPhail & Webb, 2014). There is also the teachers’ knowledge and perception of the role of the teacher and school in the issue that affect their practice. A research designed to assess teachers’ preparedness to be effective role models for healthy eating surveyed 103 teacher candidates in bachelor of education program (Rossiter et al., 2007). The research found that the 65% of the participants reported high fat intake, 72% had mid-to-low nutrition knowledge and 2/3 reported unhealthy classroom food practice (Rossiter et al., 2007). Those who perceived the role of school in addressing unhealthy eating as not important were more likely to use food as reward with candy (54%) and pizza
(48%) being most likely to be used as a reward/incentive, special treat for students (Rossiter, et al., 2007). From the lack of knowledge and awareness that leads to problematic practices, there is an argument that there needs to be a better compulsory nutrition component in the education curricula (Rossiter, et al., 2007) and overall more discussions and better direction over the role of school in addressing issues of hunger in our classrooms.

2.4 Conclusion

In this literature review, I looked at up-to-date research on the factors related to food insecurity that affects Canadian students in deeply troubling ways. The review has revealed that the cause would greatly benefit from formal federal or province-wide framework that considers the complex socio-political dimensions of food insecurity in the school environment. The important homework for educators is not simply to aid in being the frontline providers of healthy foods to growing children, but also to raise the awareness and bring in education of food system and healthy eating that are currently battling some serious side effects such as climate change and wealth disparity. The chapter also raises issues about the need to further explore how the food educational network of organizations operate, how it is sustained in the public and private sphere and how the support reaches teachers through professional development. With such examination of the issue, the purpose of the research is to see how some teachers are able to utilize the tools out there and/or even create their own solutions for addressing issues of food insecurity that are currently taking place in classrooms all across Canada.
CHAPTER THREE - RESEARCH METHODOLOGY

3.0 Introduction

In this chapter I describe the research methodology and rationale behind my methodological decisions that best attempt to address my research question. Through reviewing the general research approach, procedures and instruments of data collection, the strengths of the explorative nature of qualitative research conducive to the purpose of this study are highlighted. Afterwards, I will elaborate on the sampling and recruitment process, and data analysis procedures that are designed to synthesize meaningful understandings. The study will also be contextualized with ethical considerations that must be explored and the overall limitation and strength that are inherent in the methodology. I will end with a brief overview of my major methodological decisions for the study that began with an inquiry to understand how teachers are attempting to work with the complex issues of food insecurity at hand.

3.1 Research Approach and Procedures

In order to address my primary research question on tackling food insecurity in schools, I conducted a qualitative research approach that involves a literature review, semi-structured interviews with two or more educators, and a coding of the data collected for a thematic analysis. While quantitative research seeks to find understandings through linear attributes, measurements and statistical analysis, qualitative research attempt to holistically understand a phenomena through a process that is deeply interpretive, experience-based, situational and personal (Stake, 2010). Even though qualitative research has often been historically discredited for questions over validity and reliability in the eyes of quantitative thinking (Seale, 1999), the method has emerged as pertinent in the face of rapid social change and diversification, which require new social context and perspectives (Flick, 2002). The two methodologies are both valuable ways of
seeking to understand the world around us; each has its strengths and limitations that provide remarkable insight into social life (Neuman, 1997).

Qualitative research views reality as socially constructed and believes there are multiple realities and interpretations rather than a single observational reality (Merriam, 2009). Instead of finding correlations in numbers from a random sampling, qualitative research “places importance on context and process” (Luttrell, 2010, p.10) and attempts to unravel the intricacies surrounding a particular issue. For my research question, the qualitative method centered on the interview process can be used to create dialogues and understanding that can inform practices and promote positive social change. Utilizing apprenticeship of the qualitative research, professional and clinical knowledge can be shared (Stake, 2010), which can better foster the development of teacher candidates.

In addition, this research methodology is highly apt for the educational research that raises reflexivity about negotiation of unequal distribution of power in the production of knowledge (Luttrell, 2010). Understanding how and why the inequalities and obstacles in education exist as opposed to reaffirming the inequalities in statistics becomes a very important framework for educational research that aims to understand the breadth of the issues.

3.2 Instruments of Data Collection

In qualitative research, different types of data from measurements to observations can be used to produce optimal data for the research question (Stake, 2010). This study employs the fluid and open semi-structured interview protocol as the primary instrument for data collection. In the process where the researcher is highly involved (Neuman, 1997), the format allows the researcher the agency to design an interview that relevantly addresses the research question. This interview process relies upon a face-to-face, personal encounter between knowing subjects,
which validates our unique perspectives (Luttrell, 2010). The process, in turn, can be reaffirming for the interviewees who get to make meaning of their teaching practices. For the both parties involved, the process can highly inductive and descriptive (Merriam, 2009), which can nurture the growth for the related field of study.

While unstructured interviews which originates from traditional of ethnography entails that a researcher interviews on an ongoing basis and takes notes while observing and questioning, semi-structure interviews are scheduled in advance and organized around predetermined open-ended questions as well as other questions that may arise from the dialogues (DiCicco-Bloom & Crabtree, 2006). In order to create research questions that get the most information, researchers design mostly open-ended questions, minimizing yes or no questions (Stake, 2010). I organized my interview protocol (Appendix B) into 4 major subsections that examine the participant’s background and perception regarding nutrition programs and education as well as investigate the support and challenges they face in their initiatives.

Examples of questions include:

- What do you think is the role of educator in addressing the issues of food insecurity affecting children?
- What kind of personal and professional experiences have shaped your leadership in the matter?
- What are your biggest challenges in maintaining/initiating the food initiatives?

### 3.3. Participants

As part of the research design, procedure of sampling for the procurement of participants for the study is a vital part of the process as qualitative research aims to study personal accounts how selected individuals in the field interpret their experiences and construct their reality. I
review the methodological decisions related to the sampling criteria and procedure for the finding participants that can provide optimal insight for the study. I will then explore some of the extensive ways of teacher recruitment.

3.3.1 Sampling criteria

The following criteria was applied to the selection of teacher participants:

1. Teachers will have experience working with students of low socioeconomic status in the Greater Toronto Area.

2. Teachers will have demonstrated leadership and commitment in participating and leading food programs/food education initiatives.

3. At least one participant will have experience in community/school gardening as a means to food education.

In order to address the questions that revolve around dealing with socio-economic dimensions of food insecurity, I looked for educators who teach at high-needs schools where food insecurity is often more prevalent. I also sought to find teachers with substantial experience teaching in inner-city neighborhoods in hopes that they are deeply engaged with the community that school is located in. The teachers I interviewed have experience in participating in food programs as well as engaging in food education such as culinary education and community gardening. Since the work of food justice is often done in partnership with others in the community, my participants include an educator who works at a community food organization dedicated to addressing food insecurity. The participants include both males and females and vary in age and teaching specialty in efforts to make the data richer given the parameters of a small sample.
3.3.2 Sampling procedure & recruitment

There is a diverse array of sampling strategies in a qualitative inquiry. One type of theory-based sampling is called theoretical sampling that involves investigators examining individuals who are able to contribute to the evolving theory relating to the topic of study (Creswell, 1998). Given the restriction of this research, I employed a combination of convenience and purposeful sampling. Convenience sampling relies on potential participants that are not from random cross-sections in general populations, but are convenient in their proximity and willingness to participate (Robinson, 2014). It is important to note that convenience sampling of this size should not be used for generalization for a greater body of population, but to define “the sample universe as demographically and geographically local” (Robinson, 2014, p. 32). In order to ensure that particular categories of subjects are represented in the final sample, the sampling criteria is developed to allow for purposeful sampling, which asserts that certain categories of individuals are likely to have a different or important insight on the phenomenon in question (Robinson, 2014). My sampling criteria aims to find and create this purposeful sampling that can enrich the conclusions of my study.

Various approaches were employed for participant recruitment in order to follow this convenience and purposeful sampling. From a recent conference on Environment and Sustainability Education, I was able to find a variety of resources on food education and school gardening programs. One of the workshops I attended at the conference was held by an organization called The Stop, which not only runs a community food bank that offers healthy produce, but also engages in the community outreach programs through progressive and culturally-relevant food education. I also attended other workshops and seminars held by various food organizations in Toronto that work with teachers across the city.
Through my research for my literature review, I also came across magazines on the topic and reached out to the organizers. For ethical considerations, I made sure to provide my contact information instead of asking these individuals/organizations to provide me with the contact of people who might be suitable in order to remove any pressure or obligation to participate.

### 3.3.3 Participation bios

In order to protect the anonymity of the participants, each person is given a pseudonym.

**Gayle**

Gayle is a certified high-school teacher and an urban farmer who had worked as an education coordinator for a community food organization for 6 years at the time of the interview. In her position, she coordinates various food programs rooted in social justice and community building for teachers and students across Toronto. She has worked with a wide range of schools in Toronto with a universal programming that especially prioritizes working with schools high on the Learning Opportunities Index (LOI). Her research has looked at racial politics embedded in food programming and food literacy curriculum in education.

**Ben**

Ben is a high school science teacher who has worked at an inner-city school in the GTA for 11 years. At his special-needs school for students with learning exceptionalities, he had been teaching science classes and coordinating food programs and a rooftop garden. He studied agricultural science and environmental biology as an undergraduate and worked as a beekeeping advisor before becoming a teacher. His educational background and previous work experience working in environmental science have helped with his current food justice work at the school.

**Emma**

Emma is currently a primary/junior teacher who has taught for 15 years at various boards
in the GTA. While she is currently placed in a more affluent school outside of Toronto, she had previously worked at inner-city schools with low SES where food programs are more prominent. A few years ago, she won an award for her innovative lesson on teaching nutrition. As a technology specialist, she has tried to integrate different technology when teaching about food. She has a background in Communications and a Master of Education in curriculum studies.

3.4 Data Analysis

After the transcription of interview content, I began to analyze my data, which entailed interpretation of the content given the context of the situation. First I began coding my transcripts while utilizing my four main research questions as an interpretive tool. From each transcript, I coded different categories and synthesized several patterns of in order to arrive at themes. Afterwards, the different interviews were looked at together to arrive at any overarching themes. I also made notes of any divergences amongst the data that may contradict each other. Once the themes that answered my research questions emerged, I highlighted the significance of the findings given the existing research from the Literature Review. The categories in the coding process are progressively focused and malleable as the research questions take on different meanings and come across new stories and relationships (Stake, 2010). The interpretation and connections were developed with an understanding of the participants’ personal and professional backgrounds and experience.

3.5 Ethical Review Procedures

The nature of qualitative research warrants caution in many ways as privacy is relative and the boundaries of privacy can change in the space of an hour (Stake, 2010). Interviews also run the risk of sharing information that could put interviewees’ positions in jeopardy since some may vent their frustrations in their experiences (DiCicco-Bloom and Crabtree, 2006). For these
reasons, the participants are given pseudonyms and any identifying markers relating to their schools or students have been removed to keep the participant identity confidential.

By utilizing proper protocols that show respect, the researcher needs to build on the trust that prevents putting people at risk or burdening them (Stake, 2010). Therefore, many efforts were taken to minimize possible risk and avoid exploitation of the participants. Before beginning any interview process, participants were asked to sign a consent letter (Appendix A) approved by University of Toronto’s board of ethics, which stipulated their consent to be interviewed and audio-recorded. The letter provided an overview of the study, addresses ethical implications and expectations of the participation for one 45-60 minute semi-structured interview. In order to minimize any risk of emotional triggers, I reminded them again that they have the right to refrain from answering any question that they do not feel comfortable with. After the interview, they were able to review the transcripts and clarify or retract any statements before data analysis. The data of audio recording will be stored on my password-protected computer and will be destroyed after 5 years. The consent letter also notified that they could withdraw from the study at any stage. Asking for consent several times during a course can reinforce the opportunity to reconsider their participation (DiCicco-Bloom and Crabtree, 2006). These measures can work to minimize possible risks involved in research of this nature.

3.6 Methodological Limitation and Strengths

For better understanding and engagement in the research process, it is also important to reflect on the limitations inherent in the qualitative methodology. Qualitative research is subjective, ethically risky and can be a very long, labor-intensive process (Stake, 2010). Some of the most commonly mentioned problems include interviewer bias, variability of rapport and validity issues regarding the interpretation seen from an empiricist point of view (Crouch &
McKenzie, 2006). The biggest limitation in this study is the small scope of the research since we can only involve 2 or more teachers. The study also excludes observation and inclusion of other involved parties such as students and parents. The teacher perception can be informative to the topic at hand but they cannot be generalized due to the small sample size.

However, it is important to account for the strengths of such an in-depth study. Under the semi-structured interview setting, the interviewer-interviewee interactions can produce richness of materials where unexpected understandings can emerge, especially when a researcher is responsive to the cues through the interview (Crouch & McKenzie, 2006). Furthermore, with deepening understanding and construction of breadth into the investigation, just one case through qualitative research can lead to new insight considering any such case is an insight of social reality (Crouch & McKenzie, 2006). Qualitative research also draws upon imagination, which includes the ability to conceptualize images, ideas and concepts that are both seen and unseen (Luttrell, 2010), in its attempt to understand the complexities of difficult issues we are faced with. It is my hope that I can employ this working imagination to develop a deepening picture of how some teachers are contesting the status quo and inequalities in education through progressive measures of aid and education. As a teacher-researcher, it is important to recognize the strengths and limitations of different research methodologies and utilize diverse research methods that best support one’s growth and understandings in education.

3.7 Conclusion

In this chapter, I examined the qualitative research method behind this study that included three semi-structured interviews. I began with research approach of semi-structure interviews fit for my educative exploration of learning from experienced educators, and then proceeded with explaining the primary instrument of data collection. The rationales behind the methodological
decision regarding my research participants were specified to highlight the sampling criteria for my purposeful sampling as well as address the need for convenience sampling, leading to the participant bios. The chapter also explored the coding process of data analysis in order to derive meaning and synthesize themes from the interviews conducted. Lastly, the ethical review procedures that include confidentiality, consent, right to withdraw and data storage alongside methodological limitations of the study were examined while re-emphasizing the strengths of the research approach. Next, in Chapter 4, I report the research findings.
CHAPTER FOUR - FINDINGS

4.0 Introduction

This chapter reports and discusses data collected from three semi-structured interviews with Greater Toronto Area educators who have shown commitment to addressing the effects of food insecurity within a school environment. In doing so, the finding provide insights to my main research questions that asks how is a small sample of classroom teachers and community educators addressing the topic of food insecurity with students, and how do they create opportunities for students to learn about the multi-layered socio-political dimensions of food. Beyond looking at meal programs designed to feed students, the research examines how educators create opportunities to empower students in the process of combating multidimensional effects of food insecurity. There are four main themes in these findings:

1. Teachers working against food insecurity find a wide range of support both within and outside of school environment that help to make the work successful in the long term.

2. Teachers working against food insecurity take multiple considerations regarding student needs and holistically approach the issues regarding access and education.

3. Students exhibit personal growth from involvement and engagement with various work for the cause of food justice.

4. Teachers face barriers stemming from a lack of priority and awareness that impede their ability to initiate and continue beneficial food education and programs.

Under each theme, sub-themes will impart findings and examples from the data, which will be contextualized with existing literature from Chapter 2. In summation, I will outline what I have discovered and the significance of the findings that reveal needed actions relating to current challenges.
4.1 Teachers working against food insecurity find a wide range of support both within and outside of the school environment that help to make the work successful in a long term.

Educators recognized that addressing food insecurity requires a holistic approach that includes extensive support from communities outside the classroom. It was crucial for educators to know where they can find assistance. Through meaningful partnerships with various support networks, the teachers were able to successfully start and continue their initiatives and teachings. Educators also discussed the importance of funding from various municipal and provincial levels that were essential in keeping the programs running with necessary personnel and infrastructure. Support from their schools, food organizations and government agencies make it possible for the educators to continue the imperative work of battling food insecurity.

4.1.1 Teachers receive help from non-profit food organizations that provide instructional and outreach support.

For teachers working with tight schedules and high demands, a network of community organizations dedicated to addressing food insecurity provided guidance and support with classroom instruction and new food programs. With his position of working at a school that is very high on the Learning Opportunity Index (LOI) for their great needs, Ben talked about the school’s close partnership with many well-established local and provincial food organizations that provide instructional support that makes connections to food and healthy eating. Ben asserted that he frequently uses FoodShare Toronto’s website that has “a whole host of resources.” As a community educator who strives to create support for classroom teachers, Gayle revealed her organization offers a variety of free resources “already connected to specific curriculum expectations.” In addition, Gayle’s food organization provides professional development for teachers in a 2-day workshop where “teachers can learn to approach the topic in
friendly, scaffolded ways.” In providing accessible instructional support, Gayle said the organization’s goal is to connect food to any class through cross-curricular engagement. On top of the assistance in providing teaching resources, both Ben and Gayle stated that food organizations play a huge role in getting new food programs off the ground. At Ben’s school, partnering with an organization was crucial in many of the new initiatives such as rooftop gardening, as many teachers often do not have the expertise to write the grant proposals or technical skills that can initiate and maintain a project of a large magnitude. In recent years, food gardens have arisen as a way to create access and exposure to locally grown produce that students are not easily exposed to (Harrison, 2008). Food organizations aid teachers who may not be equipped with the know-how to start a garden in their schools and help in its maintenance. Ben credited the food organization for taking on the responsibility of maintaining the garden and farmer's market in the summer when teachers are off. Within existing research, there is criticism that food programs focus too much on providing food but not enough on making structural changes (Hay, 2000). These new organizations working with the teachers like Ben are attempting to go beyond the meal programs and create greater lasting impact and changes through innovative initiatives. Rather than just providing students with a meal program, these organizations are helping educators embed knowledge and first-hand experience through food pedagogy and gardening.

4.1.2 Teachers are also supported by a school environment that assists them in implementing school-wide health initiatives and feeding programs.

Classroom teachers Emma and Ben stated that a school-wide environment of support played an important role in carrying out the work. At Emma’s school, which lies outside of Toronto and has abundant access to resources, there were many school-wide health programs run
by the Health Action Team of dedicated teachers whose goal was to promote healthy eating and wellness across the school. She listed many school-wide health initiatives such as Mindful Monday, Awareness Wednesday and Wellness Dance that were designed to bring action and discussions of health into the school. The parents committee was also very involved in the health actions as participants and volunteers. In one incident, a family of a student owned an organic food company and helped to bring a health food market into the school to “expose them to food they may not always have had before.” While Ben’s inner city school in Toronto had a very different atmosphere where there was a lack of parental involvement due to various socio-economical barriers, various school networks also supported him. As a science teacher, Ben spoke of planning with other classroom teachers and sharing resources on the topic. He showed an appreciation in “receiving a fair bit of books and resources that were helpful about food education” from his previous science instructional leader. Since the school had 3 meal programs a day, having a large number of educational assistants and volunteers to run the programs was essential. Studies show that major changes towards better eating and better health require a combination of different interventions, which include changing school environment and encouraging parental involvement (Perry et al., 2004). Active involvement of school communities and families helped the participants in making healthy eating a priority across the board for their students.

4.1.3 Teachers find specific funding for combating food insecurity offered by various avenues.

Both Emma and Ben affirmed the importance of funding that allows the programs to begin and continue. Emma was able to win a grant from the ministry to do STEM work that pushed for food and nutrition education through the formal curriculum. For Ben’s high-need
school, they relied heavily on the school board and city foundations such as Toronto Foundation for Student Success that is designed to deliver emergency funding based on needs. The new funding supports their 3-meal program that provides a breakfast, mid-morning snack and lunch at no cost to the students. Ben reported that a TDSB program called Focus on Youth provided funding to hire students to maintain the school food garden. As an educator working with various school boards in the city, Gayle testified to the increase in the investment in student nutrition programs by the City of Toronto in recent years. Furthermore, Gayle talked about corporate sponsorship that worked with the food organizations and schools to implement new food programs. A large corporate donation recently has helped with building modular and mobile gardens in several TDSB classrooms.

A plethora of research in recent years shows the adverse impact of hunger and unhealthy eating on student development and learning. For growing students who are learning in the classrooms in their formative years, the lack of nutritional intake can have direct adverse effects on cerebral functions and produce indirect effects on physical and mental health (Roustiti et al, 2010). With growing evidence that demands more attention towards funding for the issues of food insecurity, the governments of Ontario and Toronto have launched several initiatives and strategies to fund various student programs in recent times. The participants were able to take advantages of the new funding and initiatives for school programs that encourage better engagement with healthy eating.

4.2 Teachers working against food insecurity take multiple considerations regarding student needs and holistically approach the issues regarding access and education.

Participants exhibited a strong understanding of the background of the students and the community of the school. Knowing the needs of the students helped the educators in addressing
the issues with multi-tier approaches. In order to assist students struggling with food insecurity, the teachers focused on creating further access to food and economic opportunities, which are crucial components of food insecurity that is undeniably tied to low SES. Going above disseminating food and providing access, the work included an important component of empowering education meant to encourage engagement and building skills for students. The findings highlight the importance of not only knowing the students and their environment but also the significance in responding to the different needs by coming up with new solutions to the age-old problem of hunger and poverty.

4.2.1 Teachers consider the background of students regarding their socioeconomic status and understand the challenges of different populations.

The teachers from very diverse schools all talked about the importance of understanding their students and the community of the school. Ben described the unique status of his students all with varying forms of learning exceptionalities and had an extensive knowledge of special social services needed for his demographic of students with low socioeconomic status. He described his students that often come from multi-generational impoverished families where the “access to food has historically been a major issue.” In addition, he talked about accessing mental health resources being a huge problem for this community. Emma also talked about a few specific students in her class that had less access to healthy fruit and vegetables; she pointed out the importance of having knowledge of a student’s home life and empathy for the family's shortcomings in providing the best care for the student. Both Ben and Gayle spoke to the overrepresentation of racialized minority students being affected by issues of food insecurity. Working with various high-need schools, Gayle had a very acute awareness of how race factors into the equation of food insecurity. She discussed compounded problems for racialized youth
who face higher unemployment and the greatest food insecurity, bringing in the data that “if you look at the general youth population, [unemployment] is like 9-18%, but if you look at racialized youth, newcomer youth and Aboriginal youth, it is 33% if you focus in.” While Ben and Emma did not notice any major changes in recent years, Gayle touched upon increasing difficulties with the changing economic trends of jobs becoming more precarious with an increase in low-wage, contract and part-time positions. Gayle’s understanding reflects the steady growth in food insecurity in Canada with recent downturns in Canadian economy (Tarasuk, Mitchell & Dachner, 2012), and this social challenge is often heightened with marginalized populations. Newcomers in Canada face greater obstacles arising from issues related to income, food practices and lifestyle (Girard & Sercia, 2013). Moreover, a large percentage of Aboriginal populations in Canada continue to struggle with access to food in their isolated communities affected by intergenerational poverty (Gates, Hanning, Gates, McCarthy & Tsuji, 2011). In order for change to happen, the participants felt that there needs to be greater public awareness of the societal hurdles that the students face beyond the classroom, especially for more oppressed communities in our society.

4.2.2 Teachers attempt to create further access to food and economic opportunities to assist students struggling with food insecurity.

The educators discussed their schools’ various efforts to increase student access to healthy food. While her affluent school did not have high needs for feeding programs, Emma talked about the school’s initiatives to expose students to healthier food by connecting with local farmers and having farmers’ markets in schools. For Ben’s high-needs school, they prioritized running the 3-meal program to address student hunger. In this process of providing access to food, the new programs have arisen to encourage empowerment in the equation of feeding
hungry students. For Ben’s school with a large rooftop garden, they attempted to grow a lot of the food they ate at the school all year round. Next to the garden, there was a cafeteria where the students could prepare the garden produce into meals and develop the culinary skills for healthy living. Gayle described a program called School Grow where students farm and take the produce they grow home. Gayle said, “having the skills to grow their own food is a great way to support access to food...if you could grow it yourself, you can supplement a budget with food that you seed and harvest for all seasons.” Both Ben and Gayle talked about youth employment programs related to food as part of the TDSB’s Focus on Youth program that hired students to work at maintaining the garden and selling produce at a farmers’ market throughout the summer.

Providing access to food and economic opportunities has been a big part of the current programs. In response to the growing needs, various ministry and school board specific initiatives have been focused on feeding programs such as Student Nutrition Programs (SNPs) in Ontario, established to provide healthy breakfasts, lunches and snacks in schools led by volunteers of teachers, community members and parents (Pratley, McPhail, & Webb, 2014). For the schools in the Jane and Finch area in Toronto, the TDSB launched a breakfast program in 2008 to meet the needs of the neighbourhood (Baluja, 2012). With a significant portion of research on food insecurity out there showing ongoing prevalence of hunger and effects of malnutrition, many programs have arose to fill the nutrition needs that are not currently being met.

4.2.3 Teachers attempt to engage their students through experiential learning and cross-curricular connections focused on encouraging changes in students.

While increasing access to food is an integral part of addressing food insecurity, the participants talked about a need to go beyond the simple meal programs focused on provision of food that might not attribute to breaking the cycle of poverty. All three participants testified to
the importance of connecting food to multidimensional, engaged learning that can lead to change in behaviour and build skills necessary for healthy living. With the grant as part of STEM, Emma has worked on integrating food education into various subject matters in her class such as math, science and media literacy. Emma encouraged students to make the connection in their home life by getting them to do activities such as a grocery scavenger-hunt. In speaking about the intent of the scavenger hunt, she said “the idea was to get kids involved, being shoppers at a young age and also for parents to pay attention to what they are putting in the cart.” For Ben’s school, their learning goal was for students to develop the skills they needed to have access to healthy food at a low cost. Students participated in running the meal programs and had opportunities to learn valuable culinary and food preparation skills for both personal and professional uses. In the study looking at different inventions for food insecurity, Perry et al (2004) found that a multi-component approach that includes changing not only the cafeteria environment, but also classroom curriculum instruction led to the best result in encouraging better eating habits. The educators saw the need to bring learning and skills in different facets of students’ lives that can better help them find a healthy balance in life.

4.3 Students exhibit personal growth from involvement and engagement with various work for the cause of food justice.

Participants reported that they witnessed positive involvement and feedback from their students when working with various food education initiatives. They shared anecdotes of the students’ experiences and changes in their behaviour. While the educators did not provide specific measurement of the positive impact of their work, they understood that the topic of food was very important to the students and observed positive improvement when engaging students about issues related to food. Educators spoke about seeing the students’ enjoyment, engagement
from the work that was meaningful to them, positive change in behaviors and personal growth shown through their pride and confidence in the subject matter.

4.3.1 Students exhibit enjoyment and engagement in meaningful experiential learning.

Educators highlighted enjoyment and engagement that their students exhibited with various food initiatives and education in the classroom. For his students with learning disabilities, Ben acknowledged how the hands-on learning with and about food suited their different needs and learning styles. He testified that they responded really well to the experience of preparing meals and growing food, as “[food] is a concrete thing that they know about and that is important to them...it is not just sitting in a classroom listening and reading textbooks”. Emma also discussed how enthusiastic her students were with hands-on learning on healthy eating that took the learning outside of the classroom. In media literacy and health, she looked at culturally relevant topics such as the effects of food packaging and adverts. In her efforts to rid the class of ‘junk foods’, she decided to have a day every week dedicated to healthy eating called ‘Freggy (Fruit & Vegetable) Friday’. At the end of the year she had a Freggy Friday Party as a celebration of their healthy eating all year. She noticed how they were “more engaged, more attuned with what they are doing and happier” when the students were empowered about healthy eating and being. Gayle also noted that her education programs with students always received positive feedback. Research has shown the difficulty of changing children's eating habits with school-based intervention that lack engagement and involvement (Bullen, 2004). Educators understood the importance of engaging the students in long-term approaches that appeal to their learning styles and personal interests to increase engagement and involvement from the students.
4.3.2 Students show positive change in behaviour in and outside of class.

Being seasoned educators, all three participants understood the social implications of hunger on the growth and learning of students and witnessed how their programs helped alleviate some of these problems. Ben describes noticing major side effects of hunger such as “lethargy and big swings between lethargy and hyperactivity.” For his population of students where regular student attendance was a major issue, Ben measured the success of their food-related program in student attendance and participation in school rather than in grades. He also talked about reduction in the behavioural incidents with better-fed students engaging in their learning. Both Emma and Gayle discussed how students brought the learning to their homes. Gayle indicated the influence the children have on their parents, saying, “[i]f you can get to kids, you can often influence parents.” She shared her experience where she taught a group of students how to make a kale smoothie at a farm and subsequently, “they went to the store with their parents and they got some kale, [which] they never really did before.” Emma also had a lesson where they made a smoothie and “the parents would tell me we are going to the grocery store to make that smoothie.” While there is a debate about the role of school in addressing food insecurity, research shows schools can have a big influence and be an ideal setting to support behavioural change with a rich source of positive influences (Gates, et al., 2011). The participants demonstrated how the positive influences and experiences within the school could affect the students and those around them in a valuable way.

4.3.3 Students show personal growth that comes with empowerment and reflection.

The educators described witnessing the personal growth of their students through opportunities for reflection on their eating habits and learning something new, which ultimately helped with their confidence. Both Emma and Gayle talked about the difficulties navigating the
current landscape against a lot of negative external influences such as inescapable food
marketing targeted at children. Emma felt like they “have to do damage control with stuff out
there because there is so much being pushed.” With her students, Emma encouraged
opportunities to realize their eating habits with reflection-based lessons that allowed students to
examine what they ate everyday. The students were able to see what food groups they lacked in
their daily diets. Emma said that “[a]fter a year of Freggy Fridays, they were pretty proud of
eating healthy and it felt good.” For Gayle, the goal of their program for the students was to learn
something new and “increase their confidence around food issues.” Similar to what Emma
previously spoke about, Gayle acknowledged there being “so much competing info about how
you should eat and cook.” Therefore, her workplace prioritized building the confidence and skills
for students to make better choices for healthy eating. Instead of just feeding information on
nutrition that might seem arbitrary to the students, it is important to help them “develop an
understanding of the food/health relationship which has both meaning and ownership for them”
(Bullen, 2004, p. 55). Rather than just getting the students to memorize nutritional facts, the
participants helped their students build more informed relationships with food in a way that
empowers them.

4.4 Teachers face barriers stemming from a lack of priority and awareness that impede
their ability to initiate and continue beneficial food education and programs.

When implementing various strategies to combat food insecurity, participants faced
various challenges within the parameters at the institutions they worked at. In many cases,
teachers faced a lot of hurdles within and outside the class, navigating around the system that
made approvals and funding difficult. As the issues require cooperation from different facets of
society, there is a need for greater awareness of the systemic challenges that prevent greater
changes from happening. The obstacles ranged from a lack of training and job stability for the teachers to coming up against difficult bureaucracy and funding changes. Due to what the educators perceive as a lack of awareness and priority towards nutritional programs, their teaching goals had to be flexible in order to navigate the fluctuating funding streams available to them.

4.4.1 Within the class, teachers faced various hurdles to take on the task of addressing food insecurity.

All three participants confessed to not receiving any training on the topic of food insecurity while they were in teacher’s college. Gayle talked about how she came across many teachers who would show interest in doing the food justice work but that “they have no idea where to start.” With various demands from different levels, teachers also acknowledged time constraints as a big factor. Ben said, “As a teacher, your head is barely above the water.” Emma said “there is still more push with language, math and EQAO and covering the curriculum” and lamented the fact that the curriculum “focuses are on [EQAO] as opposed to trying to educate healthy Canadians that learn to create balance at a young age.” Gayle also understood the struggles of classroom teachers where they are pressured to focus on academic evaluation and reporting.

Job instability in the teaching position also threatened the longevity of the work. Gayle, having worked alongside many classroom teachers in many different schools in the GTA, said there was not really a cohesive approach because the work really depends on individual teachers who champion the causes. She said, “In one of our schools in the last few years, we’ve had 5 horticulture teachers because the position is getting surplussed.” In some cases, a program began with one teacher then came to a stop with the next teacher who did not continue the program.
Ben also talked about the difficulties collaborating with Health and Physical Education teachers because “there has been a lot of turnover” at his school with certain teaching positions. Since topics of healthy eating are covered in Health and Physical Education curriculum, it is important for classroom teachers to collaborate with HPE teachers to ensure the issues of healthy eating are dynamically covered throughout the year. Currently, there is not a lot of time given to nutrition and health in teacher training and as a result, a majority of teacher candidates demonstrate low nutrition knowledge and report unhealthy classroom food practices such as using low-nutritious food as rewards (Rossiter et al., 2007). All the participants highlighted other personal avenues of educating themselves and taking interest on the subject matter. When trying to do the work combating food insecurity, research suggests teachers face numerous challenges such as increased workload and difficulty incorporating food preparation into the curriculum (Pratley, McPhail & Webb, 2014). A lack of sufficient time, training and collaboration amongst teachers presents significant barriers to the work being done for food insecurity within the classroom.

**4.4.2 Difficulties of funding and dealing with bureaucracy also restricted the teacher involvement and prevented the program success.**

Getting the bureaucratic approval and funding for the work played a big role in the various food programs for different reasons. Emma talked a lot about red tape that has prevented her from doing more work on this front. After reading about successful examples of schools starting food gardens across North America, she expressed her wishes of starting an outdoor classroom and growing food with her classroom, but came across challenges in getting the approval from all different levels of authority from the principal to the city. Ben described TDSB as a risk-averse organization with a large deficit and talked about barriers he faced in getting the rooftop project off the ground with concerns from the administrations on various issues of
funding. Gayle had an acute understanding of problems of not having any federal funding set aside for student nutrition. She said “there is some provincial money and some municipal money, but it is always in threat of being cut.” Despite the City of Toronto’s introduction of widespread student nutrition programs, she said, “it is on the chopping block already and it hasn’t even been a year.” She highlighted that success of their programs often depend on continuity of the grants and they need to constantly adapt to the changing landscape of funding. This is the tough reality of Canada being the only G8 country without a national school-based feeding program (Picard, 2013). Compared to countries such as the United States, Canada lacks a strong national framework for student health and runs mainly on programs that are largely an "ad hoc response of local initiatives" (Henry, Allison & Garcia, 2003). As Gayle has put so succinctly “we have money as a government but we don’t spend it on food,” showing the low priority society puts on anti-poverty measures.

4.4.3 Beyond the individual programs, educators work against great systemic challenges that put food insecurity at low priority.

The participants faced a lot of obstacles working in an environment where issues of food insecurity were not only given very low priority and attention, but also tied to various sociopolitical factors that are often much more difficult to address. Both Emma and Gayle addressed the problems of food insecurity being connected to politics in the food industry and agricultural system. Emma talked about the problems of sugar in school and students having an excess of pop and juice. For any major changes to happen on the structural level, Gayle implored that there should be greater discussion of government spending on agricultural subsidies that only support certain foods like wheat and sugar. Most importantly, all three participants agreed that there need to be more awareness and investment from society and policy makers. Ben
described his students as “forgotten populations,” explaining, “[t]here is an awareness piece for intellectual disabilities and poverty, and the connection needs to be better understood societally so that we can start to better help this population gain the tools they need to be more successful.” Ben tried to bring this awareness to his students by teaching his students a course called ‘Seed the Market’ where they focus on learning about food production and how “food security is an issue and explore topics like food deserts and access to healthy food.” For Gayle, a huge part of their work was “doing advocacy to get funding and get policy changes with ultimately better support for teachers.” In order to create more sustainable food programs with long-term impacts, there is a need to push for structural changes in the organization of environment (Henry, et al., 2003). Rather than the charity model of food programming that de-politicizes the legitimacy of hunger (Raine, McIntyre & Dayle, 2003), these teachers call for more advocacy work that examines the flaws inherent in the current system and calls for changes.

4.5 Conclusion

Through these interviews, participants demonstrated how they are actively addressing the problems of food insecurity by connecting with various resources and communities. They prioritize engaging and empowering their students in this work, which leads to positive behavioural changes and development of skills and knowledge that help to make better choices for healthy living. Providing access and empowerment through education are important components to this problem.

Currently, much of the literature reveals the perspectives of researchers, food organizations and government agencies that suggest a strong need for interventions, but is limited on showing how teachers are effectively working with various methods of interventions despite the obstacles. Their success from the resources and expertise befitting diverse needs of
the students provide enlightening glimpses of how the issues can be tackled with a multi-tier approach in the educational institution. Through the understanding of the challenges to their work, there needs to be a greater social awareness and advocacy for paradigm shifts that can propel greater improvement. Structural changes that include re-examining the purpose and priorities within schooling are critical to food education reformation. Studies clearly demonstrate that students cannot succeed in life without a nutritional health foundation. If education is to be a tool for change, we need to provide students with proper nutritional guidance to ensure that their minds and bodies are healthy enough to realize their full academic potential. In Chapter 5, I outline the implications of my research project and conclude with recommendations for the education community and the greater society within which education functions.
CHAPTER FIVE - DISCUSSION

5.0 Introduction

In this chapter I discuss the implications of my research and suggest recommendations that have stemmed from my findings and continuing research. I begin by giving an overview of my key findings and its significance to the education community. Afterwards, I look at the implications of my findings for the broader education community and the personal implications for me as a teacher-researcher. Based on the significance presented, I make recommendations for various policies and practices that holistically combat food insecurity. Finally, I address important areas for further research and end with a summary of my findings that demand more meaningful systems of social change for our students.

5.1 Overview of Key Findings and their Significance

My findings were organized into four themes. My first theme was on the importance of a support system that the participants utilized in their food justice projects. My participants testified to working with a range of support available that helped them address issues of food insecurity both within and outside of the school environment. Ben credited the success of his various food programs to a community food organization that helped him with lesson planning and program maintenance. Both Ben and Emma also emphasized the importance of a school environment that provides an encouraging atmosphere and support system of staff and volunteers. With supportive assistance and guidance from organizations and administration, they were able to secure funding and personnel required for the work of addressing food insecurity.

The participants indicated the importance of understanding their community needs and approaching food insecurity holistically in order to increase both access to healthy foods and education that supports behavioural change. Since food insecurity is closely linked with students
of a low SES, Ben and Gayle discussed the need to comprehend the heightened struggles of historically marginalized populations. With a deepening understanding of the needs of students and the community they live in, Gayle’s community food organization strives to provide better access to healthy foods and create economic opportunities for students, which include innovative programs such as food gardening and youth employment at schools. These educators engage in a multi-tiered approach to fighting food insecurity that encourages positive behavioral change through experiential learning and cross-curricular connections.

An important factor that needs to be recognized is a student’s response to diverse programming such as school gardening and healthy eating initiatives that can successfully encourage engagement, reflection and growth. The participants all observed student engagement and enjoyment in learning something concrete that has a great relevance and impact in their lives. Ben and Gayle’s students enjoyed hands-on experiences of growing food and cooking. When students’ diets were better supported with these programs, Ben also noticed changes that were shown through better attendance and improvement in their cognitive and social behaviours. By tasking her students with reflecting on their eating habit, Emma strengthened her students’ confidence. My participants’ efforts and success highlight the need for students to feel proud of their growth in learning the different skills required for healthy living.

Barriers in initiating and maintaining food justice programs is a constant challenge that all the participating educators face, regardless of how important the work and the positive impact it creates. They expressed not having received any real training on the issues in their teacher education and observed many teachers not knowing where to begin in this type of work. When Emma and Ben wanted to begin a new project, they often faced a lot of bureaucratic red tape that often stemmed from a lack of funding. There is no federal funding for school nutrition in
Canada, and Gayle lamented that whatever limited funding they have is often at risk of getting cut. As classroom teachers, Ben and Emma discussed how most teachers face pressure to produce test results for standardized testing since the priority in education is often directed toward academic results rather than student well-being. The lack of priority was attributed to a lack of awareness, advocacy and empowerment. These barriers that educators face often prevent students from benefiting from different food programming out there and receive the right kind of help they require.

5.2 Implications

There are various implications of my research findings for different contexts within the education system. I begin by discussing the implications the greater education community and then exploring the implications that inform my practices as a teacher-researcher in shaping my pedagogical choices.

5.2.1 Education community

The research shown in the literature review and the interview findings make a strong case for the need for more vigorous measures in improving student nutrition. A significant portion of students in Canada come to school hungry and struggle with access to healthy food on a daily basis. The problem is compounded for many Canadian families in recent years by economic downturn and changes to the agricultural systems due to climate change. The existing research indicates that there is a lot riding on student nutrition. Adequate proper nutrition plays a huge role in the development of academic performance and social behavior that are deemed essential foundations to academic success. Despite growing needs, the participants experienced a lot of barriers to the implementation and continuation of their programs. In many cases, the programs were considered highly dispensable in their educative environment. Gayle testified that recently
implemented student nutrition programs are often first to be cut.

The intergenerational cycle of poverty that is often the root of food insecurity requires multi-layered approaches that are only possible with major structural examinations and paradigm shifts. In order to remove the existing barriers, my study has shown that there needs to be more vigorous discussion in the greater education community about the role of education and schooling in addressing the health and wellness of children.

Due to its low priority, a lack of clarity and consensus on the role of schools, the participants reported that they have faced a lot of structural barriers, such as inconsistent funding and bureaucratic difficulties in getting administrative approval for their projects. Throughout my research, I was able to find a network of resources available within the GTA and beyond in the province of Ontario. However, my participants observed that many teachers did not have proper training nor time to work with the resources currently offered to educators. The participants work in an education system that overwhelmingly favours test results for certain academic subjects over emotional and physical well being of students. In order to sustain their meaningful work for the cause of food justice, the educators asked for more societal awareness of the problems that many students face, which encourages a robust support system in the field.

5.2.2 My professional identity and practice

The research has given me the opportunity to develop my educational philosophy that prioritizes the well-being of my students and real-life issues that exceeds academia. The quandary I came across repeatedly in my research was whether or not it was an educator’s responsibility to address the issues of food insecurity. Some believe that it is the ‘responsibility’ of the parents, social services and healthcare institutions to take care of children’s health. Given society’s deeply embedded structures of inequality, it is my belief that primary education can
mitigate the causes of food insecurity to better support parents and overburdened social workers. As educators, we need to understand the systems of social injustices and collectively develop strategies to address these issues that have continuously disenfranchised people.

A deep understanding of the systemic problems and observing progressive practices have better prepared me with the awareness of the challenges and the resources available. I have learned that there are a lot of opportunities to build partnerships with a network of organizations that are dedicated to combat the effects of food insecurity. With the teacher-researcher lens I have developed, I am continuously noticing new initiatives and organizations committed to food education and food justice in different schools and community environments that I inhabit in my daily life. Allyship and community building are a big part of my teaching philosophy that classrooms must be connected to the greater society that it functions in. There are a lot of allies out there that are working towards awareness and reforms. Working together to advocate for change is something I have learned to prioritize in my teaching.

5.3 Recommendations

In order for changes to occur, there must be increased awareness and dialogues that lead to actions at every level that surround the education system. Cohesive societal approaches that are multi-layered can produce the best results. The agencies within the education system must work together to come up with better programs that take many considerations.

5.3.1 Governments

- Federal government funding is required for nation-wide student nutrition programs based on the different needs of communities across Canada. All levels of government must work to set specific mandates for student health.

- The provincial and municipal governments working together can attempt to increase
sustainable access to healthy food by connecting schools with local farms and markets.

Sustainable access also requires building infrastructure, which includes kitchens and markets to aid with food deserts.

- The leadership for the intervention should come from within the community that the intervention aims to help. Approaches cannot derive from those with the most privilege towards the underprivileged. With the leadership from within the community, there must be venues for dialogue that consider the perspectives of the people in need of help.

- Funding should be allocated for the research and development of better nutrition programs and education. There must be support for innovative solutions that goes beyond the charity model. The charity model of giving food to the hungry does not break the cycle of poverty. There needs to be a paradigm shift that looks at the source of intergenerational inequities.

5.3.2 Faculties of education

- Teacher education must provide a more complex understanding of the effects of food insecurity that goes beyond the ‘saviour’ model of needing to feed hungry children. Teacher education often emphasizes teachers being agents of change without fully exploring the complex roots of societal problems. There needs to be greater encouragement for anti-poverty education.

5.3.3 School boards

- It is important for schools to foster an environment that prioritizes health and well-being of their students. Teaching for academic performance should not be the only priority for the teachers. A supportive environment can include school-wide initiatives of health clubs, markets, celebrations and activities that can help to provide access and education to food.

- Success in schools should not only be measured through standardized testing such as EQAOs. Other measures must be implemented for accountability that examines student health.
- School boards should allocate consistent funding dedicated to the programs and initiatives that fit the needs of its community.
- If hunger is a persistent problem in a given community, there must be new empowering approaches from schools that can aid in its alleviation. Good examples include student gardening and employment programs to increase access to healthy food and economic opportunities.
- School administrators should help to connect teachers with available resources in the community and provide professional development to the teachers on the topics of food pedagogy. School administrators should not only actively support eco-champions, but encourage teachers to become eco-champions. Having more support can prevent the fatigue of individual teachers and ensure the longevity of programs.
- Schools should work with various community organizers to help raise awareness from the greater school community involving the parental population.

5.3.4 Teachers

- For teachers, it is important to stay continually informed of community needs and resources in the changing social climate. Attempts must be made to connect with the greater community outside of schools. Educators need to understand the community and become aware of any power imbalances.
- Teachers should help connect students to the resources available that many families may not be aware of.
- Teachers should use cross-curricular connections to bring topics of food and healthy eating into the forefront. Through education, it is also important to build the critical lens of media literacy in understanding marketing strategies.
- Teachers need to be role models and demonstrate healthy relationships with food and eating in
the classroom. Teachers must develop a comprehensive understanding of nutrition that builds upon the paradigms of health food and junk food. Educators must also be sensitive to different cultural backgrounds and practice culturally relevant pedagogy when approaching food programs and education.

5.4 Areas for Further Research

In order to dismantle the prevalent “saviour model” in education that offers charitable programming that does not look at the underlying causes of a social problem like hunger (Raine, McIntyre & Dayle, 2003), different interventions must reflect a community’s character and are led by its representatives with an in-depth understanding. Therefore, we need to have more examinations of the importance of cultural relevancy in food education and programming given the diverse populations of Canada and its colonial roots. The solutions cannot only be offered in a top-down approach where a dominant class of people in charge is continuously making decisions on behalf of the marginalized and the oppressed. Gayle, who had a background studying the race dynamics in this food justice movement, talked about the need for more culturally relevant food programming. There needs to be more discussions on how food education and programs can be anti-racist, anti-colonial and anti-oppressive. More research is vital on the needs and positive effects of programs that start within the community with a focus on empowerment and restructuring. For myself, I would like to investigate the different food pyramids for FNMI groups and how the system of ongoing settler-colonialism has impacted their health and nutrition. We need to look for roles that education can play in repairing the damages of settler-colonialism that are not only psychological but also physiological and felt everyday by generations spanning decades and centuries.

In regards to the existing food programs, we need more qualitative research on student-
centered approaches to addressing issues of food insecurity. As a society, we need to part from the desire to always measure things from the Eurocentric lens of quantifying success only in terms of statistics. My participants all described the positive emotions that students expressed when working with these empowering programs, instead of testifying to the success in scores and percentages. There needs to be greater discussion on what better health access and education mean to students in terms of more internal self-value, confidence and well-being.

Furthermore, there needs to be more research that closely examines how the funding system works for student health. My research has made it clear that there is a lack of funding in this area compared to other countries with similar economic standing. For more awareness, we need to discuss the reasons behind the lack of priority given to anti-poverty measures and student nutrition in our society and look for ways to dismantle these inactions.

5.5 Concluding Comments

I began this research mainly from being appalled by the fact that there are so many hungry children in Canada. If education is indeed to be used to create social progress and not just maintain the status quo, educators must understand the deeply-embedded barriers to one’s success in education. This research has opened my eyes to the different models of social interventions for food insecurity that are trying to empower students from within and innovate the existing system. Despite new efforts, most of the public education system is often removed from the social issues that deeply impact the students. In an environment that focuses heavily on the tradition of academic performances, there are overwhelming social problems that students face that require greater attention. Teachers must have the support of funding and time for their programs and be encouraged to take on the issues with administrators and community supporters. However, educators cannot be asked to do this work alone. Changes cannot occur until proper
interventions and responsibilities are allocated at every tier of our society.

As is evident in the metaphor that says when you teach a man to fish, you feed him for a lifetime, our society continually talks about the importance of education that empowers, as opposed to a system that maintains dependency. Despite such favorable sentiments for empowerment in education, social issues such as food insecurity have continued one generation after another. We need to consider the limited power of education given the constraints of our collective society. If one has the skills to fish, but has no energy to continue fishing due to hunger, there is little use to the skill. Food insecurity does not have a one-size-fits-all solution. All parts of our society must work in tandem if there is to be social change that is meaningful and sustainable.
References


Green Thumbs. (n.d.). Retrieved January 24, 2016 from
http://greenthumbsto.org/about/programs/kids-growing/


Larsen, K., & Gilliland, J. (2008). Mapping the evolution of 'food deserts' in a Canadian city:


strategies to encourage fruit and vegetable consumption among children. *Health Education & Behaviour, 31*(1), 65-76.


supplementation help break cycles of intergenerational transmission of social
inequalities? Pediatrics, 126(6), 1174-1181.

Saltos, E. (1999). Adapting the food guide pyramid for children: defining the target audience,


School snacks and meals. (n.d.). Retrieved from
http://www.children.gov.on.ca/htdocs/English/topics/schoolsnacks/index.aspx

and physical activity for First Nation youths in Northern Canada. International Journal of
Circumpolar Health, 65(2), 148-161.

Guildford Press.

Sriram, U. & Tarasuk, V. Changes in household insecurity rates in Canadian metropolitan areas

Toronto: Research to identify policy options to reduce food insecurity (PROOF).
Retrieved from http://nutritionalsciences.lamp.utoronto.ca/

Public Health, 100(3), 184-188.

Retrieved from
http://www.tdsc.on.ca/Portals/0/Elementary/docs/SupportingYou/EvaluationFOFProgra
m19Mar12.pdf


Appendix A: Letter of Consent for Interviews

Date:

Dear _______________________________,

My Name is Jung-Sun Song and I am a student in the Master of Teaching program at the Ontario Institute for Studies in Education at the University of Toronto (OISE/UT). A component of this degree program involves conducting a small-scale qualitative research study. My research will focus on how elementary school teachers address the issues of food insecurity in their classrooms. I am interested in interviewing teachers who have shown a commitment to this topic and teaching about it. I think that your knowledge and experience will provide insights into this topic.

Your participation in this research will involve one 45-60 minute interview, which will be transcribed and audio-recorded. I would be grateful if you would allow me to interview you at a place and time convenient for you, outside of school time. The contents of this interview will be used for my research project, which will include a final paper, as well as informal presentations to my classmates. I may also present my research findings via conference presentations and/or through publication. You will be assigned a pseudonym to maintain your anonymity and I will not use your name or any other content that might identify you in my written work, oral presentations, or publications. This information will remain confidential. Any information that identifies your school or students will also be excluded. The interview data will be stored on my password-protected computer and the only person who will have access to the research data will be my course instructor Sarah Cashmore. You are free to change your mind about your participation at any time, and to withdraw even after you have consented to participate. You may also choose to decline to answer any specific question during the interview. I will destroy the audio recording after the paper has been presented and/or published, which may take up to a maximum of five years after the data has been collected. There are no known risks to participation, and I will share a copy of the transcript with you shortly after the interview to ensure accuracy.

Please sign this consent form, if you agree to be interviewed. The second copy is for your records. I am very grateful for your participation.

Sincerely,

Jung-Sun Song
Email js.song@utoronto.mail.ca

Course Instructor’s Name: Sarah Cashmore
Contact Info: sarah.cashmore@utoronto.ca
Consent Form
I acknowledge that the topic of this interview has been explained to me and that any questions that I have asked have been answered to my satisfaction. I understand that I can withdraw from this research study at any time without penalty.

I have read the letter provided to me by Jung-Sun Song and agree to participate in an interview for the purposes described. I agree to have the interview audio-recorded.

Signature: ________________________________________

Name: (printed) __________________________________________

Date: ______________________________________
Appendix B: Interview Protocol

Thank you for agreeing to participate in this research study, and for making time to be interviewed today. This research study aims to learn ways of addressing food insecurity in educational settings. This interview will last approximately 45-60 minutes, and I will ask you a series of questions focused on food programs and/or education. I want to remind you that you may refrain from answering any question, and you have the right to withdraw your participation from the study at any time. As I explained in the consent letter, this interview will be audio-recorded. Do you have any questions before we begin?

Section A - Background Information
1. How long have you been working as a teacher?
   a. How long have you been teaching at your current school?
   b. Do you fulfill any roles in your school? (e.g. leader in food programming, coach, advisor, parent council liaison etc.)
2. Can you tell me more about the school and community within which you teach?
   a. What is the demography of your classroom regarding student ethnicity and race?
   b. What are the demographics of the school’s neighborhood?
   c. From your perspective, are the community’s economic needs being met?
   d. Would you say that food insecurity is an issue that your students’ and their families experience? Approximately what proportion of your students?
   e. Does the school you teach in run any food programming? How, if at all, does it support students’ access to healthy and affordable food?
3. What is your educational background?
   a. What did you study in your undergraduate program(s)?
   b. Post-secondary degrees?
4. How, if at all, were the issues regarding the effects of poverty and food insecurity addressed in your teacher education program?
5. What other educational experiences helped prepare you for addressing the topic of food insecurity in your teaching?
6. What personal or professional experiences have contributed to developing your interest in the topic of food insecurity?
7. How do you stay informed about the social effects of food insecurity?
8. Do you carry out any educational/leadership roles outside of your classroom for your school and community?

Section B - Teacher Perspectives/Beliefs
9. In your view, how serious are the effects of poverty and hunger affecting children in our Canadian society?
   a. What effects have you seen firsthand?
10. What do you think is the role of schools and educators in addressing the issues of food
insecurity affecting children?

11. How well do you think schools and educators are generally doing in addressing this issue?

12. What do you believe are some of the greatest barriers in the way of schools and teachers addressing this issue?

13. From your perspective, what are some of the greatest needs facing students and families who experience food insecurity?

14. How do you think schools and educators could meet these needs? In your view, what are some key ways that they can do this, and what would be required to do this?

Section C - Teacher Practices

15. How do you recognize effects of hunger amongst your students?
   a. Have you noticed any changes in recent years with the changing economy?
   b. What indicators do you see that your students are experiencing food insecurity?

16. How do you address the topic of food insecurity in your own teaching practice?
   a. Through the formal curriculum?
      i. What subject areas do you connect with and how?
      ii. What are your learning goals in these lessons?
      iii. What opportunities for learning do you create?
      iv. How do your students respond to learning about this topic?
      v. How, if at all, do you address this topic and its implications in local and global contexts?
      vi. What resources support you in this work?
   b. Through the informal curriculum?
      i. How do you respond to the food insecurity needs of your specific students?
      ii. What range of supports do you offer them and how?
      iii. How do these students respond?
   c. Through extra-curricular programming?
      i. What food programs or food education clubs, if any, run at your school and what is your involvement with these?
      ii. What are the goals of these programs?
      iii. Who participates in them, and what outcomes of learning have you observed from them?

17. How do you measure the success of the initiatives in your classroom and in the school?

Section D - Supports and Challenges/ Next Steps

18. How does the school (including a network of teachers and administrators) support the initiatives are involved with related to food insecurity? What resources are available to support you?
   a. How does the greater community support or participate in these initiatives?
   b. What role, if any, do parents play in the work you do on the topic of food insecurity?

19. What are the biggest challenges you face in this work?
   a. How do you think some of the structural challenges can be overcome?
   b. How do you think we can prioritize greater education and awareness of the issue
of food insecurity and its consequences?

20. What advice do you have for the beginning teachers committed to being a part of this work?

Thank you for your participation in this research study.