

**EVALUATING IMPLEMENTATION OF THE  
ONTARIO SCHOOL FOOD AND BEVERAGE POLICY (P/PM 150)  
IN WATERLOO REGION: ROLE OF FOOD SERVICES**

by

Dana Habayeb

A thesis

presented to the University of Waterloo

in fulfillment of the

thesis requirement for the degree of

Master of Science

in

Health Studies and Gerontology

Waterloo, Ontario, Canada, 2013

© Dana Habayeb 2013

## **Author's Declaration**

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

## **Abstract**

*Objectives.* The purpose of this study was to assess food service organizations' experiences with the implementation of P/PM 150, perceived strengths and weaknesses of food services organizations implementing P/PM150, and perceived opportunities and threats to the policy's implementation.

*Methods.* Semi-structured interviews were done with food service organizations selling food to Waterloo Region schools. Food services identified perceptions of and experiences with P/PM 150. Interview responses were coded using 'open coding', coding was based on the SWOT analysis, a reliability test was conducted, and matrix coding was used to compare food services' attributes to their experiences implementing P/PM 150.

*Results.* Food services that had a good experience mentioned more 'opportunities' resulting from the policy and more 'strengths' within their company. Both food services that had a negative or positive experience mentioned an equal number of 'threats'. However, food services that had negative experiences mentioned more 'weaknesses' than those that had positive experiences. More small food services, and food services that serve elementary schools identified having a good experience with the policy. All food services that identified themselves as healthy before implementing the policy had a positive experience with the policy. The main factor that determined whether food services had a negative experience implementing the policy was if the food service had to make many changes to their menu to comply with P/PM 150.

*Conclusions.* Collecting additional data on the compliance of food services, the role of education in policy acceptance, and schools', parents', and students' experiences with the policy would be beneficial to get a full understanding of the policy's impact.

## Acknowledgements

I would like to thank my family and friends for their ongoing support throughout my masters degree.

Thank you to my committee members, Dr. Rhona Hanning and Dr. Erin Hobin, who offered their assistance and input throughout the writing process.

I would like to thank our IT specialist, Brent, for always being just around the corner to help with all of my technical difficulties.

A huge thank you goes out to all the food services that participated in my study. Without your participation this study would not have been possible.

And finally, I would especially like to express my gratitude towards my supervisor, Dr. Steve Manske, whose knowledge, support, and patience, made my graduate experience one to remember.

## Table of Contents

List of Figures .....	ix
List of Tables .....	x
1. Introduction.....	1
2. Literature Review.....	3
2.1. Children and Youth Obesity and Poor Nutrition .....	3
2.2. Policy Approaches in School Settings .....	7
Individual Approach .....	7
Population Approach .....	8
School Level Approaches .....	8
2.3. Challenges to Implementing P/PM 150 in Food Services .....	11
2.4. Improving Implementation .....	13
2.5. Rationale and Research Questions.....	14
3. Methodology .....	15
3.1. Overview.....	15
3.2. Epistemological and Theoretical Perspectives.....	15
3.3. Pilot Study.....	16
3.4. Sample Selection.....	16
3.5. Recruitment.....	18
<i>Methods to encourage response</i> .....	18
<i>Recruitment</i> .....	19
3.6. Data Collection .....	21
<i>Interview Protocol</i> .....	21
<i>Ethical Considerations</i> .....	22
Figure 2: Order of Events - Pilot, Sample, Recruitment, and Data Collection .....	23
3.7. Analysis.....	25
Thematic Analysis .....	25
Reliability Testing.....	26
Matrix Coding .....	28
Strategies for Validating Findings .....	29
4. Results.....	30
4.1. Food Service Attributes .....	30
4.2. Emergent Analysis Theme: Experience Implementing P/PM 150 .....	32

Positive Experience.....	32
Negative Experience .....	33
4.3. SWOT Analysis Theme: Threats .....	33
Lack of Compliance.....	34
Competition.....	35
Lack of Appeal to Students.....	36
School Related Threats .....	38
Reduced Revenue.....	39
Negative Effect on Bottom Line .....	39
4.4. SWOT Analysis Theme: Emergent Opportunities .....	40
Healthier Brand .....	41
Increased Business .....	41
Education .....	43
Policy Changes.....	44
4.5. SWOT Analysis Theme: Strengths.....	45
Product Related Strengths.....	45
Customer Service .....	47
Preparedness and Awareness of Policy.....	48
4.6. SWOT Analysis Theme: Weaknesses .....	49
Product Development.....	50
Reduced Profitability .....	50
Increased Waste .....	51
Portion Sizes .....	51
Time to Prepare Compliant Foods .....	52
Meeting Stakeholders’ Demands .....	52
5. Discussion.....	54
5.1. Overview.....	54
5.2. Revisiting the Research Questions.....	54
5.3. Implications for Practical and Comparable Interventions .....	59
5.4. Implications for Future Research.....	64
5.5. Overall Influence of P/PM 150.....	67
5.6. Strengths and Limitations .....	69
References.....	71
APPENDIX A: Policy/Program Memorandum No. 150 .....	81

APPENDIX B: Telephone Initial/Follow-up Script .....	99
APPENDIX C: Information Letter .....	104
APPENDIX D: Interview Script.....	107
APPENDIX E: Consent Form .....	110
APPENDIX F: Codebook.....	113
APPENDIX G: Nodes List .....	125



## List of Figures

Figure 1: Comprehensive School Health Framework.....	6
Figure 2: Order of Events – Pilot, Sample, Recruitment, and Data Collection .....	23
Figure 3: Force Field Analysis.....	66

## List of Tables

Table 1: Recruited Food Services' Attributes.....	20
Table 2: Food Services' Reliability Test Transcripts .....	25
Table 3: Food Services' Attribute Categories.....	30
Table 4: SWOT Analysis .....	55

# 1. Introduction

The introduction of the Ontario Ministry of Education School Food and Beverage Policy (P/PM150) in September 2011 redefined nutritional standards in elementary, middle, and secondary schools. The primary purpose of the policy is to address the issue of poor eating habits in Ontario's children and youth and the effects of such eating habits on their intellectual growth and health outcomes. P/PM 150 aims to improve children's intellectual development and health through the promotion of healthy food options at school. The policy includes four main components; three have to do with the type of foods that are sold ( $\geq 80\%$  Sell Most,  $\leq 20\%$  Sell Less, Not Permitted for Sale), and one has to do with exception days (10 days) (Appendix A). Products in the 'Sell Most ( $\geq 80\%$ )' category have been determined to be the healthiest food/beverage choices. They are more nutrient dense and contain less fat, sugar, and/or sodium. Schools must ensure that 80% or more of the foods and beverages available for sale at their school are from the 'Sell Most' category. The remaining foods and beverages for sale must be from the 'Sell Less' category which is made up of slightly less nutrient dense foods or those with slightly higher fat, sodium and/or sugar content when compared to the 'Sell Most' category. Foods and beverages in this category can only make up 20% or less of the foods available for sale in schools. The 'Not Permitted for Sale' category includes foods and beverages that cannot be sold in schools due to having little or no essential nutrients and high levels of fat, sugar, and/or sodium (e.g., chocolate, chips, fries, etc.). Finally, schools are given 10 exception days each school year on which they can sell foods from any category (Appendix A). P/PM 150 is also organized by the four food groups outlined in Canada's Food Guide, plus a 'mixed dishes' section and a 'miscellaneous items' section.

Assessing implementation of policies to guide improvements and determine outcomes is an important part of advancing population health. There are multiple facets that can directly influence the implementation of P/PM 150 at the school board and school levels including, but not limited to, school staff. Additional groups with potential influence include parents, students, and food services. For example, food services' ability to comply with P/PM 150 may directly or indirectly affect students' eating habits. Therefore, in this research the researcher has tried to understand how food service organizations have responded to P/PM150, identify the opportunities and barriers they experienced in its implementation, and identify potential solutions to such barriers. A food service, here, is defined as a business, company, or institution that makes, transports and serves food to students in a school setting. Food services serve food through school cafeterias, tuck shops, vending machines, or lunch and snack catering. As schools are now expected to be incorporating this policy, it would be beneficial to evaluate the food service organizations' experiences with the policy and the impacts of this policy on these services. This will ultimately assist schools that are having difficulties with implementation and will assist in the effective implementation of the policy. The aims of the study were to assess:

1. Food service organization's experiences with the implementation of P/PM 150;
2. Perceived strengths and weaknesses of food services organizations implementing P/PM150 and;
3. Perceived opportunities and threats to the policy's implementation.

## 2. Literature Review

### 2.1. Children and Youth Obesity and Poor Nutrition

Child and youth health is an issue in Ontario. According to Tremblay and colleagues (Tremblay, Katzmarzyk, & Willms, 2002), childhood obesity has more than doubled for boys and girls between 1981 and 1996. Obesity is a result of energy imbalance. Physical activity accounts for energy “out” and nutrition accounts for energy “in”. Any understanding of obesity needs to account for both sides of the equation. For the purposes of this thesis, child and youth nutrition will be focused on. Youth in Canada are not necessarily obese because they are consuming an excess of the recommended foods in Canada’s Food Guide, rather it is because 25% of all the calories consumed are coming from foods in the ‘Other’ category (Garriguet, 2004). The most commonly consumed ‘other’ foods are soft drinks, followed by salad dressing (Garriguet, 2004). With regards to the recommended food groups, most youth appear to not be eating the recommended intake of vegetables and fruits, grains, dairy, and meat products according to Canada’s Food Guide (Church, Gubbels, Russell, Wong, & Manske, 2011)<sup>1</sup>. Vegetables and fruits are particularly important because they are associated with healthy body weight, and the reduced risk of chronic disease and cardiovascular disease (Hung et al., 2004). In addition, a healthy diet and lifestyle in childhood are associated with a healthy diet and lifestyle in adulthood (Lake, Mathers, Rugg-Gunn, & Adamson, 2006). However, with only 16% of youth in Ontario, aged 9-18, consuming the recommended 6-8 serving of fruits and vegetables a day it

---

<sup>1</sup> For the purposes of this study, children and youth are defined as 5 to 18 years of age, equivalent to the range of ages from kindergarten to grade 12 in Ontario.

is evident that some sort of intervention needs to be put in place (YSS, 2012). The Canadian Community Health Survey (CCHS 2004) showed that Canadian children were not consuming enough fibre, which can be found in three of the four food groups in Canada's Food Guide - whole grains, vegetables and fruit, and meat alternatives (Statistics Canada, 2009). In the sections on whole grains, vegetables and fruits, and meat alternatives P/PM 150 focuses specifically on fat, sodium, and fibre content. In addition, children ages 1 to 8 are not consuming enough calcium, which is also covered under the P/PM 150 guidelines in the section 'Milk and Alternatives' (Statistics Canada, 2009).

Unfortunately, there is excessive consumption of the 'wrong level' of nutrients in youth across Canada. According to the Canadian Community Health Survey (CCHS 2004), 80% and 90% of female and male adolescents (aged 9-18), respectively, had sodium consumption levels that exceeded the limit beyond which there is potential risk for illness (Health Canada, 2012a). These findings replicate in children ages 1 to 8; in fact, findings suggest there is an increase in sodium consumption as children age. According to Health Canada (2012b), 93% of 4-8 year olds had sodium intake levels that suggested a greater risk of adverse health outcomes. Having sodium levels that exceed the recommended intake at such young ages is cause for concern. With regards to fat intake, children ages 1-8 appear to have an intake of fat that is within the recommended range, however, it is recommended that adolescents decrease their saturated fat intake (Health Canada, 2012b; Health Canada, 2012a).

Generally, poor health habits persist from childhood into adulthood and are even exacerbated with age and result in illness (Rose, 2001). Poor nutrition in youth is associated with illnesses in adulthood including chronic diseases such as type 2 diabetes, cancer, and cardiovascular disease (Caterson, Franklin, & Golditz, 2004). Lifestyle changes in childhood, including healthy eating,

can decrease the risk of chronic disease in adulthood, making children and youth health a clear priority (Viner & Barker, 2005).

Since child and youth health is an issue in Ontario, the implementation of nutrition programs that are aimed at lowering the rates of obesity in youth is necessary. Interventions that are comprehensive (e.g involving media, parents, teachers, and cafeteria workers) and last at least 8-10 weeks are the most successful in elementary and high schools (Thomas, Ciliska, Micucci, Wilson-Abra, & Dobbins, 2004).

Schools serve as an ideal setting to promote healthy eating habits in youth, since schools accommodate youth between the ages of 5 and 18 for the majority of the day, and are a place of learning. A study done in Nova Scotia looked at the effects of school programs on weight, fruit and vegetable intake, fat intake, quality of diet, and participation in physical and sedentary activities (Veugelers & Fitzgerald, 2005). The study found that schools that made menu changes alone did not significantly improve body weights of youth. However, schools that made menu changes and were involved with the Annapolis Valley Health Promoting Schools Project (AVHPSP), a comprehensive program that incorporates Centers for Disease Control and Prevention (CDC) recommendations for school nutrition programs, lowered rates of Obesity and improved youth eating habits (Veugelers & Fitzgerald, 2005).

Roblin (2007) and the CDC (2013) recognize that the success of interventions for preventing child and youth obesity depend on multiple factors including, nutrition education, physical activity, and family involvement. However, based on a study done in Prince Edward Island (PEI) with fifth and sixth grade students, the school-based policy alone has made positive changes in student eating habits (Mullally, 2010). Schools offer many opportunities to advance health. For

instance, comprehensive school health approaches (Joint Consortium for School Health, 2012) identify four pillars for action: (1) creating a social and physical environment that is conducive to a child's health; (2) providing health education to students regarding healthy eating; (3) establishing partnerships with the community to access useful services; and, (4) establishing policies that support health.

Figure 1: Comprehensive School Health Framework



(Pan Canadian Joint Consortium for School Health, 2010)

Research has shown that CSH is a good way of targeting health and education, and improving both outcomes (Stewart-Brown, 2006; Murray, Low, Hollis, Cross, & Davis, 2007). Therefore, understanding the effective implementation of the comprehensive school health approach, including healthy school policy, is warranted.



## 2.2. Policy Approaches in School Settings

### Individual Approach

The individual approach, versus a population approach, targets and protects individuals who are high risk. With regards to child health these would be the children that have the poorest nutrition compared to other children (Rose, 2001). An individual approach that would cater to the particular high-risk child provides more motivation than a population approach because it is a targeted approach; however, there are a number of limitations that come with this approach. Primarily, an individual approach focuses more on providing a temporary solution to high risk individuals than targeting the determinants of the health problem. For this reason an individual intervention will need to be offered continuously, generation after generation, since rather than fix the upstream factors that cause the disease it is, generally, only providing a ‘direct intervention’ for high risk individuals alone (Pan American Health Organization, 2011; Rose, 2001). In addition, the predictive ability of an individual approach is weak. Those that are at risk may remain well for an extended period of time, yet someone who was screened and was shown to be healthy could unexpectedly get ill which makes it difficult to target high-risk individuals and allocate the appropriate resources (Rose, 2001). A final disadvantage of the individual approach is that it requires the individual to change particular lifestyle habits that do not coincide with the lifestyle habits of those in their environment, such as friends and family. Changing lifestyle habits can be extremely challenging for the individual who is now not able to, for example, eat what their friends and family are eating or has put a lot of money into changing their lifestyle, yet despite these efforts there are ‘small returns’ (Kelly, 2004).

### **Population Approach**

In contrast to an individual approach, a population approach targets the determinants of poor nutrition of large numbers of individuals in the population (Saskatchewan Health, 1999). In school, for example, this would include children who are healthy, and have a well-balanced diet, as well as those who are not. The most apparent and powerful advantage of the population approach addresses the root cause of the problem by, for example, changing the environment. In addition, the approach aims to target the behaviour of the population, eventually making healthy behaviour (such as healthy eating) the easier, and more convenient choice (Story, Neumark-Sztainer, & French, 2002). Once the social norm is to eat healthy it is expected that supply industries will adjust to these needs and there will be no need to continue to persuade individuals to eat healthy, and maintaining healthy eating will no longer be an effort.

A disadvantage to the population approach is what is known as the Prevention Paradox (Rose, 1981). Although a population approach brings great benefit to the population, it does not provide as great a benefit to each participating individual. In addition, there is poor motivation not only for the population but for the administrators of the approach; because improvement takes time to see and it is difficult to get individuals to comply with an intervention that shows improvement only over extended periods of time (Rose, 2001).

### **School Level Approaches**

In reality, both individual approaches and population approaches are needed for prevention of disease; however, a priority should be placed on targeting the cause of disease and implementing solutions to take care of them (Doyle, Furey, & Flowers, 2006; Rose, 2001). Since many of the determinants of poor health are upstream, it is assumed that a population intervention is the most appropriate solution. Rather than target only high-risk youth, most youth can be targeted in

schools creating a supportive environment for high-risk youth and preventing future risk for low risk youth. Schools are an ideal environment for population interventions as youth are in school for a great amount of time, and children from high and low risk groups can be targeted without stigmatizing or misclassifying anyone. In addition, research shows that health and academic performance are inter-dependent in that if their students are not healthy, schools have a harder time reaching their academic goals (Storey, Nanney, & Schwartz, 2009). Research has also found that the health of students (youth in particular) is affected by their eating habits (Centers for Disease Control and Prevention, 1996). That said, interventions in schools may have a great influence on students' health behaviours. According to the Ontario Ministry of Education (2010), when 'unhealthy' foods are offered at school, even if 'healthier' foods are also offered, it increases the likelihood of students having an unhealthy diet. Changing the school food environment to not include 'unhealthy' foods would be considered a population approach as it targets the whole school population. It is assumed such a change would increase the likelihood of students having a healthy diet.

CSH approaches are consistent with population approaches, as they would both involve the whole school (including, parents, students, staff), and both address multiple factors (including environmental and educational factors) that may lead to the problem being solved. The four inter-dependent pillars described earlier are explained in further detail below. Community partnerships and services act as facilitators to the implementation of environmental, educational, or policy interventions. Social and physical environmental interventions might include the reduction of unhealthy foods sold by schools and not allowing unhealthy foods to be distributed within the schools. Educational interventions would include teaching youth about the detrimental effects of unhealthy eating, and the benefits of having a balanced diet according to Canada's

Healthy Food Guide, as in the ON curriculum, and educating stakeholders about P/PM 150. Finally, a policy approach, which is where P/PM 150 fits, can include everything from the application of restrictions on what can be sold in schools to the standards of instruction around the value of the policy and how it can effectively be implemented (JCSH, 2012). Therefore, evaluating the effectiveness and implementation of P/PM 150 with regards to the pillars described above is a priority, as the adoption of a whole school approach could potentially help in the implementation of the policy.

Ontario has attempted to improve the nutritional value of food choices in schools through its policy P/PM 150. The policy outlines nutritional standards for food and beverages sold in elementary (including middle schools) and high schools. It promotes the selling of foods that have greater levels of essential nutrients consistent with the four food groups in the Canada's Food Guide to Healthy Eating (CFGHE), a guide that shows how many servings of each food group is needed each day in order to maintain a healthy lifestyle and lower the risk of diabetes, cardiovascular disease, obesity, and cancer (APPENDIX A).

According to a US study done with students between the ages of 12 and 16, it was found that approximately 80% of students ate at school, however, from the 80%, 44% brought food from elsewhere and 56% purchased food at school (Temple, Steyn, Myburgh, & Nel, 2006). This means that 45% of students purchase food at school. Although this doesn't constitute the majority of students it still constitutes a large proportion of students. In addition, despite a large percentage of students also not purchasing food at school, the policy does not just directly influence students' eating habits on campus through cafeteria and vending purchases, it also serves as an educational tool since students and parents become more aware of what healthy eating looks like (Thomas et al., 2004). Besides the proportion of students bringing food from

home and purchasing food at school, there is the issue of the study not being conducted in Ontario. However, unlike most schools in the US, the schools in the study did not participate in “organized, subsidized feeding schemes”, therefore the school characteristics in the study were most similar to the sample used in this thesis (Temple et al., 2006). Therefore, the success of food services is such an essential component of implementation, as food services’ ability to comply with P/PM 150 may directly and indirectly affect the eating habits of students that regularly purchase food from their school food services. Therefore, food service organizations’ experiences implementing the school food policy and the impacts of this policy on these services in Waterloo Region are highly important to understand.

### 2.3. Challenges to Implementing P/PM 150 in Food Services

While the provincial government of Ontario can set P/PM150 as a policy, it relies on others to implement the policy. These other groups include schools and food services; however, the support and acceptance of parents and students are also important. Effective implementation requires consideration of the remaining CSH pillars: (1) social and physical environment (2) teaching and learning (3) partnerships and services and (4) policy (Joint Consortium for School Health, 2012). These pillars may help deal with barriers to the implementation of P/PM 150; for instance, food services and schools not only have to deal with issues related to cost, lack of knowledge and student preferences that lead to resistance from students and parents (teaching and learning pillar), but also have to deal with limited school resources/volunteers (partnership pillar), and the proximity of the schools they serve to other food outlets (social and physical environment) (Downs et al., 2012; MacLellan, Holland, Taylor, McKenna, & Hernandez, 2010).

In an observational study conducted in Ontario with grade 7-8 students He and colleagues (2012) found that the location of the school was a significant factor in the successful implementation of the food policies. Schools situated closer to convenience stores and fast-food restaurants were associated with poorer diets for adolescents (He et al., 2012). He and colleagues (2012) explain the association as the closer fast food outlets and convenience stores were to schools, and the greater the density of fast-food restaurants near schools, the more likely adolescents were to purchase fast foods when their parent or guardian was not present. This is not surprising seeing as in Ontario, the 2007-2008 SHES Survey found that 67.1% of secondary schools and 34.6% of elementary schools were located within walking distance from fast food services that students could access them during their lunch hour or after school (Kroeker, Manske, Beyers, & Murkin, 2008). Therefore, this environmental issue may act as a barrier to the successful implementation of P/PM150.

A study conducted with food service providers in recreational facilities found that the facilities implementing the Alberta Nutrition Guidelines for Children and Youth (ANGCY) experienced threats and challenges including not having enough resources or training, complicated guidelines, little demand for compliant products, competition, and loss of revenue (Olstad, Raine, & McCargar, 2013). Since ANGCY has similar restrictions to P/PM 150 it is expected that these challenges will reflect in the interviews done as a part of this thesis as well.

The strengths, weaknesses, opportunities and threats faced by food services organizations complying with P/PM 150 need to be investigated in order to support the development of solutions. Educators and their partners may identify common resources and processes to help deal with barriers. Policy makers would be able to use such data to refine the regulations within the policy.

## 2.4. Improving Implementation

Promoting nutritional food choices and healthy eating in children requires multi-sector input and collaboration. The expertise provided by collaboration between stakeholders is important to the successful implementation of an intervention like P/PM 150. In addition, in order for an intervention to reflect the needs and capabilities of all stakeholders, their input is key to the creation of the policy. Therefore, examining the opportunities and challenges of food service organizations implementing P/PM150 will assist policy makers, school administrators, and food service providers in their decision making for effective policy implementation.

## 2.5. Rationale and Research Questions

The literature review established the importance of understanding how food services are involved in the implementation of P/PM 150 in elementary and high schools. Therefore, using the literature as a foundation, the following research questions will be addressed in this thesis:

1. What have food services organizations' experiences been with the implementation of P/PM 150?
2. What do food services organizations perceive as the strengths and weaknesses of implementing P/PM 150 based on their experiences?
3. What are the opportunities and threats to P/PM 150's implementation as perceived by food services organizations?



### **3. Methodology**

#### 3.1. Overview

This section first describes the epistemological and theoretical perspectives that guided the research. It continues by describing the research design, sample, recruitment, data collection, and analysis.

#### 3.2. Epistemological and Theoretical Perspectives

This study used a constructivist approach. A constructivist approach suggests that there are a number of ways to know the truth, and that truth is shaped through conversation. In that sense, truth is constructed by social processes, such as a person's experience with their environment, rather than truth through observation, as with a positivist approach (vonGlaserfeld, 1989). Therefore, the constructivist approach asserts that knowledge is created from each individual's personal interactions, allowing for multiple truths to emerge from their experiences (Patton, 2002; vonGlaserfeld, 1989).

Multiple truths created in a constructivist epistemology acknowledge that truths are dependent on local context (Anderson, Reder, & Simon, 1996; vonGlaserfeld, 1989). Therefore, the constructivist approach is consistent with this research, as it is looking at findings obtained from local services, and aims to produce a better understanding of local school food providers' experiences rather than produce generalizable or universal truths (Kvale, 1996).

The qualitative method used in this study will allow the researchers involved to understand the experiences of food services with different characteristics. The qualitative method

was chosen because it will allow the researcher to dig deeper and really grasp an understanding of food providers' experiences with and perspectives on P/PM 150. The rich detail that is collected during qualitative studies allows not only the researcher to fully understand the participants' experiences, but also allows the reader to understand the participants' experiences in detail. Providing a 'thick description' of the data also allows the reader to determine the credibility of the data and determine whether the responses would apply in different settings (Creswell & Miller, 2000).

### 3.3. Pilot Study

A preliminary study was undertaken for a different purpose, but informed the present study. Eighteen Waterloo Region schools completed the pilot study, including face-to-face interviews and an environmental scan of the food service outlets at the schools, between April and June 2012. The pilot contributed to an understanding of the implementation of P/PM 150 at the school level. It also pointed to a need for deeper insight into the implementation of P/PM 150 by looking at food services' experiences with its implementation at the school level. It appeared that food services determined to what extent schools would comply with the policy, what the changes in cost (to the school) would be, and whether they felt able to continue their business considering the new demands made by the policy.

### 3.4. Sample Selection

The intent of sampling was to ensure the research accounts for as many different perspectives from food service organizations providing food to Waterloo Region schools as possible. A purposeful sampling strategy was employed. Purposeful sampling involves the selection of

participants who are expected to provide a lot of information regarding the research questions. There are a number of ways to select ‘information-rich’ cases; these include maximum variation sampling (Patton, 1990). Maximum variation sampling was used in this study to gain complete picture of P/PM 150 implementation from food services’ perspectives. According to Patton (1990), one is able to use maximize variation in a small sample by determining the different characteristics that should be included in the sample population. Knowledge of these characteristics will help the researcher select a wide range of food services that would be needed in order to fully understand the issue.

In the current study, food services’ key attributes known prior to sample selection were number of schools served and type of food served. These attributes were ascertained when all 159 (139 elementary, and 20 secondary) schools in Waterloo Region were called by the researcher in order to determine what food services they employed. This resulted in a set of 64 food service organizations that were eligible to be selected. The researcher used the Internet to obtain these food services’ contact information. Food services were divided into categories based on two characteristics: number of schools served, and type of cuisine served (e.g., full meals, pizza, subs). Maximum variation sampling was based on these two characteristics, in that (1) all services that served two or more schools were included, and (2) where the food services served the same cuisine but only one school each, services were randomly chosen. At least one food service providing each cuisine was included in the study.

By including food services with different attributes, the results are sure to show a number of different experiences, however, there will also be common experiences that are shared by most of the sample. Common experiences that arise from a diverse sample increase their validity

because of the fact that they appeared despite emerging from varied group of participants (Patton, 1990).

### 3.5. Recruitment

#### **Methods to encourage response**

Since Dillman and colleagues (2009) recommend researchers use numerous methods of contact to increase response rates, a follow-up telephone call was made to the food service provider within 2 weeks after food services received the initial call to encourage food service providers to participate in the study (Appendix B). The call was used to connect with a representative who would be able to answer the three research questions guiding this study, or book an appointment for the researcher to conduct a phone or face-to-face interview.

The name, email, and phone number of the appropriate representative was obtained so that the researcher could send an official letter by email, signed by professor and student (Appendix C). This letter included information regarding the study and the contact information of researchers involved. In addition, the letter, and ensuing contacts, ensured participants knew what value the interview would add to their organization and addressed concerns participants might have had, such as no identification of individual businesses, and that the study was designed to try and understand “their side of the story” to recommend improvements to implement the policy.

Consistent with recommendations by Dillman (2009), incorporating the University of Waterloo logo into the invitation email and attaching a personalized letter was expected to result in a higher response rate. In addition, the invitation letter and the consent form indicated that this study received approval from the University of Waterloo Research Ethics Board.

The invitation letter cited a number of benefits to encourage participation:

- The food service will receive an individualized Feedback Report, which will include a summary of the food service's main themes, and recommendations for successful implementation of the policy.
- The food service can access "Lessons learned" about the implementation of the school food policy.
- A member of the research team would be happy to give presentations to staff and representatives from the food service.

### **Recruitment**

Contact was initially made with the food service providers via phone call to their head office (Appendix B). This call determined who was most appropriate individual to speak with regarding their services in Waterloo Region. The food service organizations were sorted by number of schools served, and types of foods sold. Of the services that served two or more schools (n=20), 14 (70%) were recruited. A total of 18 food services were interviewed. Food services were recruited and interviewed until no new themes emerged, meaning that thematic saturation was reached. After the interviews were conducted with all the different 'types' of food services, and after three interviews were conducted without creating any new nodes, it was determined that saturation was reached. Of the interviews conducted, participants consisted of managers (marketing, sales, business development, general), owners, employees, a president, and a director of nutrition. At least one of each type of food service was interviewed, including 3 hot lunch, 2 snack, 9 pizza, 2 vending, 1 pita, 1 sub. The food service organizations interviewed worked with schools for 1 to 20 years, and served between 1 and 34 schools in Waterloo Region.

**Table 1: Recruited Food Services' Attributes**

<b>Food Service Code</b>	<b>Size of Food Service</b>	<b>School Level Served</b>	<b>Experience Implementing Policy</b>	<b>Changes Needed to Comply with P/PM 150</b>
LE5	Large	Elementary	Positive	No
SE9	Large	Elementary	Positive	No
LLE7	Large	Elementary	Positive	No
SE15	Large	Elementary	Positive	No
LE4	Large	Elementary	Positive	No
LE2	Large	Elementary	Positive	No
SE3	Large	Elementary	Positive	Yes
SE4	Large	Elementary	Negative	Yes
LE7	Large	Elementary	Negative	Yes
LLE20	Large	Elementary	Negative	Yes
SE5	Small	Elementary	Negative	Yes
LS6	Large	Secondary	Positive	Yes
LS1	Large	Secondary	Negative	Yes
LS2	Large	Secondary	Negative	Yes
SS20	Small	Secondary	Negative	Yes
SE4	Small	Elementary	Positive	No
LE20	Small	Elementary	Positive	Yes
SSE5	Small	Elementary	Negative	Yes

### 3.6. Data Collection

#### **Interview Protocol**

All but three interviews were conducted by telephone. The exceptions were conducted face-to-face. Interviews were semi-structured and averaged 22 minutes in length (range 12 – 37 minutes). The researcher obtained participants' permission to audio record the interview. Notes were taken during face-to-face interviews to ensure thoughts, impressions, and body language were noted (Creswell, 2003) (Appendix E). Following a description of the study, its purpose and consent procedures, the participants:

- Described their position within their food service and their food services involvement with P/PM 150 in schools.
- Identified perceptions of and experiences with P/PM 150.
- Identified strengths and opportunities that helped with the implementation of P/PM 150.
- Identified weaknesses and threats to the implementation of P/PM 150.

The interview questions were planned around the Strengths, Opportunities, Weaknesses, and Threats (SWOT) analysis, which is a tool that is designed to understand the strengths, weaknesses, opportunities and threats faced by an individual, group or organization (Hay & Castilla, 2006). Strengths and weaknesses are defined as characteristics of the organization that help and hinder it from achieving its goals, respectively. Opportunities and threats are external factors that may be helpful or harmful, respectively, to the achievements of an organization's objectives (Hay & Castilla, 2006). According to Hay and Castilla (2006), in order for a SWOT analysis to be conducted properly the questions must inform decision making, which is the exact

intention of the research. The interviews explored strengths and weaknesses of food service organization's approach to implementing P/PM 150 by asking questions like, "What advantages does your organization have?". The opportunities and threats experienced in implementing P/PM 150 were also asked about in the interviews with questions including, "In what circumstances do you find it difficult to implement P/PM 150?". Finally, facilitators to the policy's implementation were inquired about by including questions like, "What role do you think government, policy makers, school boards need to play to alleviate any challenges for those implementing P/PM 150?" (Appendix D). Interviews were transcribed verbatim and coded as they were collected, which allowed the researcher to modify probe questions when new issues were unearthed in interviews.

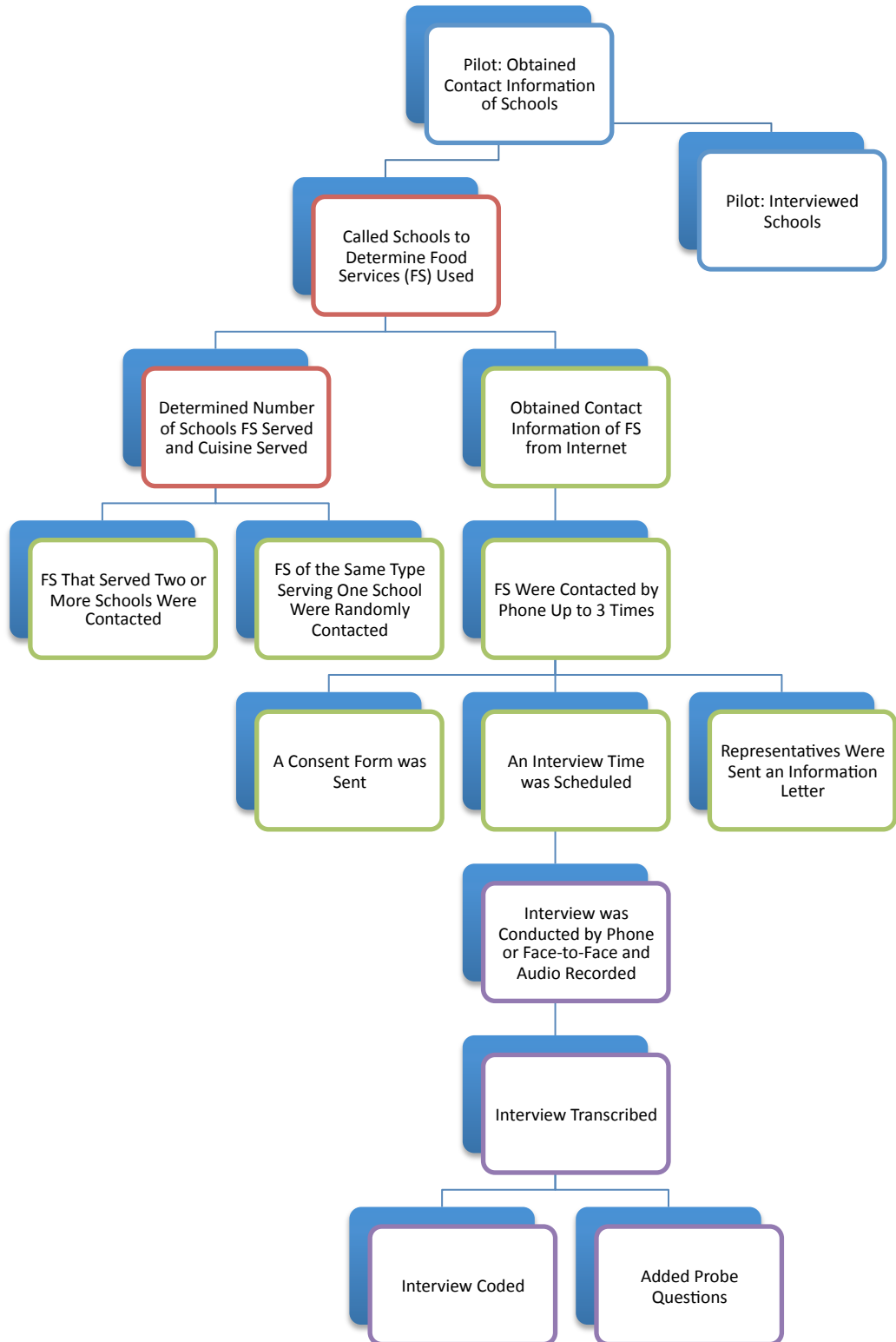
### **Ethical Considerations**

This research has ethics clearance from the Office of Research Ethics at the University of Waterloo. A consent form was presented to participants before participating in the study, it notified them that they have the option of not responding to any questions if they wish, not allow the researcher to record the interview, and withdrawing from participation at anytime without penalty or questioning (Appendix D).

Participants' data, including recordings and transcripts will be stored in locked (password-only) files at the University of Waterloo accessible only to the P/PM150 research team for seven years, after which they will be destroyed. In addition, when relaying the results in the final thesis the data were not associated with any identifying information.



Figure 2: Order of Events - Pilot, Sample, Recruitment, and Data Collection





### 3.7. Analysis

#### **Thematic Analysis**

After transcription, the qualitative data were imported into NVivo 10 (QSR International, 2010) and manually analysed using thematic analysis, which is flexible and allows for the researcher to assume that the data reflect reality (Braun & Clarke, 2006). The analysis was guided by SWOT analysis. To conduct this analysis properly, the researcher became very familiar with the data by collecting and transcribing the data (Howitt & Cramer, 2010).

The interview responses were coded using ‘open coding’, the process by which data are broken down into as many categories and themes as possible (Dey, 2004, p80). Appendix F lists the codes identified in the transcripts. Codes predominantly consisted of a couple of words because the broader context could be displayed in NVivo if needed. Similar codes were then grouped together to represent a theme. In NVivo this described the creation of a new node. When new nodes were created the researcher returned to previously created nodes and coded texts of data and modified the coding in light of new experiences and emerging themes (Appendix G), which is referred to as constant comparison (Howitt & Cramer, 2010). Constant comparison ensures that there is no duplication in coding, and that codes are relevant to the node and its definition. Then the researcher conducted ‘axial coding’ which involved the integration of nodes to produce a main category or theme (Dey, 2004, p80). Themes were created through the chunking of codes together. Codes were organized by the main themes: strengths, weaknesses, opportunities, threats, experience with the policy, and perceived nutritional impact on students (Appendix F).

## Reliability Testing

Reliability testing is conducted to ensure the coding is precise, reliable, and reproducible (Berg, 2009). According to Lombard and colleagues (2002), at least 10% of the transcript should be recoded by a second coder during a reliability test. Therefore, the researcher selected 10% of the transcripts to be tested by a second coder, selecting approximately 4 pages from different sections of each interview. The researcher picked the interviews and sections using the maximum variation strategy, which was discussed in the sample selection section of this thesis. Therefore, these transcripts consisted of interviews with food services with a variety of characteristics and types of cuisines sold (including snack, vending, pizza, sub, hot lunch). Maximum variation ensured that a variety of codes were tested for, in addition, by conducting the reliability test on 10% of the transcripts the majority of the codes were tested for as well. Therefore, although not all codes were tested for the reliability test results may generalize to those codes.

**Table 2: Food Services included in Reliability Testing of Transcripts**

<b>Food Service Code</b>	<b>Size of Food Service</b>	<b>School Level Served</b>	<b>Experience Implementing Policy</b>	<b>Changes Needed to Comply with P/PM 150</b>
SE9	Large	Elementary	Positive	No
LLE7	Large	Elementary	Positive	No
SE15	Large	Elementary	Positive	No
LE2	Large	Elementary	Positive	No
LE7	Large	Elementary	Negative	No
SE3	Large	Elementary	Positive	Yes
LS6	Large	Secondary	Positive	Yes
LS2	Large	Secondary	Negative	Yes
SS20	Small	Secondary	Negative	Yes

Next the researcher determined what the minimum level of reliability was needed for each of the methods used including, percentage agreement and Cohen's kappa. Percentage agreement is defined by NVivo as "the percentage of the source's content where the two users agree on whether the content may be coded at the node," and Kappa "is a statistical measure of inter-rater reliability which many researchers regard as more useful than the percentage agreement figure, since it takes into account the amount of agreement that could be expected to occur through chance" making it the stricter of the two methods (QRS International, 2010).

A kappa or percentage agreement of .90 or more is almost always accepted, .80 or more is accepted in most cases, and 0.70 is acceptable in cases where a strict method of determining reliability is used, such as Cohen's kappa (Lombard, Snyder, Bracken, 2002). It is preferable to use both methods because the weaknesses of each will be made up for by the strengths of the other. For the purposes of this research, it was decided that at least 80% agreement was needed, and 0.70 kappa to pass the reliability test.

The second coder, a PhD student in the School of Public Health and Health Systems familiar with the researcher's area of study and qualitative methods, was trained in order to ensure that they would be able to accurately place segments in the right category. The coder was asked to use the codes that were already created by the researcher, and was provided with the definition of each code; the reliability coder wrote any code they thought should be added on a separate sheet for discussion later. A pilot using 4 pages from one interview was conducted to ensure the second coder did not need additional training. Pilot testing achieved 99% agreement. The pilot was included in the rest of the reliability test, and after the second coder completed coding 10% of the data a coding comparison query was conducted. Overall, reliability measures of 99.5% agreement, and kappa equal to .906 were found. Both measures exceeded the researcher's

requirements for a reliability test. Although there were very few disagreements, all disagreements were resolved through consensus. Consensus building is an interactive way to resolve conflicts in coding by involving stakeholders, in this case both the main researcher and the second coder (Buchecker & Hunziker, 2006; Dorcey et al., 1994). Decisions are reached based on the strength of the arguments and mutual understanding. The method ensures that all points of view are heard and that the final decision is a more ‘optimized’ one (Jackson, 2002). No new codes were identified when disagreements were discussed between the main researcher and the second coder, however some codes were collapsed and/or renamed.

### **Matrix Coding**

The third step in analysis consisted of looking for patterns in participants’ responses and connections between themes, perspectives, attitudes, and experience with the implementation of P/PM 150. The researcher then ran a matrix-coding query on themes that had the highest number of references against the attributes of the food services, including size, school level served, healthiness, and positive or negative experiences with the policy. The researcher made sure to calculate what the expected values were for each matrix code, and then determined whether the obtained values were higher or lower than the expected. The expected values were based on the proportion of one type of food services versus another. For example, when looking at the attribute ‘food service’s experience implementing P/PM 150’ and the theme ‘strengths - because 45% of the food service had ‘positive experiences’ and 55% had ‘negative experiences’ with the implementation of P/PM 150, one would *expect* that 45% of food service that had positive experiences would mention ‘strengths’ and 55% of food services that had negative experiences would mention ‘strengths’. However, if the analysis produced values of approximately 10% or greater above or below the expected values this meant there was an effect that was not due to the natural distribution of attributes (45% and 55%). These exceptional results were reported.

### Strategies for Validating Findings

The researcher put an emphasis on having consistency in the interviews, transcription process, and analysis by creating questions with probes, and by purposefully double-checking coding with another researcher (Kvale, 1996). These precautions were taken to ensure that the objectives of the research were being reached, otherwise known as validity (Moskal, & Leydens, 2000).

Validity in qualitative research is dependent on consistently checking, questioning and interpreting the findings. This is why as the study was being conducted the researcher looked back at previous interviews and coding to ensure new coding was being placed within the appropriate nodes, and the nodes' definitions were still relevant. The researcher also questioned whether the interview questions were obtaining content or answers that were beyond the objectives of the research, or whether the questions were obtaining the intended content. In addition, if content was being revealed that the researcher did not intend to collect through the interviews, the researcher consulted with other researchers to determine if this content should be evaluated or not (Moskal, & Leydens, 2000).

The validity and credibility of the research also relies on the impact of the results on action. This research will not only assist in determining what steps should be taken by the food services to improve the implementation of PPM/150 but will also assist in evidence based decision making for policy makers (Kvale, 1996).

## 4. Results

Various attributes and themes emerged during analysis. The attributes that were identified as important variables are introduced first. Then the results present each theme along with their subthemes, starting with the emergent theme ‘experience implementing P/PM 150’ as the rest of the results are best understood with the food services general experience in mind. The first theme is followed by the SWOT categories in order of most referenced, as the categories that are most referenced will help the reader understand the less referenced, less detailed categories when discussed.

### 4.1. Food Service Attributes

To aid in understanding the context in which particular themes arose in interviews, food services were characterized by four attributes, each with two categories: (1) size of business (large, small) (2) experience implementing the policy (positive, negative) (3) school level(s) served (high school, elementary school), and (4) reported change to menu prior to the introduction of P/PM 150 (see Table 3). Large food services were defined as food services that serve schools in multiple provinces, whereas small food services served schools in a single province or local area. The size of the food service was not defined by the number of schools serviced because some food services serviced a limited number of schools in Waterloo Region but also serviced hospitals and other facilities, which usually meant they were a larger company and had more resources. Therefore, if we attributed these food services as small because of the number of schools they serviced it would be an inaccurate representation of their size and access



to resources. Experience was divided into positive and negative experiences, food services identified themselves as either having an easy time or having struggled implementing the policy. Food services that made no changes were those that describe their food service as one that was either did not have to make any changes or made few changes to their menu to comply with P/PM 150. Food services that made changes were those that described themselves as having to make many changes to their menu to comply with P/PM 150. Note that the researcher made no objective verification of the extent of actual compliance prior to or after introduction of P/PM150. Finally, food services were categorized as either servicing elementary or secondary schools.

By creating these strata, it is possible to control for each attribute, making it possible to see changes in food services' perceptions based on these four attributes. It is important to have controlled variables in a study so that the researcher can compare results in the rest of the variables. The results include comments on strengths, weaknesses, opportunities, and threats, which are dependent on the controlled variables.

**Table 3: Food Services' Attribute Categories**

<b>Attribute</b>	<b>Category 1</b>	<b>Category 2</b>
Food Service Size	<b>Large:</b> Serve schools in multiple provinces	<b>Small:</b> Serve schools in a single province or local area
Experience implementing P/PM 150	<b>Positive</b> experience	<b>Negative</b> experience
Changes needed to comply with P/PM 150	<b>No changes needed:</b> Did not need to make many changes to their menu to comply with P/PM 150	<b>Changes needed:</b> Had to make many changes to their menu to comply with P/PM 150
School level served	Food service serves <b>elementary schools</b>	Food service serves <b>secondary schools.</b>

#### 4.2. Emergent Analysis Theme: Experience Implementing P/PM 150

An equal number of food services had positive and negative experiences implementing the policy. More food services that had a good experience mentioned more opportunities resulting from the policy and strengths within their company, and were more likely to think that the policy had a positive nutritional affect on students. Whether a food service had a negative or positive experience with P/PM 150 it did not affect the number of threats they mentioned; both mentioned equal numbers of threats. However, food services that had negative experiences mentioned significantly more weaknesses than those that had positive experiences.

##### **Positive Experience**

Food services that serve elementary schools were the most likely to identify having a positive experience implementing the policy. In addition, all food services that identified themselves as not having to make changes to their menu to comply with the policy had a positive experience with the policy. LE2 clarifies why small food services had a more positive experience implementing P/PM 150, even though large food services had more resources.

*It has been difficult for a lot of bigger companies to adapt but that lets a lot more creativity come into the market place, you know there are some schools who have their classes creating food for the whole school and their cafeteria. [LE2, Large, Elementary, No changes needed]*

Those that serve elementary schools, like LLE7, had an easier time because they did not have problems with students leaving campus.

*And it comes to the consumer, I think once kids get into high school I mean they're old enough to make their own decisions, they're empowered to come and buy their own food, they're not like the kid whose mom in elementary school drops off, you know, the kid says here's, you know, pays the teacher not the kid doesn't go up and*

*pay for his lunch, you know like so the decision is being made on behalf of them.*  
[LLE7, Large, Elementary, No changes needed]

### Negative Experience

The main factors that determined whether food services had a negative experience implementing the policy were if the food service had to make many changes to their menus to comply with the policy and if they were small food services. All food services, but one, that had to make many changes prior to P/PM 150 mentioned having a negative experience with the policy. Some food services mentioned that changing their menu was difficult. What is involved with changing a menu from 'not compliant' with P/PM 150 to 'compliant' for many food services included hiring a nutritionist, training staff, and finding compliant alternatives; this is likely what contributed to these food services having a negative experience.

*To be honest it was a bit of a hassle [laughs] because that's something that we don't offer on our regular menu.* [LE20, Large, Elementary, No changes needed]

*So it has been quite a hurdle to do and a lot of work behind it so we had to hire on a nutritionist.* [SE5, Small, Elementary, No changes needed]

LS2 compared their negative experience with what they perceived cafeterias experienced, as they themselves did not serve their cuisine through a cafeteria.

*I'm sitting here crying the blues I can only imagine how rough it is on them [high school cafeterias] because they have staff at those locations they have equipment they have uh you know, their costs are even higher than our costs.* [LS2, Large, Secondary, No changes needed]

### 4.3. SWOT Analysis Theme: Threats

Threats are factors external to the organization that may be harmful to the achievements of an organization's objectives (Hay & Castilla, 2006). Two interview questions asked about threats, one of which may have elicited responses about the food services' weaknesses, however, threats were mentioned 169 times which is more than any other SWOT category. Since threats were

mentioned the most, it was decided that the SWOT analysis would begin with the threats category. In this section the threats that participants claimed hindered the successful implementation of P/PM 150 in their companies were identified.

This research found that food services that served secondary schools, and food services that identified themselves as having to change a lot of their menu to comply with P/PM 150 mentioned more threats to their ability to implement P/PM 150 than food services that served elementary schools, and food services that did not need to make changes to their menu to comply with P/PM 150.

Themes that emerged during the interviews conducted were lack of compliance by food service organizations, negative effect on bottom line, competition, reduced sales, school-related threats to the food services, and the compliant food's lack of appeal to students.

### **Lack of Compliance**

The most common themes categorized as a “threat” concerned lack of compliance among food service providers with P/PM 150. Of 18 interviews, 7 individuals identified lack of compliance as a threat. Only one food service interviewee self-identified as not compliant. Although just one food service identified itself as not compliant with the policy, most had suspicions about whether other companies were compliant. The lack of enforcement left an uneven playing field, lack of clarity about level of implementation and antagonism between companies.

Typically, large food services and food services that had to make many changes to their menu to comply with P/PM 150 reported that others appeared to be not compliant with the policy yet still served schools.

*I don't think that all food services have been able to meet the guidelines but are still trying to sell to the schools. [LS1, Large, Secondary, Changes needed]*

*Now, issues that I've seen out there, I've had schools approach me and you know about some of the small chain companies, some of the independent companies, you know claiming that they can meet these guidelines. I have my, I mean I can't prove that they're not, but just from what I've seen I mean I have doubts. [LLE20, Large, Elementary, Changes needed]*

Large food service, LLE20, goes on to explain why lack of compliance is a threat to their food services and deserves some attention. From the participants' concerns it is evident that increased enforcement by the government would make room for healthier competition, and reassurance that all food services are on the same playing field.

*It's definitely a problem the fact that you know we've gone out of our way to make sure that we do meet the guidelines and then you know there's enough competition out there that when you have less than honest independent people out there that are simply oh yeah no problem I meet it, and there's no one actually checking up on it, that can definitely have an impact. [LLE20, Large, Elementary, Changes needed]*

## Competition

Small food services were most likely to mention competition as one of their primary threats. Food services that served elementary schools were also more likely to mention competition as a threat as compared to food services that served secondary schools.

One food service provider mentioned advertising as an area that they could not compete with larger food service organizations in due to lack of resources.

*I know Pizza Pizza sometimes sends out flyers about their school order. Because they're a chain, I think they have more money to be able to, and we're just like one small business we're not even a chain. [SE4, Small, Elementary, Changes needed]*

Small food services were also concerned with surrounding food services that did not serve schools. Food services that do not serve schools (but do have products that appeal to youth) also do not have to comply with the policy, which presents a greater source of competition especially

when the food services are in walking distance of schools. This would predominantly be an issue for those food services serving secondary schools, because students can leave campus and purchase foods from non-compliant services. On rare occasions elementary school students can leave campus, or simply wait until after school to purchase their meals off campus. LS2 brings this up in their interview, stating that, “... *There’s so much competition that does not have to follow that criteria*” [LS2, Large, Secondary, Changes needed].

Large food services were not as worried about competition because they have more resources, and are able to order ingredients in larger quantities from their suppliers (reducing the price of the ingredients, and giving their suppliers more incentive to manufacture a new compliant ingredient/product). In addition, larger food services have departments that help with the implementation of P/PM 150 and finding compliant ingredients or products. Small food services do not have this luxury because they are normally family run, and do not have the manpower/resources to have a specific individual focus on the nutritional value of their food or be responsible for their marketing. Despite these worries, overall small food services had an easier time implementing the policy, mostly due to their flexibility. When asked about their strengths LE2 commented, “...*So having these strict food guidelines lets smaller more versatile companies get in your door*” [LE2, Large, Elementary, No changes needed]. One cannot tell, however, if small food services simply do not feel as pressured to be fully compliant, and are simply saying they are compliant when they are not.

### **Lack of Appeal to Students**

Large food services, food services that served elementary schools, and food services that had to make many changes to their menus were more likely to mention that compliant foods were

unappealing to students. One third of the sources mentioned whole wheat as the most unappealing P/PM 150 compliant addition to their menu.

*If you give any kid a choice between whole wheat and white I guarantee at least 90 percent are going to choose the white. [LLE20, Large, Elementary, Changes needed]*

Elementary schools get more negative feedback from parents when food is not appealing to students because students aren't able to leave campus if the food is unappealing. Therefore, elementary school students are more likely to complain to their parents about the foods served at their school when parents are filling out order forms for their child's lunch menu. Parents then relay that feedback to the food services that serve elementary schools, making it a greater threat for food services serving elementary schools than those serving secondary schools.

Food service, SE5, serves solely elementary schools and mentioned the threat of P/PM 150 foods not being appealing to younger students. In addition, SE5 was one of the companies that associated the lack of appeal to the lack of education surrounding P/PM 150, highlighting the fact that if parents and students do not understand the policy they will likely be more resistant to accepting it.

*I get a lot more kickback from the parents saying 'my child doesn't like whole wheat pasta and they don't understand the P/PM 150,' they think it's a company based policy not a provincial based policy. [SE5, Small, Elementary, Changes needed]*

Finally, when students find the foods served at their schools unappealing they are more likely to leave campus. According to a local food service organization some elementary school students find a way to leave campus for food.

*I have some you know some kids in schools that don't order that dough [whole wheat crust on pizza] because they don't like it so they come here [to the off-campus store] for regular slice. [SE3, Small, Elementary, Changes needed]*

### School Related Threats

Food services that were large, and that served secondary schools were most likely to identify threats that were school related. Themes included the fact that secondary school students can leave campus, lack of parent volunteers helping run school lunch programs, the fact that the policy was affecting schools' ability to fundraise for extra-curricular activities, and the protests against Bill 115. Bill 115 was introduced in September of 2012, and was challenged by Elementary school teachers in Ontario in December 2012. Teachers across the province stopped participating in extracurricular activities, putting a halt to fundraising events that included food orders from food services. Therefore, food services were not only in the process of implementing P/PM 150 but were also dealing with reduced sales from lack of teacher involvement in activities that involved food sales due to the Bill 115 protest.

In response to a question regarding the food service's ability to meet the demand of parents and students, a large food service mentioned that students were able to simply leave campus and get food elsewhere. Half of the participants mentioned this threat in their interviews.

*We did notice a sharp increase in students leaving the campus when P/PM 150 was introduced, partly because probably wanted to rebel against it and partly because they truly aren't finding the options that they want to eat on campus anymore. [LS6, Large, Secondary, Changes needed]*

Besides the threat to food services, there was an additional threat to school extracurricular programs. Being a food service that served secondary schools, LS2 was fully aware of the negative impact reduced revenue had on activities for student. An interviewee went on to question the positive health impact of the policy if students were no longer able to participate in sports and other extracurricular activities due increased participation fees.

*It's expensive to outfit just a uh football program. And then what happens to the kids that all of a sudden, when before they were paying 75 bucks to play, now they have to pay 150 bucks. Some kids can't afford it, then all of a sudden they're not playing and*



*P/PM 150 was brought in so that uh the kids are healthier, well how can they be healthier if they can't uh uh participate in some of the activities that are going on in the school? [LS2, Large, Secondary, Changes needed]*

### **Reduced Revenue**

Significantly more large food services, food services that served secondary schools, and food services that had to make changes to their menu complained about their sales dropping after the implementation of P/PM 150.

A food service organization that served secondary schools identified the threat of reduced sales as a hindrance on their ability to market their products creatively in the school cafeterias. The lack of creative marketing, in turn, made it difficult to sell the compliant foods that were less appealing to students.

*Obviously with the huge drop in revenue there's not a lot of extra money to be using on creative marketing. [LS6, Large, Secondary, Changes needed]*

Lack of appeal to students played a role in the declining revenues of food services serving schools. The most common food items mentioned by food services as unappealing to students were whole-wheat items, which were mentioned by one third of participants.

*There absolutely has been a decline in sales from the when the P/PM 150 was pushed to full force for all school boards... It's uh, you know you can't just sell the burger and the fries anymore or we used to sell BBQ pork ribs at our venue uh four years back um I can't sell those anymore. I can't sell chicken wings anymore. You know, so those were probably my highest sellers the three that I just mentioned. And you know, going from a white pasta for my tortellini to a whole wheat pasta just by wording it on the menu, because I have to word it on the menu that it is a whole wheat tortellini I lose sales on that too. So it is difficult in that sense. [SE5, Small, Elementary, Changes needed]*

### **Negative Effect on Bottom Line**

The majority of food services expressed either a decline in their bottom line, or no change at all. Those that served secondary schools, had to make many changes, and were large food

services were more likely to mention a negative effect on their bottom line after implementing the policy.

*In no shape, way or form has it ever increased with P/PM 150, it's either stayed neutral or declined. [LS6, Large, Secondary, Changes needed]*

A large food service felt that not only were food services hurting, but schools as well.

*When they put into effect P/PM 150 they didn't account for the loss of revenue to the schools, and they didn't make up for that, so the schools are all hurting now. [SS20, Small, Elementary/Secondary, Changes needed]*

SS20 was also a food service that tried to change their menu to meet P/PM 150's requirements without success, leading them to end their contracts with schools. Disappointed and frustrated with the introduction of this policy they mentioned multiple times throughout their interview the negative results of the policy on themselves and most secondary schools.

*Uh the service providers are all hurting or gone because of loss of revenue, and they couldn't keep their commitments to the schools. [SS20, Small, Elementary/Secondary, Changes needed]*

#### 4.4. SWOT Analysis Theme: Emergent Opportunities

Opportunities are defined as external factors that contribute to an organization's ability to reach its goals (Hay & Castilla, 2006). In this section opportunities that participants claimed motivated them to continue trying to successfully implement P/PM 150 are identified. In addition, participants' suggested facilitators they claim would assist them in implementing the policy are looked at.

The analysis showed that food services, regardless of their attributes, identified equal numbers of opportunities stemming from their involvement in the policy. Opportunities included increased business and creating a healthier brand.

Themes emerging under facilitators that could help with the implementation of the policy were increasing education, and making changes in the policy. Participants believed that these facilitators, if applied, would make implementing P/PM 150 easier.

### **Healthier Brand**

Large food services, those that serve secondary schools, and food services that had to make many changes to comply with P/PM 150 found that the policy had provided them with the opportunity to create a healthier brand.

When asked, “What opportunities have resulted from your involvement with P/PM 150?” many participants responded with comments similar to the following:

*I guess the one thing that it has helped us do, is it has helped us um get compliant products so that the one thing that it's done is that we do have more compliant products that we can offer other companies that are looking for compliant options.*  
[LS2, Large, Secondary, Changes needed]

*It did open up areas for us that we didn't uh work with before like salad bars and sort of more of the healthier selections”* [LS6, Large, Secondary, Changes needed]

Creating a healthier brand, as LS2 mentions, allowed food services to provide healthier options to customers other than schools. This in turn helped in obtaining more business, which was one of the other most commented on opportunities during the interviews with the food services.

### **Increased Business**

Small food services, those that serve elementary schools, and food services that did not have to make changes to their menu to comply with P/PM 150 found that they had an increase in business after the implementation of the policy.

The 'healthiness' of the food service before the introduction of P/PM 150 was indeed a very influential factor on their ease of implementation. If a food service identified itself as a not

having to make changes to their menu to comply with P/PM 150 it was more likely to mention having an easy time with the policy. One of the factors that contributed to food services experiencing an easy time implementing P/PM 150 was their increased business, this was due to them being prepared before others, being able to pick up other food services' schools/business, and attracting other customers with their new compliant products. Food service, SE9, echoes this concept in their interview.

*We did pick up a couple of schools last year um because they found that they weren't able to offer pizza or the pizza they were able to offer was unappealing. [SE9, Small, Elementary, No changes needed]*

SE15 was one of the food services that were created in response to the policy's introduction, putting them at a great advantage as their first menu was based on the policy's guidelines. This meant that, although like other food service organizations they had received the policy approximately 8 months prior to its implementation, the company did not need to make changes to an initially 'not compliant' menu, as their menu was 'compliant' from the start.

*So we did get uh a draft of P/PM 150 um I would say a good 8 months prior to it coming into effect, and that guideline is actually was part of developing this company. [SE15, Small, Elementary, No changes needed]*

Another company that was created in response to the policy was LE2. LE2 echoed SE15's comment but added "...For us it's a good thing, because otherwise how would we even get into that market" [LE2, Large, Elementary, No changes needed]. Looking at both these quotes together, it is apparent that in these companies' cases the opportunity was the introduction of P/PM 150. Beyond that, it was the reason two small companies could emerge and get into the market of serving schools that were now looking for compliant food services to replace food services that decided not to comply with P/PM 150 or were taking too long to do so. This is

supported by LE7's comment "...*They can't afford to keep open the cafeteria, so we're serving some middle schools*" [LE7, Large, Elementary, Changes needed].

## Education

Large food services, those serving elementary schools and food services that had to make many changes to comply with P/PM 150 mentioned an opportunity to increase education amongst parents and students.

Many food services saw an issue mainly with secondary school students that could leave campus if they did not like the compliant foods at school. In an effort to provide a solution to this problem LLE7 recommended an education in which students would understand how to make compliant decisions, so that when they reached high school they would decide for themselves to eat from the compliant foods provided by their cafeterias.

*I think it comes down to strong enough education with the understanding of cause and effect that relates to being able to make healthier decisions independently.*  
[LLE7, Large, Elementary, No changes needed]

Again, LS2, a large food services providing their services to secondary school students, focuses on providing education on compliant eating in elementary schools in order to positively influence students' food choices in high school.

*I mean I would imagine I don't know what they're teaching in elementary schools but maybe in elementary schools by the time they're in grade 6 and 7 maybe they're starting to talk about uh you know compliant eating. I don't know, I don't know how much of that education goes on but obviously that would help us too.* [LS2, Large, Secondary, Changes needed]

On another note, LE20, a large food service providing their services to elementary schools, recommends providing education to parents on what foods to send with their kids and how to make those foods. This was in line with what many food services felt. Ultimately, compliant

eating starts at home and should be reinforced when students are young, so that, again, when students reach high school they are able to make decisions on their own. LE20 focused mostly on educating parents throughout their interview because as a food service that serves elementary schools it is parents that are most in control of what their child eats while at school.

*That's really where the, it's great that these guidelines are implemented in the school and I think it should start from the public school right on up so when these kids get to high school that's already engrained, that they should be eating compliant, but it really starts at home with parents going, you know, I think schools, and public schools, and middle schools should be sending information to parents to tell them how to actually make a lunch. [LE20, Large, Elementary, Changes needed]*

### **Policy Changes**

Besides educating students and parents in order to facilitate the implementation of the policy, especially in high schools, food services also recommended making changes to the policy.

Changes, including making the policy less stringent, repealing the policy, creating more detailed guidelines, and explaining how food services can meet requirements, were suggested predominantly by food services that were small, and those that had to make many changes to comply with the policy.

The only food service that admitted to being non-compliant yet still serving schools mentioned a number of reasons for their non-compliance. Amongst these being the clarity of the guidelines.

*I think being more specific, because I know that my dad does have a piece of paper with the guidelines but I don't know if he'd actually know how to prepare all of those things... how to prepare the measurements, all those kinds of things, so I think maybe having a step by step clear guide. [LE20, Small, Elementary, Changes needed]*

A food service said, "...I think that we have to really relax the restrictions" [LE7, Large, Elementary, Changes needed] which was a resounding comment in one-third of the interviews, along with completely repealing the policy as stated by SS20.

*Um and unless they repeal it at some level or loosen the restrictions, it's going to remain a dead market. [SS20, Small, Elementary/Secondary, Changes needed]*

Overall, there was an equal push for changes to be made to the policy as there was a push for providing education to students and parents regarding the policy and compliant eating.

#### 4.5. SWOT Analysis Theme: Strengths

Strengths are defined as internal characteristics of the organization that help it reach its goals (Hay & Castilla, 2006). Two questions were also asked during the interview process that may have elicited responses revolving around the food services' strengths, however, strengths had only 110 references overall. In this section strengths that participants claimed helped them implement P/PM 150 are identified.

The analysis showed that food services that did not have to make changes to their menu to comply with P/PM 150 identified more strengths within their company after the policy's implementation than food services that had to make many menu changes. Otherwise, there wasn't much difference in strengths identified for food services that were either small or large, or serving elementary or secondary schools.

Overarching strengths that were mentioned during the interviews conducted were product related strengths, customer service, and level of preparedness and awareness of policy before the introduction of the policy.

#### **Product Related Strengths**

Product related strengths were the most frequently mentioned strengths amongst food services. The product related strengths that were most commented on were freshness, high

quality in terms of appearance, preparation, and nutrition, and innovation in creating new appealing products.

### Freshness and High Quality

Approximately half of the food services interviews mentioned freshness and high quality as one of their main strengths when asked what they think their organization does well. Amongst these food services, it was small food services, those that serve elementary schools, and those that did not have to make changes to their menu to comply with P/PM 150 that were more likely to mention freshness and high quality as one of their food service's strengths.

*We'll go all the way to California just to get these tomatoes that are not harvested in any greenhouse at any given time... So that way that natural freshness from the natural sugars in the tomatoes is preserved.* [LLE7, Large, Elementary, No changes needed]

*When you see the quality of the products, I think that's what impresses the parent council; it's what impresses parents because it's not something that they would make at home.* [SE15, Small, Elementary, No changes needed]

### Innovation

Food services were proud of the innovative ways they implemented P/PM 150. Small food services, food services that serve secondary schools, and those that had to make many changes to comply with P/PM 150 were more likely to mention innovation in their product development as one of their food service's strengths.

Food service that had to make many changes to comply with P/PM 150 were in the perfect position to practice innovation when developing their new menu. By making their foods sound more fun, they were able to connect with students.



*We've made the wraps more fun, we've kind of in our last menu said 'do you dare to have our wrap?' and that's with hot sauce, it's a chicken wrap with hot sauce, and so you know it's kind of trying to get into the kids minds and thinking what would they like you know? [LE7, Large, Elementary, Changes needed]*

LE7 was not the only food service that thought of innovative ways to market their product.

LS6, a food service serving high schools, captured a number of innovative ways to market and develop compliant products so the products sold are tailored to students.

*Well what we've been really focusing on is improving our marketing to students. Um and improving menus, so we've been really focusing on listening to what students are looking for, trying to find innovative solutions to replace some of their more traditional favourites uh and then makes sure that those who were choosing to stay within our environments who want to eat in our cafeteria, those students that we focus on, if they are looking for certain ethnicities or certain you know feature specials that we can create menus to meet their needs. Um the other thing we've been focusing on is, you know, really enhancing how our cafeterias look and feel, and where we place food within our cafes. Um but again because of the financial situations in the schools that's a bit limited. Obviously with the huge drop in revenue there's not a lot of extra money to be using on creative marketing. [LS6, Large, Secondary, Changes needed]*

Many food services that mentioned product development as one of their strengths mentioned at least one of LS6's innovative production and marketing strategies. The most reoccurring theme was related to, "*trying to find innovative solutions to replace some of their more traditional favourites*" [LS6, Large, Secondary, Changes needed]. However, as LS6 mentioned, cost determined whether these strategies were put into place.

### **Customer Service**

Small food services, and food services that serve elementary schools were more likely to mention good customer services as one of their main strengths. LE20, a food service that serves elementary schools, mentioned building positive relationships with their customers as not only one of their food service's strengths but also a part of their marketing strategy.

*It's not a money maker for us, it's more of a communal thing, here's something for you, here's a trusted brand name that when you come out of your school and you see you feel you can walk in there and get good service and you know a good product.*  
[LE20, Large, Elementary, Changes needed]

As a part of building positive relationships with their customers food services mentioned asking for feedback from students and parents. LS6 mentioned involving students as one of the best ways to be successful in implementing P/PM 150. Approximately one third of food services mentioned the involvement of stakeholders, parents and students alike, as one of their strengths.

*We rely on them to have face-to-face interaction with students so they're typically talking to the students as they come through and really asking them, you know what are you looking for is there anything we're missing? ... I think if um more of us can come together and talk honestly and openly and candidly about what it is we need to be successful including the students, um you know they need to feel like they're part of the conversation, I think it will at least have the best shot at being successful.*  
[LS6, Large, Secondary, Changes needed]

### **Preparedness and Awareness of Policy**

Large food services, and those serving secondary schools were more aware that the policy was coming into effect and were, hence, more prepared to meet the policy's requirements. Factors that helped these food services be more aware and prepared were participating in the writing process of P/PM 150, serving the Catholic school board (who had implemented the Food and Nutrition Policy, a form of healthy school food policy years before the P/PM 150's introduction), and simply being proactive by trying to implement the policy and, sometimes, exceed the policy's standards well before its introduction.

*We've really done a good job uh being proactive about it, so we did know about P/PM 150 well before it was implemented mostly because we participated in the writing process.* [LS6, Large, Secondary, Changes needed]

*We were lucky enough that the Catholic School Board in the Waterloo area um were doing a soft lunch [program] approximately two years before um it um it was in full swing, yet it was mandatory.* [SE5, Small, Elementary, Changes needed]

The Catholic school board implemented their Food and Nutrition Program in 2007 for secondary schools, and 2009 for elementary schools. The Food and Nutrition Program is similar to P/PM 150 in that its main purpose is to restrict ‘unhealthy’ foods from being sold in schools, however, the program also comments on not using food as a reward, staff being role models, water accessibility, forming a school nutrition team, and nutritional education for students and teachers. Since the Food and Nutrition Program was implemented before P/PM 150 and is more comprehensive, the food services that served Catholic School Board had an easier time implementing P/PM 150 when the time came. In an evaluation of the Food and Nutrition Policy many of this study’s findings were replicated, but perhaps the most important finding was that although it was initially difficult to follow the program it got easier over time (Miedema, 2013).

#### 4.6. SWOT Analysis Theme: Weaknesses

Weaknesses are defined as internal factors that hinder an organization from reaching its goals (Hay & Castilla, 2006). Only one question was asked about weaknesses during the interview, and this question may have also elicited responses regarding strengths. This would explain the low reference count for weakness. However, opportunities had one full question yet had more than double the references. Therefore, considering how the questions were distributed food services had mentioned less weaknesses than expected. This can be interpreted as a defence mechanism, as food services would not want to attribute their problems with the policy to internal problems. In this section weaknesses that participants claimed hindered them from being able to successfully implement P/PM 150 are identified.

According to the analysis, large food services, food services that served secondary schools, and food services that identified themselves as having to make a lot of changes to their menu to

comply with P/PM 150 mentioned more weaknesses internal to their company hindering them from successfully implementing the policy than small food services, food services that served elementary schools, and food services that did not have to make changes to their menu, respectively.

The emergent theme that stood out most as a weakness was product development, as it had the most references of all weaknesses. Other themes included lack of variety, and lack of awareness regarding the introduction of P/PM 150. However, these themes were only mentioned by one source each in their interviews therefore they were not explored further in this write-up.

### **Product Development**

Despite food services being proud of a number strengths revolving around product development, food services also experienced difficulties developing new compliant products including products being less profitable after the introduction of P/PM 150, there being an increase in waste after the policy's introduction, not being able to provide enough food to satisfy students, not having enough time to prepare compliant foods, and not being able to meet all stakeholders' demands. Food service organization attributes most strongly associated with identification of these weaknesses include those rated as large food services and that had to make changes to their menu to comply with P/PM 150 and food services that serve secondary schools.

### **Reduced Profitability**

Compliant foods were said to be less profitable than food services' regular menu items. Food services that mentioned reduced profitability also experienced a reduction in sales.

*Well it took all of the profitable items out of the school board, we could no longer afford to pay the school board to maintain our commitment to the school board, sales dropped like a rock and the sales that were there had no mark up in them so we negotiated our way and left the school board. [SS20, Small, Elementary/Secondary, Changes needed]*

A small food service explained why, especially for food services that are small, the reduced profitability of their new compliant items is an issue for them versus other companies.

*Even though all my competitors offer that too that's probably their lower sale item, where it's my only pizza item that I can offer is the whole wheat pasta, uh pizza.*  
[SE5, Small, Elementary, Changes needed]

Small food services having only one item on their menu can find implementing P/PM 150 more difficult than larger companies do, since larger companies have more items on their menu that can make up for items that aren't as profitable.

### Increased Waste

Related to reduced profitability is the increased waste resulting from implementing P/PM 150.

Respondents cited a number of reasons for increased waste, including excess food due to the inability to use leftovers in the non-compliant menu for the general public, and excess food due to the food being unappealing to students and expiring.

*Other chains they get their dough in frozen and they only basically have to take out what they need. But in our case you know especially on a Friday we have a school lets say they only need 30 pizzas you know for us to make a batch of dough we're only going to use 50 or 60 dough balls. So we had to make 30, we had to make a whole batch, we use what we need and the rest of it is going in the garbage so there's a waste factor involved for us whereas before when it was the regular dough that wouldn't matter because we could you use it for the rest of the menu.* [LLE20, Large, Elementary, Changes needed]

LS2 comments with great conviction and frustration regarding the waste produced from the expiration of compliant products that are simply unappealing to students.

*You also have the fact that you're throwing out a lot more product, because I tell you the granola slots, the slots where the granola bars go, we might as well make those out of plastic because nobody buys them. So it's almost like we have to show that we have that in the machine so that we can offer other products.* [LS2, Large, Secondary, Changes needed]

### Portion Sizes

Most food services differentiated between the needs of both age groups, stating that the policy needed to also differentiate between both school levels. Secondary school students differ in many

ways from elementary school students in that secondary school students are able to leave campus, would like to have more autonomy, and require more servings of food, as illustrated in the following quote.

*So our struggle has been to make, to provide enough food for um children who are, the same amount of servings that you would have for 8 years old has to be passed by children who are 15 years old because the high schools have the same restrictions... That's why so many of the cafeterias have had to close. Because the students aren't getting [enough food], it's really not, you can't give the same amount of food to a child that's 8 and a child that's 16. [LE7, Large, Elementary, Changes needed]*

Having separate regulations for elementary school and secondary school may be needed to facilitate the implementation of P/PM 150 in high schools.

### **Time to Prepare Compliant Foods**

Food services complained about the time it took to prepare compliant foods. In addition, the time it took to train staff and change equipment in cafeterias were issues.

*Well we found it difficult in all over the schools in Ontario to be honest mostly from an equipment and logistics perspective. Um because of the way schools had been run for so many years and the equipment that's available in the schools um the biggest challenge was figuring out how to prepare enough food so that its all ready at the same time. Um because the lunch hour in many schools is only 40 minutes some of them have a longer lunch hour but some them have a short one. So in the past we were able to serve it deep fried on the fly I guess you'd say so you can have you know food ready in 3-5 minutes whereas if you're waiting for something to cook in a convection oven to the same quality it's going to take you upwards of 30 minutes. [LS6, Large, Secondary, Changes needed]*

### **Meeting Stakeholders' Demands**

Respondents mentioned various groups of stakeholders: students, parents, and schools. A reoccurring theme revolved around students and their main concern being taste. However, this is not the only concern students have, rather it is the issue food services identified most frequently. Food service respondents cited parents' main concerns as cost and quality. Finally, schools echoed the same concerns of cost and quality, but added compliance and convenience.

*But I guess the biggest challenge would be um finding new products that taste good that students are willing to purchase. [LS2, Large, Secondary, Changes needed]*

*That's the trickiest part because uh the kids just want pizza [laughs] they want pizza that tastes good, right? It's the parents that want to make sure that you know um the kids are getting a good compliant product, and it's the school that wants to make sure that again it's a compliant product. At the same time, you know, they want it at a great price, they need it on time, they need it hot. [LE4, Large, Elementary, No Changes needed]*

In some cases, food services mentioned feedback and concern from parents regarding compliance. In most cases, however, parents were confused about the policy and turned to food services for an explanation.

*I've got more of a parent kickback with the public school board because it wasn't knowledgeable to the parents, that information wasn't given to them as with the Catholic school boards were informing the parents quite a bit more. [SE5, Small, Elementary, Changes needed]*

## **5. Discussion**

### 5.1. Overview

The introduction of P/PM 150 redefined nutritional standards in elementary, middle, and secondary schools. These changes placed a large responsibility on schools and food services to provide foods that were compliant with this new policy. This research will assist in determining future steps for food services implementing PPM/150, and will help with evidence-based decision making for policy makers. This section will discuss the main results, and will relate the findings to literature. SWOT analysis will be used to analyze and compare the threats, opportunities, strengths, and weaknesses, in the order of most referenced to least referenced. Furthermore implications for practical and comparable interventions, and implications for future research will be discussed. Then the strengths and limitations of this research will be examined. Finally, an overview of the overall influence of P/PM 150 will be provided.

### 5.2. Revisiting the Research Questions

The research questions guiding this study explored food services' experiences with P/PM 150. The strengths and weaknesses of food services organizations implementing P/PM150 were also explored, in addition to the opportunities and threats to the policy's implementation in food services organizations.

The analysis of the interviews conducted revealed that there were approximately an equal number of food services that had positive and negative experiences, 55% and 45% respectively. Those that had a good experience were predominantly food services that serve elementary



schools. This is likely due to the fact that students in elementary schools cannot leave campus. It is assumed this is the main reason for elementary schools having positive experiences, since high school students being able to leave campus was considered a threat that probably contributed to food services having negative experiences. A study conducted in Chicago found that fast food restaurants were more likely to cluster within a 5min walking distance of schools than anywhere else in the city (Austin, 2005). The researchers recognized that all students had access to fast food restaurants before and after school; however, high school student had access to nearby food services at lunch as well (Austin 2005). It was found that the proximity of food services to high schools have a negative impact on the food environment (or according to the comprehensive school framework, the physical environment), and may undermine efforts to improve child and youth health (Austin 2005; He et al., 2012).

Those that had the most negative experience were food services that had to make many changes. These food services had to undergo numerous costly and time-consuming changes in order to comply, therefore making it more difficult to implement the policy. Among these changes were changes in equipment, finding new products, creating appealing products, increased preparation time, and additional staff training.

The SWOT analysis will be used to compare the themes mentioned in the results section. This analysis will allow the researcher to develop solutions for comparable interventions, and assist policy makers in their decision-making. Table 4 identifies the main themes under each SWOT category.

**Table 4: SWOT Analysis**

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>➤ Product Related Strengths</li> <li>➤ Customer Service</li> <li>➤ Preparedness and Awareness of Policy</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>➤ Product Development</li> <li>➤ Reduced Profitability</li> <li>➤ Increased Waste</li> <li>➤ Portion Sizes</li> <li>➤ Time to Prepare Compliant Foods</li> </ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>➤ Healthier Brand</li> <li>➤ Increased Business</li> <li>➤ Education</li> <li>➤ Policy Changes</li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>➤ Lack of Compliance</li> <li>➤ Competition</li> <li>➤ Lack of Appeal to Students</li> <li>➤ School Related Threats</li> <li>➤ Reduced Revenue</li> <li>➤ Negative Effect on Bottom Line</li> </ul>

Since the SWOT category most prominent in analyses revolved around threats to the policy’s implementation, that category will be discussed first. Two food services’ attributes were associated with perceiving the greatest number of threats: serving secondary schools and those that were that had to make many changes to their menu to comply with P/PM 150. For food services serving secondary schools, participants suggested the threats of reduced revenue, negative effect on bottom line, and lack of appeal to students occurred because secondary school students can leave campus. Food services that were that had to make many changes were sensitive to compliance amongst other food services. Finally, food services that mentioned competition as a threat were small food services and those serving elementary schools. This would be because small food services have to compete with large food services that have a greater number of resources.

In accordance with ‘threats’, opportunities are also external to the food service organizations and had the second most references by food services. One food service recommended that the policy include sections on how to prepare foods that are compliant, including what measurements to use. Having more guidance and support through training, regarding the implementation of P/PM 150, may give food services an opportunity to ask questions and become more familiar with the policy.

When asked about their strengths, food services spoke freely, readily letting the researcher know where their services excelled. In particular, food services that did not have to make changes to their menu to comply with policy proudly spoke about their products’ strengths, including freshness and high quality. These food services were pleasantly surprised when they learned they were compliant without making many changes to their menu, which would explain their confidence in their products. In the case of innovation, it makes sense that mostly food services that had to make many changes would list this as their strength as they had to make drastic innovative changes to their menus. Food services that mentioned customer service as a strength were mostly small food services and those that serve elementary schools. These food services associated this strength with building relationships with their customers. Food services serving secondary schools did not interact as much with school staff and students because their services consisted of vending companies and catering companies that served through the cafeteria. On the other hand, food services serving elementary schools interacted more with school staff and students because they usually set up at the school and sent food to each class. The high level of interaction between small food services and elementary schools is why these food services mentioned customer service as one of their main strengths.

Despite being asked about internal solutions (e.g., *What have you done or what would you do to resolve such a problem?*), most food services did not provide many solutions internal to their company. Food services avoided identifying weakness and exhibited more defensive reasoning. This kind of reasoning happens when an individual attempts to not take responsibility for their actions by blaming external factors or others (Rahim, 2002). According to Sternberg and Horvath (1999), defensive reasoning leaves people unable to reflect on their shortcomings and, hence, unable to reach their goals. In SWOT analysis the identification of weaknesses is the hardest part, however, in order to improve upon them participants must be able to do so (Williams, 2013). Although most services refrained from identifying weaknesses, fingers were pointed outwards at other food services and schools. In only one case did a food service comment on its own lack of compliance. That said, when participants were asked about the policy's restrictions (e.g., *Describe for me what you understand the restrictions P/PM 150 puts on foods and beverages that can be sold in Ontario schools*) many were unable to list the restrictions around fiber, sodium, fat, and sugar without substantial probing.

Although government responsibility did not emerge as a theme, there was an underlying theme about the government not being responsible for students' eating habits. This was apparent when food services commented on accountability, on solutions involving parent and student education (regarding how to cook, what foods to eat, etc.), and when recommending that the policy be repealed or the restrictions loosened. When food services commented further on accountability they mentioned that the government was not holding food services accountable which raised the issue of who is responsible.

Many of the themes that emerged from this research were replicated elsewhere (Smith, 2010; Olstad et al., 2013). In the literature review of the School Nutrition Policies across Canada,

barriers mentioned included the cost of healthy foods, lack of human resources, lack of policy clarity, and student appeal. All of these barriers were also mentioned in this study at least once. A facilitator that was mentioned in this study and the literature review was “mobilizing a multi-stakeholder working group to develop and implement the policy” (Smith, 2010). The food services in this study also mentioned the importance of involving stakeholders, showing that the implementation of any policy requires multi-stakeholder input. In another study on the experiences of recreational facilities in Alberta with the implementation of Alberta Nutrition Guidelines for Children and Youth (ANGCY) barriers included: “few resources, no training, complex guidelines, low availability of and demand for ANGCY-compliant products, competitive pressures and substantial declines in revenue” (Olstad et al., 2013). All of the barriers mentioned in this second study were replicated by Waterloo Region food services.

### 5.3. Implications for Practical and Comparable Interventions

Considering the findings of this study there are a number of implications for future interventions similar to P/PM 150 that will be discussed, and there is feedback for the Ministry of Education and Boards of Education.

The introduction of this thesis discussed that the comprehensive school health approach was comprised of four pillars for action: (1) creating a social and physical environment that is conducive to a child’s health; (2) providing health education to students regarding healthy eating; (3) establishing partnerships with the community to access useful services; and, (4) establishing policies that support health (Joint Consortium for School Health, 2012). P/PM 150 is a policy that is perceived by most food services to support good health. However, as mentioned at the beginning of this thesis, for the policy to function as intended the other three pillars of the

comprehensive school health approach should be addressed by policy makers. As previously discussed, education was one of the main facilitators mentioned by food services, and is a pillar in the comprehensive school health approach. This included educating parents and students about cooking, nutrition, and the policy. The factor that stood out the most was the lack of awareness parents had of the policy. One food service commented on the excessive time they took responding to parents' questions and correcting their perception that the policy was introduced by food services. In fact, this was a burden on food services and was not their responsibility. Hence, to ease the implementation of policies like P/PM 150 it is recommended that an educational component is included. Primarily educating school staff, parents, and students on the policy itself (its purpose and the restrictions involved), and then educating them on healthy eating and food preparation so that they are more accepting of the policy. Manske and colleagues (2009), in the 2007-2008 School Health Environment (SHES) Survey, also proposed modifying the curriculum to include more education on P/PM 150, healthy eating, and food preparation as this would improve healthy eating amongst students. Having cooking classes, trips to farms and grocery stores, and having a school food garden can all increase student education on healthy eating and, thus, improve their eating habits (Manske et al., 2009). In addition, the Healthy Eating at School web page, mentioned later in this thesis, provides many services and resources revolving around the Comprehensive School Framework. Recommendations on how to educate students on healthy eating are provided, including guidelines on how to start School Food Gardens. These services should be taken advantage of by food services and schools.

Educating students, parents, and schools staff can also help with the first pillar, creating a social and physical environment that is conducive to a child's health, which is only partially addressed by P/PM 150. Within schools only compliant foods can be sold; however, outside of

schools and in children's' homes the physical environment is not controlled (by government) and, hence, may be less conducive to children's health. Children's social environment can include the eating habits of their peers, family, and school staff, which is why these different groups all need to be educated regarding healthy eating habits, and staff and students need to be involved in developing menus. Being surrounded by others concerned with healthy eating a child would find it easier to eat healthy themselves, and also find it easier to accept P/PM 150.

The final pillar, 'Partnerships and Services', was not mentioned by food services as an area that needed action. Many food services already used many resources in order to successfully implement that policy, including using nutritionists to create new compliant products, and asking parents and students for feedback.

Another important implication revealed in the results is the issue of accountability. When introducing a policy, such as P/PM 150, there should be a way of holding those involved accountable. This is important as it prevents an uneven playing field, antagonism between companies, and reduced compliance over time. Policy makers should determine who is responsible for holding food services accountable, and how often they plan on checking up on them. Food services generally did want others to be held accountable, however, mentioned that it would annoy them if this happened too often. Currently, only school boards are responsible for holding food services accountable. It is unclear if food services simply claim that they are compliant when they are not. No one is holding schools/school boards accountable.

Nutrition for Learning is a non-profit food service organization that serves elementary and high schools in the Waterloo Region and does not charge for the foods they administer; therefore, they do not have to follow the policy. The Ontario Ministry of Children and Youth Services, amongst other donors, fund this service. None of the food services interviewed

mentioned this as unfair competition or an obstacle to them successfully implementing the policy. This may be because there is a lack of awareness amongst food services regarding Nutrition for Learning, or because Nutrition for Learning is only offered to students who come to school without breakfast or lunch (little impact on food services serving schools). Despite not having to comply with the policy, according to the Nutrition for Learning website, the organization does try to serve healthy foods as there are the Student Nutrition Program standards, created by the Ministry of Children and Youth Services, that need to be followed (Nutrition for Learning, 2012). These standards are as stringent as P/PM 150, and are similar to P/PM 150's standards as they are divided in the same categories (excluding 'Mixed Dishes) and restrict the same macronutrients and vitamins as P/PM 150 does (Ministry of Children and Youth Services, 2011).

Policy makers should also be aware of the lead in time needed to prepare for such a policy. Although most food services were able to prepare in time some were not able to and, therefore, lost business. Others had a difficult time competing with food services that were aware of the policy before them, or did not have to make changes to their menu to comply and did not need the lead in time. Giving more time for preparation and ensuring all food services involved are aware of the policy would ensure that policies' like P/PM 150 would be more readily accepted and easier to implement. In addition, studies have found that nutrition committees in schools have had a positive impact on the implementation of school food and beverage policies in British Columbia (Rideout, 2007; Ministry of Education & Ministry of Health, 2008). Although these studies were conducted in schools, many food services have created or consulted with a nutrition committee. It would be beneficial for food services to consider having a nutrition committee if they do not already have one.



A great concern for food services, especially those serving secondary schools, was the accessibility of fast food restaurants to high school students. A food service recommended that policy makers enforce a policy similar to P/PM 150 on food services within walking distance from high schools. Restrictions on food services in close proximity to high schools would certainly help with the policy's implementation. Ultimately, the policy is not achieving one of its goals if there are only restrictions on school cafeteria and vending sales because high school students are leaving campus to eat or simply bringing food from home. Therefore, either having different restrictions for high school and/or changing bylaws to prevent the placement or limiting the density of food outlets in close proximity to schools may resolve this issue. This recommendation is supported by a study conducted in Southern Ontario, which concluded that efforts to restrict access to fast food restaurants, including restrictions on leaving school property, should be considered (Woodruff, Hanning, & McGoldrick, 2010). The study found that students ate more 'unhealthy foods' at fast food outlets, and 46% of participants consumed sugar-sweetened beverages, despite P/PM 150, as they appeared to be brought from outside of school (Woodruff, Hanning, & McGoldrick, 2010).

Finally, it is recommended that schools and food services take advantage of resources such as the Nutrition Tools for Schools (NTS) program. The NTS program was designed specifically to assist with the implementation of P/PM 150 in schools (Nutrition Tools for Schools, n.d.). As part of the Healthy School Nutrition Environment, food services are indirectly addressed in the 'Healthy Physical Environment' category, which focuses on the food sold in the school. The resources on this web page include:

- Healthy fundraising ideas;

- Healthy choices for vending machines, tuck shops, classroom rewards, classroom celebrations etc.;
- How to be a positive role model;
- How to promote positive nutrition messages.

#### 5.4. Implications for Future Research

This research examined perceptions of food service providers and suggests a number of areas, including the experiences of schools, students, and parents, that can be examined further in Ontario in order to gain a better understanding of stakeholders' experiences with P/PM 150. In addition, delving deeper into food services experience would be beneficial. For example, adding a quantitative component to the study in which food services' actual compliance to the policy is observed. This quantitative component could consist of an environmental scan conducted by the researcher, in which the researcher visits each food service and fills out a survey regarding the compliance of the foods sold. Afterwards, food service can be rated on their compliance (0 – Not compliant, 1 – Partially compliant, 2- Fully Compliant), and these ratings can be compared with the food services' attributes and perceptions of the policy. That said many food services commented on schools' experiences, however, without original data from schools or the school board one cannot confirm that the food services' comments are correct. From the interviews, it was evident that many schools were having problems with the policy, especially secondary schools. Therefore, by conducting a study on the experience of school administrators with the implementation of P/PM 150 one would get a fuller understanding of the impact P/PM 150 has on the stakeholders involved.

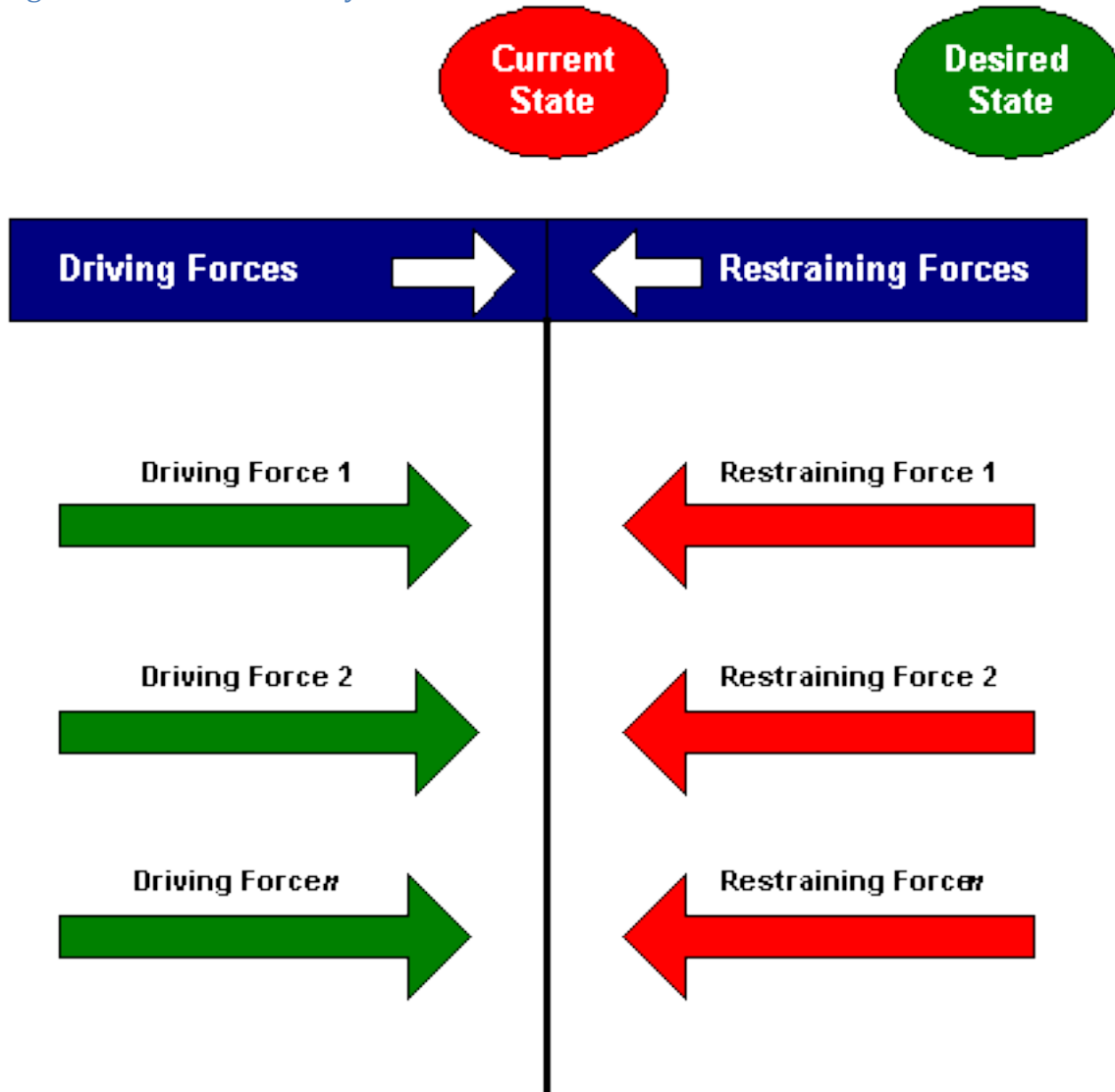
Determining the number of food outlets within a specific radius of schools using a Geographic Information System (GIS) may help explain why both secondary schools and food services that serve secondary schools have negative experiences with the policy, as compared with elementary schools. The use of this system may confirm food services' suspicions on why food services serving secondary schools have more difficulties implementing the policy than those serving elementary schools. If the presence of food outlets in close proximity to secondary schools affects the implementation of P/PM 150 negatively, the enforcement of restrictions on food services in close proximity to high schools or creating zoning laws to restrict fast food services from locating themselves 'near' schools, and/or limiting the density of fast food restaurants near schools may be necessary. Communities across America have successfully used zoning laws to exclude fast food restaurants from specific areas (Spacht, 2009). Spacht (2009) suggests the local governments provide multiple reasons for the implementation of zoning laws to avoid 'constitution criticism' (e.g. aesthetic reasons). Since research shows that there is an association between the implementation of zoning law and obesity, there is an incentive for local government to introduce zoning laws that restrict fast food restaurants from being 'near' schools (Spacht, 2009; Hodge, 2006). In addition to zoning laws, governments can apply taxes on unhealthy foods as an incentive for the population to purchase healthier options (Sacks, Swinburn, & Lawrence, 2009; Hodge, 2006).

Some food services mentioned confusion amongst parents as to who introduced the policy, why it was mandatory on food services to follow the policy, why the policy was put into place, and what constituted adherence to the policy and what did not. A controlled study looking at parent and/or student knowledge of healthy eating and acceptance of the policy would be an

interesting addition to this study, as one of the main facilitators recommended by food services is education for parents and students regarding healthy eating.

SWOT analysis was an informative analysis method, bringing attention to key areas that influence the implementation of P/PM 150. Using alternative formats could complement this analysis. For example, using Force Field Analysis will increase confidence in the results. Force Field Analysis assesses the different forces that act upon any organizational change including drivers (forces in support of the change) and resistors (forces working against the change) of change (Ramalingam, 2006). Using triangulation by including a quantitative component and a different method of qualitative analysis will ensure that the weaknesses of SWOT analysis are compensated for.

Figure 3: Force Field Analysis



(Jay Deragon, 2007)

### 5.5. Overall Influence of P/PM 150

As mentioned in the beginning of this thesis, there is excessive consumption of the ‘wrong level’ of nutrients in youth across Canada (Health Canada, 2012). Unfortunately, youth that do not have healthy eating habits are likely to have poorer health habits as they age (Rose, 2001).

These poor health habits during childhood are associated with illnesses like type 2 diabetes, cancer, and cardiovascular disease (Caterson, Franklin, & Golditz, 2004). However, the lifestyle changes addressed by P/PM 150 may decrease the risk of chronic disease in adulthood. P/PM 150 functions in an ideal setting for the promotion of healthy eating habits in youth, as the infrastructure in schools is already established. Schools accommodate youth between the ages of 5 and 18 for the majority of the day, are a place of learning, and can improve health during a ‘critical period’ of growth (Veugelers & Fitzgerald, 2005). Therefore, if implemented correctly, P/PM 150 can have a positive long-term effect on youth health, and is highly valuable.

Overall, the research indicated that although there are positive experiences resulting from the implementation of P/PM 150, there are also many areas in which there were perceived negative experiences. Food services perceived that the policy is able to reach its goals and have a positive nutritional effect on elementary school students, however secondary school students are not experiencing the same nutritional effect. After the implementation of the policy, according to food services, high school cafeterias experienced a huge reduction in sales. Students either brought food from home or ate elsewhere. For many food services, the assumption was that the students were eating at fast food restaurants in the vicinity of their school. If this is true, high school students’ nutrition is either the same or worse after the implementation of policy. Furthermore, some food services mentioned that food sales at high schools were a source of fundraising for extracurricular clubs. Without these sales food services predicted that schools struggle to maintain these programs.

On a positive note, according to the food services interviewed, P/PM 150 made schools, parents, and students more aware of what healthy meals look like. Therefore, even though the majority of students do not buy food on campus, as students and parents become more familiar

with the policy, it may provide insight into what healthy foods students can bring from home or from nearby restaurants (Temple et al., 2006). In addition, it is expected that elementary school students will start to perceive such a healthy lifestyle as the norm and follow through when they go to high school. It is expected that eventually high schools will have a full student body that grew up with the policy in place. Hence, these students will be more accepting of the policy and may find compliant foods more appealing than students that had to experience the change from no policy to the implementation of P/PM 150. This was the case in the Catholic school board when the Food and Nutrition Policy, similar to P/PM 150, was put into place (Miedema, 2013). Therefore, although the implementation of P/PM 150 is difficult for certain food services, the future is certainly promising.

#### 5.6. Strengths and Limitations

Conducting a qualitative analysis allows the researcher to collect data based on how the participants interpret P/PM 150 and not how the researcher perceives it to be. When conducting a survey the researcher can impose their ideologies on the respondent by asking questions within the researcher's scope of knowledge, whereas qualitative interviews allow for the respondent to intervene and contribute their own knowledge, perceptions, and ideologies to the research. In addition, qualitative research allows for researchers to look at a small number of cases in great detail. Providing 'thick descriptions' allows the researcher and the readers of the data to really understand the participants' feelings, and allows the reader to determine whether the responses would apply in different contexts (Creswell & Miller, 2000).

Strengths of conducting face-to-face interviews include data collection in person. Since the physical environment can be observed, such as the participants' body language, direct

observations will be known. However, the participant may be more candid in their responses and may feel more comfortable if the interview was conducted over the phone. In addition, phone interviews allowed the researcher to interview food services contacts that are not in Waterloo Region. In this study both methods were used when conducting interviews depending on the availability and location of the participant. By using both methods the strengths of one method compensated for the weaknesses in the other method. Food services that were too far to meet, or were busy were still able to participate in the study, and food services that participated in the face-to-face interview brought the researcher's attention to the fact that some participants were pulling up the policy documents when asked about it's restrictions. It would have been ideal for each method to be used an equal number of times throughout the interview process, however, most participants were more comfortable participating in phone interviews.

Response rates were optimized in this study, as participants were contacted a number of times by email and phone, and interviews were scheduled during condensed time periods with reminders being sent prior (Dillman, Smyth, & Christian, 2009)

Besides the strengths, a weakness of this research study is the population sampled. Since the recruitment draws only from Waterloo Region the results may not be generalizable to other areas, especially if the policies implemented are not similar to P/PM 150, or if schools in specific areas are not serviced by external catering companies or food services.



## References

- Anderson, J.R., Reder, L.M., Simon, H.A. (1996). Situated learning and education. *Educational Researcher*. 25(4), 5–11.
- Austin, B.S., Melly, S.J., Sanchez, B.N., Patel A., Buka, S., & Gortmaker, S.L. (2005). Clustering of fast-food restaurants around schools: A novel application of spatial statistics to the study of food environments. *American Journal of Public Health*, 95(9), 1575-1581.
- Berg, B.L. (2009). *Qualitative research methods for the social sciences*. Seventh Edition. Allyn & Bacon: Toronto.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101.
- Buchecker, M., & Hunziker, M. (2006). The effect of consensus building processes on regional collaboration. *Agricultural Economics Review*, 7(1), 72-83.
- Caterson, I. D., Franklin, J., & Colditz, G. A. (2004). Economic costs of obesity. *Handbook of Obesity*. New York, NY: Marcel Dekker Inc, 149-156.
- Centers for Disease Control and Prevention. (2013). Coordinated school health, retrieved 20/09/2013, from <http://www.cdc.gov/HealthyYouth/cshp/>
- Centers for Disease Control and Prevention. (1996). Guidelines for School Health Programs to Promote Lifelong Healthy Eating. *Morbidity and Mortality Weekly Report*, 45 (RR-9), 1-33. Retrieved 24/09/2013, from <http://www.cdc.gov/mmwr/preview/mmwrhtml/00042446.htm>

- Church, D., Gubbels, M., Russell, E., Wong, K., & Manske, M. (2011). Ontario youth health situational assessment: Tobacco use, physical activity & healthy eating. University of Waterloo: Propel Centre for Population Health Impact. Retrieved 24/09/2013, from [http://www.propel.uwaterloo.ca/\\_global/images/fck\\_uploaded/Ontario%20Youth%20Health%20Situational%20Assessment%202011\\_docx.pdf](http://www.propel.uwaterloo.ca/_global/images/fck_uploaded/Ontario%20Youth%20Health%20Situational%20Assessment%202011_docx.pdf)
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, Calif.: Sage Publications.
- Creswell, J. W., & Miller, D. L. (2000). Determining validity in qualitative inquiry. *Theory into practice*, 39(3), 124-130.
- Deragon, J. (2007). *Force Field Analysis Factors*. Retrieved 30/07/2013, from [http://www.relationship-economy.com/?attachment\\_id=358](http://www.relationship-economy.com/?attachment_id=358)
- Dey, I. (2004). *Grounded Theory*. In C. Seale, G. Gobo, J.F. Gubrium & D. Silverman (Eds.), *Qualitative research practice* (pp. 80-93). London: Sage Publications.
- Dillman, D.A., Smyth, J.D., Christian, L.M. (2009). *Internet, mail, and mixed-mode surveys: The tailored design method*. Third Edition. John Wiley and Sons Inc.: New Jersey.
- Dorcey, A., Doney, L., & Reuggeberg, H. (1994). Public Involvement in Government Decision-Making: Choosing the Right Model, B.C. Round Table on the Environment and the Economy, Victoria.

- Downs, S. M., Farmer, A., Quintanilha, M., Berry, T. R., Mager, D. R., Willows, N. D., et al. (2012). From paper to practice: Barriers to adopting nutrition guidelines in schools. *Journal of Nutrition Education and Behavior*, 44(2), 114-122.
- Doyle, Y.G., Furey, A., & Flowers, J. (2006). Sick individuals and sick populations: 20 years later. *Journal of Epidemiology and Community Health*, 60(5), 396–398.
- Garriguet, D. (2004). *Overview of Canadians' eating habits*. Retrieved 25/09/2013, from <http://publications.gc.ca/Collection/Statcan/82-620-M/82-620-MIE2006002.pdf>
- Hay, G. J., & Castilla, G. (2006, July). Object-based image analysis: Strengths, weaknesses, opportunities and threats (SWOT). In *Proc. 1st Int. Conf. OBIA*.
- He, M., Tucker, P., Irwin, J., Gilliland, J., Larsen, K., & Hess, P. (2012). Obesogenic neighbourhoods: the impact of neighbourhood restaurants and convenience stores on adolescents' food consumption behaviours. *Public Health Nutrition*, 1(1), 1-9.
- Health Canada. (2012a). *Do Canadian adolescents meet their nutrient requirements through food intake alone?*. Retrieved 8/23/2012, from <http://www.hc-sc.gc.ca/fn-an/surveill/nutrition/commun/art-nutr-adol-eng.php#a32>
- Health Canada. (2012b). *Do Canadian children meet their nutrient requirements through food intake alone?*. Retrieved 8/23/2012, from <http://www.hc-sc.gc.ca/fn-an/surveill/nutrition/commun/art-nutr-child-enf-eng.php>
- Healthy Eating at School. (n.d.). *Resources*. Retrieved 07/31/2013, from <http://healthyeatingatschool.ca/resources>

- Hodge, J. (2006). *The use of zoning to restrict access to fast food outlets: A potential strategy to reduce obesity* [PowerPoint slides]. Retrieved 23/09/2013, from <http://www.publichealthlaw.net/Zoning%20and%20Fast%20Food%20-%20Hodge.ppt>
- Howitt, D., & Cramer, D. (2010) *Intro to Research methods in psychology (2nd Ed)*. Essex, England: Pearson Education Inc. Chapter 21: Thematic Analysis.
- Hung, H. C., Joshipura, K. J., Jiang, R., Hu, F. B., Hunter, D., Smith-Warner, S. A., Golditz, G. A., Rosner, B., Spielman, D., & Willett, W. C. (2004). Fruit and vegetable intake and risk of major chronic disease. *Journal of the National Cancer Institute*, 96(21), 1577-1584.
- Jackson, L.S. (2002). Consensus processes in land use planning in British Columbia: the nature of success. *In: Progress in Planning*, 57(1), 1-90.
- Joint Consortium for School Health. (2013). *Comprehensive School Health Framework*. Retrieved 9/02/2012, from <http://www.jcsh-cces.ca/>
- Kelly, M. P. (2004). *The evidence of effectiveness of public health interventions—and the implications*. Retrieved 24/09/2013, from [http://www.nice.org.uk/nicemedia/documents/evidence\\_effective\\_briefing\\_paper.pdf](http://www.nice.org.uk/nicemedia/documents/evidence_effective_briefing_paper.pdf)
- Kroeker, C., Manske, S., Beyers, J., & Murkin, E. (2008). *Results from the provincial implementation of the 2007-2008 school health environment survey. Final report submitted to the Ontario Ministry of Health Promotion*. University of Waterloo: Waterloo.
- Kvale, S. (1996). *InterViews: An introduction to qualitative research interviewing*. Thousand Oaks, California: Sage Publications.

- Lake, A. A., Mathers, J. C., Rugg-Gunn, A. J. & Adamson, A. J. (2006). Longitudinal change in food habits between adolescence (11-12 years) and adulthood (32-33 years): The ASH30 study. *Journal of Public Health*, 28(1), 10-16.
- Lombard, M., Snyder-Duch, J. and Bracken, C. C. (2002). Content analysis in mass communication: Assessment and reporting of intercoder reliability. *Human Communication Research*, 28, 587–604.
- MacLellan, D., Holland, A., Taylor, J., McKenna, M., & Hernandez, K. (2010). Implementing school nutrition policy: Student and parent perspectives. *Canadian Journal of Dietetic Practice and Research: A Publication of Dietitians of Canada*, 71(4), 172-177.
- Manske, S., Kroeker, C., Murkin, E., & Beyers, J. (2009). *Implications and Recommendations from the 2007-2008 School Health Environment Survey*. Retrieved 08/06/2013 from [http://www.shapes.uwaterloo.ca/\\_global/documents/SHES07-08\\_Implications\\_Recommendations\\_09-03-02.pdf](http://www.shapes.uwaterloo.ca/_global/documents/SHES07-08_Implications_Recommendations_09-03-02.pdf)
- Miedema, J.M., & Wdowiak, H. (2013). *Implementation of the Waterloo Catholic District School Board Elementary Food and Nutrition Policy: An Evaluation*. Retrieved 20/09/2013, from [http://chd.region.waterloo.on.ca/en/healthyLivingHealthProtection/resources/School\\_Nutrition\\_Policy\\_Process\\_Evaluation.pdf](http://chd.region.waterloo.on.ca/en/healthyLivingHealthProtection/resources/School_Nutrition_Policy_Process_Evaluation.pdf)
- Ministry of Children and Youth Services. (2011). Student Nutrition Program: Nutritional Guidelines. Retrieved 24/09/2013, from [http://www.children.gov.on.ca/htdocs/English/topics/schoolsnacks/nutrition\\_guidelines.aspx](http://www.children.gov.on.ca/htdocs/English/topics/schoolsnacks/nutrition_guidelines.aspx)

- Ministry of Education and Ministry of Health. (2008). *School Food Sales and Policies Provincial Report II*. Retrieved 07/31/2013 from [http://healthyeatingatschool.ca/uploads/sales\\_policy\\_feb08.pdf](http://healthyeatingatschool.ca/uploads/sales_policy_feb08.pdf)
- Moskal, B.M., & Leydens, J.A. (2000). Scoring rubric development: Validity and reliability. *Practical Assessment, Research & Evaluation*, 7(10). Retrieved 24/09/2013, from <http://PAREonline.net/getvn.asp?v=7&n=10>
- Mullally, M.L., Taylor, J.P., Kuhle, S., Bryanton, J., Hernandez, K.J., McKenna, M.L., Gray, R.J., Veugelers, P.J. (2010) A province-wide school nutrition policy and food consumption in elementary school children on Prince Edward Island. *Canadian Journal of Public Health*, 101(1), 40-3.
- Murray, N.D., Low, B.J., Hollis, C., Cross, A., Davis, S. (2007). Coordinated school health programs and academic achievement: a systematic review of the literature. *Journal of School Health*, 77 (9), 589-599.
- Nutrition for Learning. (2012). *Our Programs*. Retrieved 08/05/2013, from <http://www.nutritionforlearning.ca/our-programs/>
- Nutrition Tools for Schools. (n.d). *What is NTS?*. Retrieved 24/09/2013, from <http://nutritiontoolsforschools.ca/pages/what-is-nts>
- Olstad, D.L., Raine, K.D., McCargar, L.J. (2013). Adopting and implementing nutrition guidelines in recreational facilities: tensions between public health and corporate profitability. *Public Health Nutrition*, 16(5), 815-23.

- Ontario Ministry of Education. (2010). Policy/Program Memorandum No. 150. Retrieved 23/09/2013, from <http://www.edu.gov.on.ca/extra/eng/ppm/150.html>
- Pan American Health Organization (2011). Population and Individual Approaches to the Prevention and Management of Diabetes and Obesity. Washington, DC: PAHO.
- Pan Canadian Joint Consortium for School Health. (2010). Stakeholder engagement for improved school policy: Development and implementation. *Canadian Journal of Public Health*, 101(2), S20-3.
- Patton, M. (1990). *Qualitative evaluation and research methods*. Beverly Hills, California: Sage Publications (pp. 169-186).
- Patton, M.Q. (2002). *Qualitative research and evaluation methods*. Thousand Oaks, California: Sage Publications.
- Patton , M.Q. (2003). *Qualitative evaluation checklist*. Retrieved 20/09/2013, from <http://www.wmich.edu/evalctr/checklists/qec.pdf>
- Propel Centre for Population Health Impact. (2012). 2010/2011 Youth Smoking Survey: Results Profile for Ontario. Waterloo (ON): University of Waterloo, 1-21. Retrieved 24/09/2013, from [http://www.yss.uwaterloo.ca/results/yss10\\_EN\\_Provincial%20Report\\_Ontario\\_20120514.pdf](http://www.yss.uwaterloo.ca/results/yss10_EN_Provincial%20Report_Ontario_20120514.pdf)
- QRS International. (2010). *Run a Coding Comparison Query*. Retrieved from [http://help-nv9-en.qsrinternational.com/nv9\\_help.htm#procedures/run\\_a\\_coding\\_comparison\\_query.htm](http://help-nv9-en.qsrinternational.com/nv9_help.htm#procedures/run_a_coding_comparison_query.htm))
- Rahim, M.A. (2002). Toward a theory of managing organizational conflict. *The International Journal of Conflict Management*. 13(3), 206-235.

- Ramalingam, B (2006). *Tools for knowledge and learning: A Guide for Development and Humanitarian Organisations*. Retrieved from website: <http://www.odi.org.uk/resources/docs/188.pdf>
- Rideout, K., Levy-Milne, R., Martin, C., Ostry, A.S. (2007). Food sales outlets, food availability, and the extent of nutrition policy implementation in schools in British Columbia. *Can J Public Health*, 98(4), 246-50.
- Roblin, L. (2007). Childhood obesity: food, nutrient, and eating-habit trends and influences. *Applied Physiology, Nutrition, and Metabolism*, 32(4), 635-645.
- Rose, G. (2001). Sick individuals and sick populations. 1985. *Bulletin of the World Health Organization*, 79(10), 990-996.
- Rose, G (1981). Strategy of prevention: Lessons from cardiovascular disease. *British Medical Journal (Clinical Research Ed)*, 282(6279), 1847–1851.
- Sacks, G., Swinburn, B., Lawrence, M. (2009). Obesity policy action framework and analysis grids for a comprehensive policy approach to reducing obesity. *Obes Rev.* 10(1), 76-86.
- Saskatchewan Health. (1999). Population health promotion practice in the primary prevention of Type 2 Diabetes. Retrieved 20/09/2013, from <http://www.health.gov.sk.ca/type2-diabetes-prevention>
- Smith, D. (2010). *Policies in schools and school boards in Canada which encourage the availability of healthy and/or local foods and the factors that influence their implementation*. Retrieved 24/09/2013, from <http://www.justfood.ca/foodforall/wp-content/uploads/documents/School%20Food%20Policies%20in%20Canada.pdf>



Spacht, A.C. (2009). The zoning diet: Using restrictive zoning to shrink American waistlines.

*Notre Dame Law Review*. 85(1), 391-418

Statistics Canada (2009). Do Canadian Children Meet their Nutrient Requirements through Food

Intake Alone? Retrieved 23/09/2013, from [http://www.hc-](http://www.hc-sc.gc.ca/fnan/surveill/nutrition/commun/art-nutr-child-enf-eng.php)

[sc.gc.ca/fnan/surveill/nutrition/commun/art-nutr-child-enf-eng.php](http://www.hc-sc.gc.ca/fnan/surveill/nutrition/commun/art-nutr-child-enf-eng.php).

Stewart-Brown, S. (2006). What is the evidence on school health promotion in improving health

or preventing disease and, specifically, what is the effectiveness of the health promoting

schools approach?. Retrieved 20/09/2013, from

<http://www.euro.who.int/document/e88185.pdf>

Storey, M.M., Nanney, M.S., & Schwartz, M.B. (2009). Schools and obesity prevention:

Creating school environments and policies to promote healthy eating and physical activity.

*The Milbank Quarterly*, 87(1), 72.

Story, M., Neumark-Sztainer, D., & French, S. (2002) Individual and environmental influences

on adolescent eating behaviors. *Journal of the American Dietetic Association*, 102(3), S40-

S51.

Strenberg, R.J., Horvath, J.A. (1999). *Tacit Knowledge in Professional Practice: Researcher and*

*Practitioner Perspectives*. Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc.,

Publishers.

Temple, N.J., Steyn, N.P., Myburgh, N.G., & Nel, J.H. (2006). Food items consumed by

students attending schools in different socioeconomic areas in Cape Town, South Africa.

*Nutrition*, 22(3), 252-258.

- Thomas, H. (2006). Obesity prevention programs for children and youth: why are their results so modest? *Health Education Research*, 21(6), 783-795.
- Thomas H, Ciliska D, Micucci S, et al. (2004) Effectiveness of Physical Activity Enhancement and Obesity Prevention Programs in Children and Youth. Retrieved 20/09/2013, from [http://www.ehp.ca/PDF/2004\\_HWR.pdf](http://www.ehp.ca/PDF/2004_HWR.pdf)
- Tremblay, M.S., Katzmarzyk, P.T., Willms, J.D. (2002). Temporal trends in overweight and obesity in Canada, 1981–1996. *International Journal of Obesity*, 26, 538-43.
- Veugelers, P.J., & Fitzgerald, A.L. (2005). Effectiveness of School Programs in Preventing Childhood Obesity: A Multilevel Comparison. *American Journal of Public Health*, 95(3), 432-435.
- Viner, R. M., & Barker, M. (2005). Young people's health: the need for action. *BMJ: British Medical Journal*, 330(7496), 901-3.
- Williams, C. (2013). *Management (7Ed)*. Stamford, Connecticut: Cengage Learning Publishers.

**APPENDIX A: Policy/Program Memorandum No. 150**

---

<b>Date of Issue:</b>	October 4, 2010	<b>Effective:</b>	Until revoked or modified
<b>Subject:</b>	SCHOOL FOOD AND BEVERAGE POLICY		
<b>Application:</b>	Directors of Education Supervisory Officers and Secretary-Treasurers of School Authorities Principals of Elementary Schools Principals of Secondary Schools Principals of Provincial and Demonstration Schools		
<b>Reference:</b>	This memorandum replaces Policy/Program Memorandum No. 150, January 15, 2010.		

---

## INTRODUCTION

The Ontario government is committed to making schools healthier places for students in order to establish the conditions needed to realize the potential of all students. A healthy school environment enhances student learning and success, and enhances students' social and emotional well-being. Schools have an important role to play in helping students lead healthier lives, including teaching students the skills to make healthy choices and reinforcing those lessons through school practices.

The purpose of this memorandum is to set out nutrition standards for food and beverages sold in publicly funded elementary and secondary schools in Ontario.

## APPLICATION

School boards<sup>1</sup> are required to ensure that all food and beverages sold on school premises for school purposes meet the requirements of this memorandum, including the nutrition standards set out in the Appendix to this memorandum, by September 1, 2011. The nutrition standards apply to all food and beverages sold in all venues (e.g., cafeterias, vending machines, tuck shops), through all programs (e.g., catered lunch programs), and at all events (e.g., bake sales, sports events).

The standards do not apply to food and beverages that are:

- offered in schools to students at no cost;
- brought from home or purchased off school premises and are not for resale in schools;
- available for purchase during field trips off school premises;
- sold in schools for non-school purposes (e.g., sold by an outside organization that is using the gymnasium after school hours for a non-school-related event);

---

1. In this memorandum, *school board(s)* and *board(s)* refer to district school boards and school authorities.

- sold for fundraising activities that occur off school premises;
- sold in staff rooms.

#### LEGISLATIVE AUTHORITY

Paragraphs 29.3 and 29.4 of subsection 8(1) of the Education Act provide the Minister of Education with the authority to establish a policy with respect to nutrition standards for food and beverages and for any ingredient contained in food and beverages provided on school premises or in connection with a school-related activity, and to require school boards to comply with the policy.

#### RATIONALE FOR A SCHOOL FOOD AND BEVERAGE POLICY

The school food and beverage policy contributes to improved education and health outcomes for all students. Research shows that “health and education success are intertwined: schools cannot achieve their primary mission of education if students are not healthy”<sup>2</sup> and that “healthy eating patterns in childhood and adolescence promote optimal childhood health, growth, and intellectual development”.<sup>3</sup>

The school environment profoundly influences students’ attitudes, preferences, and behaviours. Research also shows that when nutritionally inadequate food and beverages are available and promoted at school every day, even along with healthier food and beverages, it becomes increasingly difficult for students to have a healthy diet.<sup>4</sup>

The implementation of the school food and beverage policy in Ontario’s publicly funded schools will contribute to reducing students’ risk of developing serious, chronic diseases, such as heart disease, type 2 diabetes, and certain types of cancer.

The school food and beverage policy constitutes a comprehensive approach to the sale of food and beverages in schools province-wide. The implementation of this policy is another important step in creating healthier schools in Ontario.<sup>5</sup> It also reinforces the knowledge, skills, and attitudes regarding healthy eating that are developed through the various subjects and disciplines in the Ontario curriculum.

---

2. M. M. Storey, M. S. Nanney, and M. B. Schwartz, “Schools and Obesity Prevention: Creating School Environments and Policies to Promote Healthy Eating and Physical Activity”, *The Milbank Quarterly*, 87(1), (2009), p. 72.

3. Centers for Disease Control and Prevention, *Guidelines for School Health Programs to Promote Lifelong Healthy Eating*, MMWR 1996;45 (No. RR-9), p. 1.

4. Dietitians of Canada, “School Food and Nutrition Recommendations for Ontario Ministry of Education Regarding Snacks and Beverages Dispensed by Vending Machines”, p. 3, published with Ontario Ministry of Education, Policy/Program Memorandum No. 135, “Healthy Foods and Beverages in Elementary School Vending Machines”, October 20, 2004.

5. For further information, see Foundations for a Healthy School, at [www.ontario.ca/healthyschools](http://www.ontario.ca/healthyschools).

## NUTRITION STANDARDS

The nutrition standards embody the principles of healthy eating outlined in Canada's Food Guide, and are intended to ensure that the food and beverages sold in schools contribute to students' healthy growth and development. The nutrition standards for food and beverages are set out within the following two sections:

**Nutrition Standards for Food.** Food is divided into "Vegetables and Fruit", "Grain Products", "Milk and Alternatives", and "Meat and Alternatives", following Canada's Food Guide. There are also "Mixed Dishes", for products that contain more than one major ingredient (e.g., pizza, pasta, soup, salads, and sandwiches), and "Miscellaneous Items", for items that are to be used in limited amounts (e.g., condiments, sauces, dips, oils, dressings) and for confectionery, which is not permitted for sale (e.g., candy, chocolate).

**Nutrition Standards for Beverages.** Standards for beverages are provided separately for elementary schools and secondary schools.

The above two sections outline nutrition criteria<sup>6</sup> that food and beverages must meet in order to be sold in schools. The nutrition criteria are provided in the following categories:

**Sell Most ( $\geq 80\%$ ).** Products in this category are the healthiest options and generally have higher levels of essential nutrients and lower amounts of fat, sugar, and/or sodium. They must make up *at least 80 per cent* of all food choices<sup>7</sup> that are available for sale in all venues, through all programs, and at all events. The same requirement applies to beverage choices.<sup>8</sup>

**Sell Less ( $\leq 20\%$ ).** Products in this category may have slightly higher amounts of fat, sugar, and/or sodium than food and beverages in the "Sell Most" category. They must make up *no more than 20 per cent* of all food choices that are available for sale in all venues, through all programs, and at all events. The same requirement applies to beverage choices.

**Not Permitted for Sale.** Products in this category generally contain few or no essential nutrients and/or contain high amounts of fat, sugar, and/or sodium (e.g., deep-fried and other fried foods, confectionery). Food and beverages in this category may not be sold in schools.

Often a type of food or beverage (e.g., bread, meat, cheese) will fit in all three of the above categories, depending on its nutritional value. To determine whether a specific product may be sold in schools, it is

---

6. The nutrition criteria are based on scientific research, on the Canadian Food Inspection Agency's *Guide to Labelling and Advertising* (<http://www.inspection.gc.ca/english/fssa/labeti/guide/toce.shtml>), on a cross-jurisdiction scan, and on market research on available food and beverage products.

7. The following are examples of food choices: a bran muffin is one food choice and a banana muffin is another food choice; an apple is one food choice and an orange is another food choice.

8. The following are examples of beverage choices: plain milk is one beverage choice and chocolate milk is another beverage choice; orange juice is one beverage choice and apple juice is another beverage choice.

necessary to read the information on the food label – particularly the Nutrition Facts table and the ingredient list – and compare this information with the nutrition criteria.

Food should always be prepared in a healthy way – that is, using cooking methods that require little or no added fat or sodium, such as baking, barbecuing, boiling, broiling, grilling, microwaving, poaching, roasting, steaming, or stir-frying.

#### **EXEMPTION FOR SPECIAL-EVENT DAYS**

The school principal may designate up to ten days (or fewer, as determined by the school board) during the school year as special-event days on which food and beverages sold in schools would be exempt from the nutrition standards outlined in this memorandum. The school principal must consult with the school council prior to designating a day as a special-event day. School principals are encouraged to consult with their students in making these decisions.

Notwithstanding this exemption, on special-event days, schools are encouraged to sell food and beverages that meet the nutrition standards set out in this memorandum.

#### **ADDITIONAL REQUIREMENTS**

The following requirements must also be met:

- School boards must comply with Ontario Regulation 200/08, “Trans Fat Standards”, and any other applicable regulations made under the Education Act.
- Principals must take into consideration strategies developed under the school board’s policy on anaphylaxis to reduce the risk of exposure to anaphylactic causative agents.
- Food and beverages must be prepared, served, and stored in accordance with Regulation 562, “Food Premises”, as amended, made under the Health Protection and Promotion Act.
- School boards must ensure that students have access to drinking water during the school day.
- The diversity of students and staff must be taken into consideration in order to accommodate religious and/or cultural needs.

#### **PRACTICES FOR CONSIDERATION**

Boards and schools should take into consideration the following when food or beverages are sold or provided in schools:

- Offer, when available and where possible, food and beverages that are produced in Ontario.
- Be environmentally aware (e.g., reduce food waste, reuse containers, recycle food scraps).
- Avoid offering food or beverages as a reward or an incentive for good behaviour, achievement, or participation.

---

**IMPLEMENTATION AND MONITORING**

Any existing school board policies or guidelines related to food and beverages sold in schools must be in accordance with this memorandum. The ministry recognizes that there may be differences in approaches and implementation at the local level. School boards and schools are encouraged to continue to work with students, parents, school staff, community members, public health professionals, and food service providers to ensure that appropriate strategies are in place to implement this memorandum.

School boards are encouraged to consult with their board of health to implement the nutrition standards. Under Ontario Public Health Standards, 2008, boards of health have a mandate to work with school boards and schools on healthy eating in schools.

School boards are responsible for monitoring the implementation of this memorandum.

At the end of the 2010–11 school year, school boards will be required to attest that they will be in full compliance with this memorandum on September 1, 2011.

For more information on support that is available to assist with implementation, see [www.ontario.ca/healthyschools](http://www.ontario.ca/healthyschools).



**APPENDIX: NUTRITION STANDARDS FOR ONTARIO SCHOOLS**

Read the information on the food label – particularly the Nutrition Facts table and the ingredient list – and compare this information with the nutrition criteria outlined below in order to determine whether a food or beverage may be sold at the school.

Products in the “Sell Most” category must make up *at least 80 per cent* of all food choices and *at least 80 per cent* of all beverage choices that are available for sale in all venues, through all programs, and at all events on school premises.

Products in the “Sell Less” category must make up *no more than 20 per cent* of all food choices and *no more than 20 per cent* of all beverage choices that are available for sale in all venues, through all programs, and at all events on school premises.

**Nutrition Standards for Food**

All food sold in schools must meet the standards set out in Ontario Regulation 200/08, “Trans Fat Standards”, made under the Education Act.

**Vegetables and Fruit**

<ul style="list-style-type: none"> <li>• Compare the nutrition criteria below with the Nutrition Facts table and the ingredient list on the food label.</li> <li>• See the section “Nutrition Standards for Beverages” for the nutrition criteria for vegetable and fruit juices and juice blends.</li> <li>• Food should always be prepared in a healthy way – that is, using cooking methods that require little or no added fat or sodium, such as baking, barbecuing, boiling, broiling, grilling, microwaving, poaching, roasting, steaming, or stir-frying.</li> </ul>			
	<b>Sell Most (≥ 80%)</b>	<b>Sell Less (≤ 20%)</b>	<b>Not Permitted for Sale</b>
	<b>Nutrition Criteria</b>	<b>Nutrition Criteria</b>	<b>Nutrition Criteria</b>
<b>Fresh, Frozen, Canned, and Dried Vegetables and Fruit</b>	Vegetable or fruit is the first item on the ingredient list <b>and Fat: ≤ 3g</b> <b>and Sodium: ≤ 360mg</b>  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Fresh or frozen vegetables with little or no added salt</li> <li>• Fresh or frozen fruit with no added sugar</li> <li>• Canned vegetables</li> <li>• Canned fruit packed in juice or light syrup</li> <li>• Unsweetened apple sauce</li> <li>• Some low-fat frozen potato products, including French fries</li> <li>• Some dried fruit and 100% fruit leathers*</li> </ul>	Vegetable or fruit is the first item on the ingredient list <b>and Fat: ≤ 5g</b> <b>and Saturated fat: ≤ 2g</b> <b>and Sodium: ≤ 480mg</b>  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Some dried fruit and 100% fruit leathers</li> <li>• Lightly seasoned or sauced vegetables and fruit</li> <li>• Some prepared mixed vegetables</li> </ul>	Sugar** is the first item on the ingredient list <b>or Fat: &gt; 5g</b> <b>or Saturated fat: &gt; 2g</b> <b>or Sodium: &gt; 480mg</b>  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Vegetable and fruit products prepared with higher amounts of fat, sugar, and/or salt, including deep-fried vegetables</li> <li>• Some packaged frozen and deep-fried potato products, including hash browns and French fries</li> <li>• Some fruit snacks made with juice (e.g., gummies, fruit rolls)</li> </ul>

**Vegetables and Fruit (cont.)**

	Sell Most (≥ 80%) Nutrition Criteria	Sell Less (≤ 20%) Nutrition Criteria	Not Permitted for Sale Nutrition Criteria
<b>Canned Tomatoes and Tomato-Based Products</b>	Fat: ≤ 3g <b>and</b> Sodium: ≤ 480mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Some whole, crushed, or diced tomatoes</li> <li>• Some pasta sauce</li> </ul>		Fat: > 3g <b>or</b> Sodium: > 480mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Whole, crushed, or diced tomatoes that are higher in fat or sodium</li> <li>• Pasta sauce that is higher in fat or sodium</li> </ul>
<b>Vegetable and Fruit Chips</b>	Fat: ≤ 3g <b>and</b> Sodium: ≤ 240mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Some lower-fat, lower-sodium vegetable chips (e.g., potato, carrot)</li> <li>• Some lower-fat, lower-sodium fruit chips (e.g., banana, apple, pear)</li> </ul>	Fat: ≤ 5g <b>and</b> Saturated fat: ≤ 2g <b>and</b> Sodium: ≤ 480mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Some vegetable chips (e.g., potato, carrot)</li> <li>• Some fruit chips (e.g., banana, apple, pear)</li> </ul>	Fat: > 5g <b>or</b> Saturated fat: > 2g <b>or</b> Sodium: > 480mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Some vegetable chips that are higher in fat or sodium</li> <li>• Some fruit chips that are higher in fat or sodium</li> </ul>

\*Food high in sugars and starches (natural or added) can leave particles clinging to the teeth and put dental health at risk. Vegetable and fruit choices of particular concern include fruit leathers, dried fruit, and chips (potato or other). It is suggested that these foods be eaten only at meal times and that foods that clear quickly from the mouth be eaten at snack times, such as fresh (raw or cooked), canned, or frozen vegetables or fruit.

\*\*Look for other words for sugar, such as *glucose, fructose, sucrose, dextrose, dextrin, corn syrup, maple syrup, cane sugar, honey, and concentrated fruit juice.*

### Grain Products

<ul style="list-style-type: none"> <li>Compare the nutrition criteria below with the Nutrition Facts table and the ingredient list on the food label.</li> <li>Food should always be prepared in a healthy way – that is, using cooking methods that require little or no added fat or sodium, such as baking, barbequing, boiling, broiling, grilling, microwaving, poaching, roasting, steaming, or stir-frying.</li> </ul>			
	Sell Most (≥ 80%)	Sell Less (≤ 20%)	Not Permitted for Sale
	Nutrition Criteria	Nutrition Criteria	Nutrition Criteria
<b>Bread</b>	Whole grain is the first item on the ingredient list <b>and</b> Saturated fat: ≤ 2g <b>and</b> Sodium: ≤ 240mg <b>and</b> Fibre: ≥ 2g  <i>Examples:</i> <ul style="list-style-type: none"> <li>Whole grain breads, including buns, bagels, English muffins, rolls, naan, pitas, tortillas, chapattis, rotis, bannock</li> <li>Whole grain pizza dough and flatbread</li> </ul>	Saturated fat: ≤ 2g <b>and</b> Sodium: ≤ 480mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>White (enriched) breads, including buns, bagels, English muffins, rolls, naan, pitas, tortillas, chapattis, rotis, bannock</li> <li>White (enriched) pizza dough</li> </ul>	Saturated fat: > 2g <b>or</b> Sodium: > 480mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>White breads that are higher in fat or sodium</li> <li>Some cheese breads, scones, and biscuits</li> </ul>
<b>Pasta, Rice, and Other Grains</b>	Fat: ≤ 3g <b>and</b> Saturated fat: ≤ 2g <b>and</b> Sodium: ≤ 240mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>Whole wheat or white (enriched) pasta, including couscous</li> <li>White, brown, and wild rice, rice noodles, and soba noodles</li> <li>Quinoa, bulgur, wheat berries, spelt, and other whole grains</li> </ul>	Fat: ≤ 5g <b>and</b> Saturated fat: ≤ 2g <b>and</b> Sodium: ≤ 480mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>Some pasta, rice, and other grains</li> </ul>	Fat: > 5g <b>or</b> Saturated fat: > 2g <b>or</b> Sodium: > 480mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>Some pasta, rice, and other grains that are higher in fat, saturated fat, or sodium</li> </ul>
<b>Baked Goods</b>	Fat: ≤ 5g <b>and</b> Saturated fat: ≤ 2g <b>and</b> Fibre: ≥ 2g  <i>Examples:</i> <ul style="list-style-type: none"> <li>Some muffins, cookies, grain-based bars</li> <li>Some whole grain waffles and pancakes</li> </ul>	Fat: ≤ 10g <b>and</b> Saturated fat: ≤ 2g <b>and</b> Fibre: ≥ 2g  <i>Examples:</i> <ul style="list-style-type: none"> <li>Some muffins, cookies, grain-based bars, snacks</li> <li>Some waffles and pancakes</li> </ul>	Fat: > 10g <b>or</b> Saturated fat: > 2g <b>or</b> Fibre: < 2g  <i>Examples:</i> <ul style="list-style-type: none"> <li>Most croissants, danishes, cakes, doughnuts, pies, turnovers, pastries</li> <li>Some cookies and squares</li> </ul>

**Grain Products (cont.)**

	Sell Most (≥ 80%) Nutrition Criteria	Sell Less (≤ 20%) Nutrition Criteria	Not Permitted for Sale Nutrition Criteria
<b>Grain-Based Snacks</b>	<p>Fat: ≤ 3g  <b>and</b> Saturated fat: ≤ 2g  <b>and</b> Sodium: ≤ 240mg</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• Some whole grain crackers, pita chips, and flatbreads</li> <li>• Some packaged crackers and popcorn</li> </ul>	<p>Fat: ≤ 5g  <b>and</b> Saturated fat: ≤ 2g  <b>and</b> Sodium: ≤ 480mg</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• Some crackers, pretzels, and popcorn</li> </ul>	<p>Fat: &gt; 5g  <b>or</b> Saturated fat: &gt; 2g  <b>or</b> Sodium: &gt; 480mg</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• Crackers, pretzels, and popcorn higher in fat and sodium</li> <li>• Most corn chips and other snack mixes</li> </ul>
<b>Cereals</b>	<p>Whole grain is the first item on the ingredient list  <b>and</b> Saturated fat: ≤ 2g  <b>and</b> Fibre: ≥ 2g</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• Some breakfast cereals, including oatmeal, some granola, and cold cereals containing fibre</li> </ul>		<p>Whole grain is <i>not</i> the first item on the ingredient list  <b>or</b> Saturated fat: &gt; 2g  <b>or</b> Fibre: &lt; 2g</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• Some breakfast cereals</li> </ul>

### Milk and Alternatives

- Compare the nutrition criteria below with the Nutrition Facts table and the ingredient list on the food label.
- See the section "Nutrition Standards for Beverages" for the nutrition criteria for fluid milk and fluid milk alternatives.

	Sell Most (≥ 80%) Nutrition Criteria	Sell Less (≤ 20%) Nutrition Criteria	Not Permitted for Sale Nutrition Criteria
<b>Yogurt/Kefir</b>	Fat: ≤ 3.25% M.F.* or ≤ 3g  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Plain and flavoured yogurt, yogurt tubes</li> </ul>		Fat: > 3.25% M.F. or > 3g  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Yogurt higher in fat, such as Balkan-style</li> </ul>
<b>Cheese**</b>	Fat: ≤ 20% M.F. <b>and</b> Sodium: ≤ 360mg <b>and</b> Calcium: ≥ 15% DV***  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Cheeses lower in fat and sodium, including part-skim mozzarella, light cheddar, some Swiss and ricotta</li> </ul>	Sodium: ≤ 480mg <b>and</b> Calcium: ≥ 15% DV  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Most hard and soft, non-processed cheese, including cheddar, mozzarella, brick, parmesan, some feta, Monterey jack, havarti, and gouda; cottage cheese, cheese curds, and cheese strings</li> </ul>	Sodium: > 480mg <b>or</b> Calcium: < 15% DV  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Some processed cheese products</li> <li>• Most cream cheese</li> </ul>
<b>Milk-Based Desserts</b>		Fat: ≤ 5g <b>and</b> Sodium: ≤ 360mg <b>and</b> Calcium: ≥ 5% DV  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Some frozen yogurt, puddings, custards, ice milk, gelato</li> </ul>	Fat: > 5g <b>or</b> Sodium: > 360mg <b>or</b> Calcium: < 5% DV  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Some puddings</li> <li>• Most frozen desserts high in fat and sugar, including ice cream, ice cream bars, ice cream cakes, and ice cream sandwiches</li> </ul>

\*M.F. = Milk Fat. The amount can be found on the front of the food label.

\*\*Encourage selection of lower-fat cheese options.

\*\*\*DV = Daily Value.

### Meat and Alternatives

- Compare the nutrition criteria below with the Nutrition Facts table and ingredient list on the food label.
- Food should always be prepared in a healthy way – that is, using cooking methods that require little or no added fat or sodium, such as baking, barbequing, boiling, broiling, grilling, microwaving, poaching, roasting, steaming, or stir-frying.

	Sell Most (≥ 80%) Nutrition Criteria	Sell Less (≤ 20%) Nutrition Criteria	Not Permitted for Sale Nutrition Criteria
<b>Fresh and Frozen Meat</b>	Fat: ≤ 10g <b>and</b> Sodium: ≤ 480mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Extra-lean ground meat</li> <li>• Lean beef, goat, lamb, pork, or poultry</li> <li>• Some breaded chicken strips and nuggets</li> <li>• Some lean meatballs</li> <li>• Some lean hamburger patties</li> </ul>	Fat: ≤ 14g <b>and</b> Sodium: ≤ 480mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Lean ground meat</li> <li>• Beef, goat, lamb, pork, or poultry</li> <li>• Some breaded chicken strips and nuggets</li> <li>• Some meatballs</li> <li>• Some hamburger patties</li> </ul>	Fat: > 14g <b>or</b> Sodium: > 480mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Meat that contains higher amounts of fat or sodium, including chicken wings, bacon, pork and beef ribs</li> <li>• Some wieners</li> <li>• Most pepperoni sticks</li> <li>• Most beef/turkey jerk products</li> </ul>
<b>Deli (Sandwich) Meat</b>	Fat: ≤ 5g <b>and</b> Sodium: ≤ 480mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Some lean deli meat</li> </ul>	Fat: ≤ 5g <b>and</b> Sodium: ≤ 600mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Some lean deli meat</li> </ul>	Fat: > 5g <b>or</b> Sodium: > 600mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Deli meat higher in fat or sodium</li> </ul>
<b>Fish</b>	Fat: ≤ 8g <b>and</b> Sodium: ≤ 480mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Fresh, frozen, or canned fish</li> </ul>	Fat: ≤ 12g <b>and</b> Sodium: ≤ 480mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Some frozen, breaded fish (e.g., fish sticks)</li> <li>• Fresh, frozen, or canned fish</li> </ul>	Fat: > 12g <b>or</b> Sodium: > 480mg  <i>Examples:</i> <ul style="list-style-type: none"> <li>• Some breaded or battered fish higher in added fat or sodium</li> <li>• Fresh or frozen fish with a higher mercury content*</li> </ul>
<b>Eggs</b>	Fat: ≤ 7g <b>and</b> Sodium: ≤ 480mg		Fat: > 7g <b>or</b> Sodium: > 480mg

**Meat and Alternatives (cont.)**

	Sell Most (≥ 80%) Nutrition Criteria	Sell Less (≤ 20%) Nutrition Criteria	Not Permitted for Sale Nutrition Criteria
<b>Nuts, Protein Butters, and Seeds</b>	<p>Not coated with candy, chocolate, sugar, or yogurt  <b>and Sodium: ≤ 480mg</b></p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• Nut, legume, and seed butters, including peanut, almond, walnut, soy, sesame, and sunflower</li> <li>• Nuts and seeds, including almonds, walnuts, peanuts, sunflower seeds, pumpkin seeds (papas)</li> </ul>		<p>Coated with candy, chocolate, sugar, and/or yogurt  <b>or Sodium: &gt; 480mg</b></p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• Coated nuts</li> <li>• Some roasted and salted nuts</li> </ul>
<b>Meat Alternatives, such as Tofu, Beans, and Lentils</b>	<p>Fat: ≤ 8g  <b>and Sodium: ≤ 480mg</b>  <b>and Protein: ≥ 10g</b></p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• Some vegetarian burgers, simulated meat strips, veggie meatballs, veggie ground round, veggie wieners and sausages, tofu and tempeh</li> <li>• Beans and lentils</li> </ul>		<p>Fat: &gt; 8g  <b>or Sodium: &gt; 480mg</b>  <b>or Protein: &lt; 10g</b></p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> <li>• Some vegetarian products high in sodium</li> <li>• Some meat alternatives that are higher in fat or sodium or lower in protein</li> </ul>

\*Certain types of fish may contain levels of mercury that can be harmful to human health. Fish caught in local lakes and streams may have different levels of mercury from those found in stores. Canned "light" tuna contains less mercury than "white" or "albacore" tuna, and salmon generally has low levels of mercury. See Health Canada's website for continually updated information and a list of fish with low levels of mercury, at <http://www.hc-sc.gc.ca/fn-an/securit/chem-chim/environ/mercur/cons-adv-etud-eng.php>.

## Mixed Dishes

Note: Mixed dishes are products that contain more than one major ingredient.

Mixed Dishes With a Nutrition Facts Table			
<ul style="list-style-type: none"> <li>Compare the nutrition criteria below with the Nutrition Facts table and the ingredient list provided by the supplier.</li> <li>Food should always be prepared in a healthy way – that is, using cooking methods that require little or no added fat or sodium, such as baking, barbequing, boiling, broiling, grilling, microwaving, poaching, roasting, steaming, or stir-frying.</li> </ul>			
	Sell Most (≥ 80%) Nutrition Criteria	Sell Less (≤ 20%) Nutrition Criteria	Not Permitted for Sale Nutrition Criteria
<b>Entrées</b> (e.g., frozen pizza, sandwiches, pasta, hot dogs)	Fat: ≤ 10g and Saturated fat: ≤ 5g and Sodium: ≤ 960mg and Fibre: ≥ 2g and Protein: ≥ 10g	Fat: ≤ 15g and Saturated fat: ≤ 7g and Sodium: ≤ 960mg and Fibre: ≥ 2g and Protein: ≥ 7g	Fat: > 15g or Saturated fat: > 7g or Sodium: > 960mg or Fibre: < 2g or Protein: < 7g
<b>Soups</b>	Fat: ≤ 3g and Sodium: ≤ 720mg and Fibre: ≥ 2g	Fat: ≤ 5g and Saturated fat: ≤ 2g and Sodium: ≤ 720mg	Fat: > 5g or Saturated fat: > 2g or Sodium: > 720mg
<b>Side Dishes</b> (e.g., grain and/or vegetable salads)	Fat: ≤ 5g and Saturated fat: ≤ 2g and Sodium: ≤ 360mg and Fibre: ≥ 2g	Fat: ≤ 7g and Saturated fat: ≤ 2g and Sodium: ≤ 360mg	Fat: > 7g or Saturated fat: > 2g or Sodium: > 360mg



**Mixed Dishes (cont.)**

<b>Mixed Dishes Without a Nutrition Facts Table</b>			
<ul style="list-style-type: none"> <li>• For every ingredient used, refer to the nutrition criteria in this appendix for the appropriate food groups.</li> <li>• Food should always be prepared in a healthy way – that is, using cooking methods that require little or no added fat or sodium, such as baking, barbequing, boiling, broiling, grilling, microwaving, poaching, roasting, steaming, or stir-frying.</li> </ul>			
	<b>Sell Most (≥ 80%) Nutrition Criteria</b>	<b>Sell Less (≤ 20%) Nutrition Criteria</b>	<b>Not Permitted for Sale Nutrition Criteria</b>
<b>Entrées</b> (e.g., pizza, sandwiches, pasta, hot dogs)	All major ingredients* are from the “Sell Most” category.	One or more major ingredients are from the “Sell Less” category.	Cannot be sold if prepared with any ingredients from the “Not Permitted for Sale” category.
<b>Soups</b>	All major ingredients are from the “Sell Most” category.	One or more major ingredients are from the “Sell Less” category.	Cannot be sold if prepared with any ingredients from the “Not Permitted for Sale” category.
<b>Side Dishes</b> (e.g., grain and/or vegetable salads)	All major ingredients are from the “Sell Most” category.	One or more major ingredients are from the “Sell Less” category.	Cannot be sold if prepared with any ingredients from the “Not Permitted for Sale” category.

\*A major ingredient is any product that is identified in one of the food groups set out in the nutrition standards – that is, Vegetables and Fruit, Grain Products, Milk and Alternatives, and Meat and Alternatives. *All* pizza toppings are considered major ingredients.

### Miscellaneous Items

Minor Ingredients	
<ul style="list-style-type: none"> <li>The following are considered minor ingredients and are to be used in limited amounts, as defined under "Serving Size".</li> <li>Choose products that are lower in fat and/or sodium.</li> </ul>	
Ingredients	Serving Size
Condiments and Spreads	≤ 15ml (1 tbsp)
Gravies and Sauces	≤ 60ml (4 tbsp)
Dips	≤ 30ml (2 tbsp)
Fats	≤ 5ml (1 tsp)
Oils and Dressings	≤ 15ml (1 tbsp)
Other (e.g., chocolate chips, coconut, olives, parmesan cheese)	≤ 15ml (1 tbsp)

Not Permitted for Sale: Confectionery (Examples)
Candy Chocolate Energy bars Licorice Gum Gummies Popsicles and freezies, if not prepared with 100% juice

## Nutrition Standards for Beverages

Separate beverage standards are provided for elementary and secondary schools.

All beverages sold in schools must meet the standards set out in Ontario Regulation 200/08, "Trans Fat Standards", made under the Education Act.

### Beverages – Elementary Schools

Compare the nutrition criteria below with the Nutrition Facts table and ingredient list on the food label.			
	Sell Most (≥ 80%) Nutrition Criteria	Sell Less (≤ 20%) Nutrition Criteria	Not Permitted for Sale Nutrition Criteria
Water	Plain		
Milk and Milk-Based Beverages (Plain or Flavoured)	Fat: ≤ 2% M.F.* or ≤ 5g and Sugar: ≤ 28g and Calcium: ≥ 25% DV** and Container size: ≤ 250ml		Fat: > 2% M.F. or > 5g or Sugar: > 28g or Calcium: < 25% DV or Container size: > 250ml
Yogurt Drinks	Fat: ≤ 3.25% M.F. or ≤ 3g and Container size: ≤ 250ml		Fat: > 3.25% M.F. or > 3g or Container size: > 250ml
Soy/Milk Alternative Beverages (Plain or Flavoured)	Fortified with calcium and vitamin D and Container size: ≤ 250ml		Unfortified or Container size: > 250ml
Juices or Blends: Vegetable or Fruit	100% juice, pulp, or purée and Unsweetened/No sugar added and Container size: ≤ 250ml		< 100% juice, pulp, or purée or Sugar in the ingredient list or Container size: > 250ml
Hot Chocolate	Fat: ≤ 2% M.F. or ≤ 5g and Sugar: ≤ 28g and Calcium: ≥ 25% DV and Container size: ≤ 250ml		Fat: > 2% M.F. or > 5g or Sugar: > 28g or Calcium: < 25% DV or Container size: > 250ml
Coffee and Tea			All Coffee and Tea
Iced Tea			All Iced Tea
Energy Drinks			All Energy Drinks
Sports Drinks			All Sports Drinks
Other Beverages (e.g., soft drinks; flavoured water; "juice-ades", such as lemonade, limeade)			All Other Beverages

\*M.F. = Milk Fat. The amount can be found on the front of the food label.

\*\*DV = Daily Value.

### Beverages – Secondary Schools

Compare the nutrition criteria below with the Nutrition Facts table and ingredient list on the food label.

	Sell Most (≥ 80%) Nutrition Criteria	Sell Less (≤ 20%) Nutrition Criteria	Not Permitted for Sale Nutrition Criteria
<b>Water</b>	Plain		
<b>Milk* and Milk-Based Beverages (Plain or Flavoured)</b>	Fat: ≤ 2% M.F.** or ≤ 5g and Sugar: ≤ 28g and Calcium: ≥ 25% DV***		Fat: > 2% M.F. or > 5g or Sugar: > 28g or Calcium: < 25% DV
<b>Yogurt Drinks</b>	Fat: ≤ 3.25% M.F. or ≤ 3g		Fat: > 3.25% M.F. or > 3g
<b>Soy/Milk Alternative Beverages (Plain or Flavoured)</b>	Fortified with calcium and vitamin D		Unfortified
<b>Juices or Blends: Vegetable or Fruit</b>	100% juice, pulp, or purée and Unsweetened/No sugar added		< 100% juice, pulp, or purée or Sugar in the ingredient list
<b>Hot Chocolate</b>	Fat: ≤ 2% M.F. or ≤ 5g and Sugar: ≤ 28g and Calcium: ≥ 25% DV		Fat: > 2% M.F. or > 5g or Sugar: > 28g or Calcium: < 25% DV
<b>Coffee and Tea</b>		Decaffeinated	Caffeinated
<b>Iced Tea</b>		Calories: ≤ 40 and Decaffeinated	Calories: > 40 or Caffeinated
<b>Energy Drinks</b>			All Energy Drinks
<b>Sports Drinks</b>			All Sports Drinks
<b>Other Beverages</b> (e.g., soft drinks; flavoured water; "juice-ades", such as lemonade, limeade)		Calories: ≤ 40 and Caffeine-free	Calories: > 40 or with caffeine

\*Milk can be sold in containers that hold multiple servings.

\*\*M.F. = Milk Fat. The amount can be found on the front of the food label.

\*\*\*DV = Daily Value.

## **APPENDIX B: Telephone Initial/Follow-up Script**

**P = Potential Participant**

**I = Interviewer**

### **Initial Phone Script**

#### *Call to head office*

I - Hello, my name is (insert name) and I am a student interested in conducting research on food services in Waterloo Region. I'm really looking to give food services that work with schools a voice, and find out what their experiences are implementing the school food and beverage policy (P/PM 150). I'm studying at the University of Waterloo, this research would be for my masters. So I'm really just calling right now to ask if your branch/organization is one that provides their services to schools in Waterloo Region.

P - Yes

I – Could you connect me with a representative in Waterloo Region that is in charge of services catering to schools.

[Collect the representative's full name (Mr/Ms), phone number, and email]

\*If call and the appropriate representative answers, go to "A" below.

### **Follow-up Phone Script**

(Include responses to their question (from common questions) if the follow-up is in *response* to them)

I - Hello, it's (insert name) from the University of Waterloo. I'm calling for Mr./Ms \_\_\_\_\_ regarding an email sent \_\_\_\_ (date). Would he/she be available?

\*IF representative is on the other end, go to "A" below (where A has next steps)

IF secretary/ administrative assistant responds that representative is not available:

I - Thank you. When would be a good time to call back? Is he/she most responsive to phone or email? OR

- *If the individual wants to give the representative a note, OR if they offer you to leave a voice mail, provide information on the reason for the call.*

**What to say in the voicemail:**

I - Hello, my name is (insert name) and I am a student interested in conducting research on food services in Waterloo Region. I'm really looking to give food services that work with schools a voice, and find out what their experiences are implementing the school food and beverage policy (P/PM 150). I'm studying at the University of Waterloo, this research would be for my masters. This call was to determine whether Mr./Ms. \_\_\_\_\_ is willing to participate in a 30-minute interview. Please call us back at 519-888-4567 x 36317 to get more information about the study and set up and an appointment.

**\*A: When contact person is on the other end.**

I - Hello Mr./Ms. \_\_\_\_\_

P - Hello

I - My name is \_\_\_\_\_ and I'm calling back from the University of Waterloo on behalf of the Propel Centre. We sent an email on (Date) asking if your organization/company would be interested in participating in our study regarding the new provincial School Food and Beverage Policy known as PPM150. I'm really looking to give food services that work with schools a voice, and find out what their experiences are implementing the school food and beverage policy (P/PM 150). I'm studying at the University of Waterloo, this research would be for my masters.

I - Have you heard about this policy?

P – No

I - [IF not, say] Well, the policy classifies foods and beverages that can be sold in schools into “sell most”, “sell less” and not permitted for sale categories.

I - Do you recall receiving that email?

P - No

I - Well I'll go over the details again with you.

**Project requirements**

I - We would like you to participate in a 30-minute interview.

- Project feedback: We will offer your food service tailored feedback on your input.
  - A member of our research team would be happy to present to your staff and/or organization as a whole.
- Each food service that participates will receive a Food Service Feedback Report that includes data pertaining to their service, and a report about how school food services are doing as a whole, no food services will be identified. Also, a member of our research team would be happy to give a presentation to your staff and/or organization.
  -
- What questions do you have about this project?

P- No

I - What do you think about participating in this short research project?

P – We would like to participate

I - I guess the first thing we need to do is establish a day, time, and location where we can meet.

OR

P – We don't have time

I – Do you have the contact information of someone that will have time and would be interested in the project?

P – Yes

[Take contact information]

---

### **Common Questions and Answers**

(If you are responding to a call/voicemail/email – they initiate)

1. P - How long will the study take?

I - 30 to 45min of your time.

2. P - We would like to set up an appointment, when will you be conducting interviews?

I – Feb 1 – Feb 30 2013

Any day

3. P - Will our service be mentioned in the study?



I - No, the data will be kept confidential. Only you will be able to see your service's data in the Food Service Feedback Report we will provide at the end of the study.

4. P - How does our food service benefit from this study?

I - At the end of our study we will be able to tell you what the 'lessons learned' are, this will hopefully help you in implementing the policy. In addition, your service will receive an individualized Food Service Feedback Report that includes data pertaining to your service. Finally, a member of our research team would be happy to give a presentation to your staff and/or your organization

5. P - Do you have ethics approval?

I - Yes, ethics clearance has been granted from the Office of Research Ethics at the University of Waterloo.

6. P - How confidential is this study?

I - Any reporting will be in grouped form.

## **APPENDIX C: Information Letter**

Address

Date

Dear \_\_\_\_\_

This note requests a reply by email or telephone (519-888-4567 x #####).

We recently contacted you about a University of Waterloo approved study examining how food services are coping with the, "Ontario School Food and Beverage Policy". Our team is interested in learning the full story – food services affected positively, negatively or not at all by P/PM 150. Since all our research aims to work with partners to identify solutions, we want to share ‘lessons learned’ with food services in Waterloo Region. We will work with local education and health decision makers to identify how to take advantage of what is working well and find ways to support food services facing challenges. Each and every contribution is essential in producing a complete and representative report.

Thank you for your consideration of this request. We would love to chat to clarify our request, and see how we might work with you. If you would like to book an appointment, please reply with times and dates that you or a representative will be available to meet and we will confirm the date as soon as possible.

You’ll find details regarding the study below.

Sincerely,

Dana Habayeb (on behalf of the Propel Team)

---

### **What is involved for you?**

- Provide the menus and ingredients your food services organization offers to Waterloo Region schools.
- Answer some closed ended questions regarding the number of schools they provide their services to and approximate weekly students served.
- Participate in a 30-minute interview regarding their experience implementing P/PM 150 and the barrier/facilitators involved.

### **What are the benefits to your services?**

- Your food service will receive an individualized Feedback Report. Comparisons with data for all participating food services serving Waterloo Region schools will be provided.

- You can access "Lessons learned" about the implementation of the school food policy.
- A member of the research team would be happy to give presentations to staff and representatives from your food service.

### **Ethics Information**

This research has been reviewed and ethics clearance has been granted from the Office of Research Ethics at the University of Waterloo. If you have any comments or concerns resulting from your participation in this project please contact the University of Waterloo Director of Research Ethics at [\(519\) 888-4567 ext. 36005](tel:519-888-4567 ext.36005).

We understand that you and your staff are busy and we wish to provide support in any way possible to assist your food service's participation in this project. One of our staff members will call you within the next two weeks to provide you with more information about the project and to discuss your food service's participation. If you would prefer to call us with your questions or arrange an appointment feel free to contact us at [\(519\) 888-4567 ext. 36317](tel:519-888-4567 ext.36317). We look forward to collaborating with you on this exciting project.

Sincerely,

Dana, on behalf of Rhona Hanning and Steve Manske

--

Dana Habayeb, BSc  
School of Public Health and Health Systems, MSc  
University of Waterloo '13  
Phone: [519-888-4567 x 36317](tel:519-888-4567 x36317)

## **APPENDIX D: Interview Script**

**Interview Questions**  
**Evaluation of School Food and Beverage Policy**

Food Service: \_\_\_\_\_

Completed by: \_\_\_\_\_

Date (dd/mm/yy): \_\_\_\_\_

**Introduction Script**

As you know today we'll be conducting a 30-minute interview about your food service's experiences with P/PM 150 and the barriers and facilitators of its implementations. This interview will contribute to my Masters thesis at the University of Waterloo. If you have any questions throughout the interview please let me know, all your answers are confidential however if you are uncomfortable answering a question just indicate that you would like to skip to the next question.

**Background Questions:**

What is your role within your food service organization?

How long has your food service organization been providing food to schools in Waterloo Region?

Approximately how many students/meals does your service provide food for on a weekly basis?

Describe for me what you understand the restrictions P/PM 150 puts on foods and beverages that can be sold in Ontario schools.

- If respondent does not mention sell most / sell least / don't sell restriction, ask if there are restrictions on amount / proportion of different types of food that can be sold.
- If respondent does not mention fibre, sodium, fat, sugar restrictions, ask about each of them?

> Are there any more restrictions?

Besides schools, what is your customer base?

For those other customers, does your menu have to meet guidelines similar to P/PM 150?

**Objective: Identifying perceptions of and experiences with P/PM 150**

Tell me about your organization's experience with P/PM 150 so far?

- How do you think P/PM 150 is affecting the nutritional intake of students?

**Objective: Identify barriers to the implementation of P/PM 150**

T/W - In what circumstances do you find it difficult to implement P/PM 150?

- What have you done or what would you do to resolve such a problem?

- What factors have affected your sales since P/PM 150 introduction?

S - How do you manage meeting the demands of students and implementing P/PM 150 at the same time?

- How about parents' demands?

**Objective: Identifying facilitators to the implementation of P/PM 150**

S - What do you think your organization does well?

- What are your main strengths when implementing P/PM 150?

O - What opportunities have resulted from your involvement with P/PM 150?

- *Probes*— opportunity to change own brand to one that is healthy, to expand market because others were not willing to be compliant

F - What role do you think other groups need to play to alleviate any challenges for those implementing P/PM 150?

- government,
- public health,
- school boards,
- individual schools (parent council, principal, teachers)
- parents

## **APPENDIX E: Consent Form**



## CONSENT FORM

By signing this consent form, you are not waiving your legal rights or releasing the investigator(s) or involved institution(s) from their legal and professional responsibilities.

---

I have read the information presented in the information letter about a study being conducted by Drs. Rhona Hanning and Steve Manske and MSc candidate Dana Habayeb at the University of Waterloo. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and any additional details I wanted.

I am aware that I have the option of allowing my interview to be audio recorded to ensure an accurate recording of my responses.

I am also aware that excerpts from the interview may be included in the thesis and/or publications to come from this research, with the understanding that the quotations will be anonymous.

I was informed that I may withdraw my consent at any time without penalty by advising the researcher.

This project has been reviewed by, and received ethics clearance through, the Office of Research Ethics at the University of Waterloo. I was informed that if I have any comments or concerns resulting from my participation in this study, I may contact the Director, Office of Research Ethics at 519-888-4567 ext. 36005.

With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

YES    NO

I agree to have my interview audio recorded.

YES    NO

I agree to the use of anonymous quotations in any thesis or publication that comes of this research.

YES    NO

Participant Name: \_\_\_\_\_ (Please print)

Participant Signature: \_\_\_\_\_

Witness Name: \_\_\_\_\_ (Please print)

Witness Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## **APPENDIX F: Codebook**

## PPM150\_Codebook

Full level of coding is included in this table; however, for the purposes of this study analysis was conducted on the parent and child nodes only (two levels down), and not on grandchild nodes.

Name	Description	# of Sources Coded	# of Coding References	Hierarchical Name
Accessibility to FS (food services) off-campus	Students have access to non-compliant FS off school property.	2	2	Nodes\\Threats\\School related\\Students can leave campus\\Accessibility to FS (food services) off-campus
Accountability to parents	Some FS are asked by parents regarding their compliance to the policy.	2	2	Nodes\\Opportunities\\Presence of Accountability\\Accountability to parents
Accountability to schools	FS have been asked about their compliance by schools, not the government.	8	11	Nodes\\Opportunities\\Presence of Accountability\\Accountability to schools
Advertising	Marketing one's FS to schools.	1	6	Nodes\\Threats\\Competition\\Advertising
Affecting extracurricular negatively	The policy affects school extracurricular negatively because the schools is making less revenue that would have normally went to extracurricular activities	1	3	Nodes\\Threats\\School related\\Affecting extracurriculars negatively
Bill 130 protest	Difficulty implementing the policy was exacerbated by the Bill	1	2	Nodes\\Threats\\School related\\Bill 130 protest
Bottom line	Negative impact on FS net income.	6	13	Nodes\\Threats\\Bottom line
Bottom line	Positive impact on FS net income.	2	3	Nodes\\Opportunities\\Bottom line
Bottom line unaffected	The FS bottom line was unaffected	2	3	Nodes\\Opportunities\\Bottom line\\Bottom line unaffected
Cafeterias closing	Due to schools losing profits over the new policy they have been forced to close their	2	2	Nodes\\Threats\\Bottom line\\Negatively affected school bottom line\\Cafeterias closing
Challenge for small businesses	Small businesses have trouble marketing themselves to schools.	1	2	Nodes\\Threats\\Competition\\Advertising\\Challenge for small businesses
Changing equipment in cafs	Changing the equipment in cafeterias in order to make compliant foods.	1	3	Nodes\\Weaknesses\\Product development\\Changing equipment in cafs
Closed shop mentality	Not as open to things, ex. To try new foods	1	1	Nodes\\Threats\\School related\\Closed shop mentality

Competition	Competition between FS.	5	17	Nodes\\Threats\\Competition
Compliance	Others (FS, schools) are not following P/PM 150.	7	12	Nodes\\Threats\\Compliance
Compliant products are more expensive	The FS had a difficult time implementing the policy due to compliant products/ingredients being more expensive than non-compliant ingredients.	1	1	Nodes\\Experience with policy\\Negative experience\\Difficulty implementing policy\\Lack of resources\\Compliant products are more expensive
Consistent	The FS claims they provide consistent service, a consistent product, or consistent	3	4	Nodes\\Strengths\\Consistent
Creating new products	FS must create new compliant products.	4	8	Nodes\\Strengths\\Product related strengths\\Innovation\\Creating new products
Customer Service	The FS claims they provide food customer	7	9	Nodes\\Strengths\\Customer Service
Decreased physical activity	FS recommends the government focus on decreased student physical activity rather than nutrition.	2	3	Nodes\\Threats\\Other reasons for poor youth health\\Decreased physical activity
Difficulty implementing policy	The FS had a difficult time implementing the policy.	6	18	Nodes\\Experience with policy\\Negative experience\\Difficulty implementing policy
Distributor disinterest	Distributors are disinterested in implementing the policy for such a small customer base (schools).	1	2	Nodes\\Threats\\Distributor disinterest
Easier for large organizations	Marketing to schools is easier for large organizations.	1	1	Nodes\\Threats\\Competition\\Advertising\\Easier for large organizations
Easy to implement	P/PM 150 was easy to implement by the FS.	6	11	Nodes\\Experience with policy\\Good experience\\Easy to implement
Easygoing		1	1	Nodes\\Underlying tones\\Positive tones\\Easygoing
Education	Education stakeholders on the intent of the policy and its benefits etc.	6	18	Nodes\\Opportunities\\Education
Education for parents	By educating parents this will facilitate the FS' job in implementing the policy (less complaints, time consuming questions, rebellion, competition with non-compliant lunches brought from home).	3	6	Nodes\\Opportunities\\Education\\Education for parents

Education for students	Students need to be educated regarding healthy eating and P/PM	4	12	Nodes\Opportunities\Education\Education for students
Educational for FS	The policy makes food services aware of the nutritional value of their food.	1	1	Nodes\Perceived Nutritional Effect\Positive nutritional effect\Educational for FS
Educational for parents	The policy makes parents more aware of healthy food options for their children.	1	1	Nodes\Perceived Nutritional Effect\Positive nutritional effect\Educational for parents
Educational for schools	The policy makes schools more aware of what has a positive nutritional affect on students.	1	3	Nodes\Perceived Nutritional Effect\Positive nutritional effect\Educational for schools
Educational for students	The policy is a form of health/nutritional education for students, and may in this way improve their eating	5	5	Nodes\Perceived Nutritional Effect\Positive nutritional effect\Educational for students
Elementary students can't leave campus	Elementary school student's can't leave school during lunch hour to be food elsewhere. They can either buy food from the school (or the FS serving the school) or	2	2	Nodes\Opportunities\Elementary students can't leave campus
Experience with policy	FS experience with the policy's implementation.	15	42	Nodes\Experience with policy
Extend ppm150 to FS around school		1	1	Nodes\Opportunities\Extend ppm150 to FS around school
Face-to-face interaction with students	Feedback was obtained by FS through Face-to-face interaction with students	1	1	Nodes\Strengths\Customer Service\Involving stakeholders\Involved parents\Face-to-face interaction with students
Felt unprepared for interview		1	1	Nodes\Underlying tones\Negative tones\Felt unprepared for interview
Freshness	The FS claims they provide a product that is	7	12	Nodes\Strengths\Product related strengths\Freshness
Frustration		2	2	Nodes\Underlying tones\Negative tones\Frustration
FS because of PPM 150	The food service was created around the policy.	1	2	Nodes\Opportunities\Increased business\FS because of PPM 150
FS compliant	FS stated that they have implemented all the guidelines within the	5	5	Nodes\Strengths\FS compliant
FS not compliant	FS stated that they are not abiding by he policy's guidelines.	1	3	Nodes\Weaknesses\FS not compliant

FS products originally compliant	The FS claimed that their foods were either compliant or mostly compliant before the introduction of the policy.	7	11	Nodes\\Strengths\Product related strengths\FS products originally compliant
FS should be held accountable	FS feel that they should be held accountable regarding the policy (mostly to create a level	3	3	Nodes\\Opportunities\Presence of Accountability\FS should be held accountable
FS would like to increase advertising	Small FS would like to increase advertising so they can be competitive.	1	2	Nodes\\Threats\Competition\Advertising\FS would like to increase advertising
FS would resent it	FS feels they would resent being held accountable, as it would result in more checks of their facility etc.	1	1	Nodes\\Threats\Lack of Accountability\FS would resent it
Good experience	FS had a good experience implementing the policy.	9	19	Nodes\\Experience with policy\Good experience
Good product	The FS claims they provide a good product.	3	3	Nodes\\Strengths\Product related strengths\Good product
Good to have healthy options	It's good that the policy provides healthy choices for students.	1	1	Nodes\\Opportunities\Positive thoughts\Good to have healthy options
Healthier brand	The food service has a healthier brand due to the implementation of the policy.	4	5	Nodes\\Opportunities\Healthier brand
Healthy eating starts at home	Students are more influenced by healthy eating at home.	7	13	Nodes\\Perceived Nutritional Effect\Healthy eating starts at home
Helps parents provide healthy treats	Through P/PM 150, schools are able to provide healthy treats to students removing that burden	1	2	Nodes\\Opportunities\Helps parents provide healthy treats
High quality product	The FS claims they provide a product that is good quality.	8	13	Nodes\\Strengths\Product related strengths\High quality product
Home grown ingredients	The FS provides a product that is made of homegrown ingredients.	2	2	Nodes\\Strengths\Product related strengths\Home grown ingredients
Impact students' lives	The food service feels as though they are able to impact students' lives positively through the policy.	1	1	Nodes\\Opportunities\Impact students' lives
Increase school budget	To facilitate the implementation of P/PM 150, FS suggested increasing school budgets	2	3	Nodes\\Opportunities\Increase school budget
Increased business	The food services' business increased as a result of being P/PM 150	8	20	Nodes\\Opportunities\Increased business
Increased sales	Sales have increased since the implementation of P/PM 150 for the FS.	1	2	Nodes\\Opportunities\Sales\Increased sales

Increased waste	P/PM 150 compliant food is more likely to produce waste from excess materials that can't be used in the main menu of the	2	3	Nodes\\Weaknesses\Product development\Increased waste
Innovation	FS must be innovative in creating new products that comply with the policy.	7	13	Nodes\\Strengths\Product related strengths\Innovation
Involved parents	FS involved parents, and asked for their feedback.	2	3	Nodes\\Strengths\Customer Service\Involving stakeholders\Involved parents
Involving stakeholders	The involvement of stakeholders as a facilitator to the FS implementation of the	6	12	Nodes\\Strengths\Customer Service\Involving stakeholders
Lack of Accountability	FS are not being held accountable.	9	19	Nodes\\Threats\Lack of Accountability
Lack of awareness regarding the introduction of PPM150	FS, suppliers, parents, and/or schools were not aware of the policy before and/or after it's implementation.	1	2	Nodes\\Weaknesses\Lack of awareness regarding the introduction of PPM150
Lack of enforcement by government	The government is not enforcing the policy on schools, so it's up to the school board to abide by the policy or not.	1	1	Nodes\\Threats\Compliance\Lack of enforcement by government
Lack of parental awareness regarding child's eating habits	Lack of parental awareness allows students to eat off campus and creates an additional	2	3	Nodes\\Threats\Lack of parental awareness regarding child's eating habits
Lack of resources	The FS had a difficult time implementing the policy due to a lack of resources. Ex. Financial	2	6	Nodes\\Experience with policy\negative experience\Difficulty implementing policy\Lack of resources
Lack of staff	The FS had a difficult time implementing the policy due to a lack of staff available to prepare an entire separate menu.	1	1	Nodes\\Experience with policy\negative experience\Difficulty implementing policy\Lack of staff
Lack of time	The FS had a difficult time implementing the policy due to a lack of time (to prepare, to come up with creative solutions, to train	1	2	Nodes\\Experience with policy\negative experience\Difficulty implementing policy\Lack of time
Lack of variety	FS does not offer much variety making it difficult to compete with those that	1	3	Nodes\\Weaknesses\Lack of variety
Lack of volunteers	Lack of parent/staff volunteers resulted in the dissolution of the food program in general.	2	4	Nodes\\Threats\School related\Lack of volunteers
Large FS don't care to serve schools	Large FS don't care to serve schools, increasing small FS business	2	4	Nodes\\Threats\Competition\Large FS don't care to serve schools



Less profitable items	Items developed in compliance with the policy are less profitable than non-compliant items.	2	5	Nodes\\Weaknesses\\Product development\\Less profitable items
Less stringent policy	Facilitating the implementation of P/PM 150 by loosening the restrictions.	5	8	Nodes\\Opportunities\\Policy changes\\Less stringent policy
Limited compliant products made by suppliers	The FS had a difficult time implementing the policy due to a lack of compliant products from suppliers	1	1	Nodes\\Experience with policy\\Negative experience\\Difficulty implementing policy\\Limited compliant products made by suppliers
Little conviction		3	4	Nodes\\Underlying tones\\Little conviction
Little nutritional effect	The policy has improves the nutritional intake of students minimally.	4	4	Nodes\\Perceived Nutritional Effect\\Little nutritional effect
Marketing	Displaying products in an appealing way so as to attract students.	3	5	Nodes\\Strengths\\Marketing
Meeting everyone's demands	Meeting the demands of parents, kids, and schools.	2	3	Nodes\\Weaknesses\\Product development\\Meeting everyone's demands
More detailed guidelines	Policy needs to be written in a clearer way.	1	4	Nodes\\Opportunities\\Policy changes\\More detailed guidelines
More variety in store	The food service has more variety on their regular menu after implementing the policy.	1	1	Nodes\\Opportunities\\More variety in store
Negative experience	FS had a negative experience implementing the policy.	8	22	Nodes\\Experience with policy\\Negative experience
Negative nutritional effect	The policy has a negative nutritional affect on students.	7	9	Nodes\\Perceived Nutritional Effect\\Negative nutritional effect
Negative tones		4	5	Nodes\\Underlying tones\\Negative tones
Negatively affected FS bottom line	The FS bottom line was negatively affected due to the policy's	5	6	Nodes\\Threats\\Bottom line\\Negatively affected FS bottom line
Negatively affected school bottom line	School's bottom line was negatively affected by the policy.	3	5	Nodes\\Threats\\Bottom line\\Negatively affected school bottom line
Nervous		1	1	Nodes\\Underlying tones\\Negative tones\\Nervous
Networking	Networking with other food service providers to share tips on	2	2	Nodes\\Strengths\\Customer Service\\Involving stakeholders\\Networking
Neutral thoughts	Thoughts regarding the policy that are neither negative nor positive.	4	8	Nodes\\Opportunities\\Neutral thoughts
No effect on sales	Sales were unaffected by the policy	3	3	Nodes\\Opportunities\\Sales\\No affect on sales

No follow-up	The government has not followed-up with FS regarding their implementation of the policy.	8	12	Nodes\\Threats\Lack of Accountability\No follow-up
Non-compliant food can be eaten in moderation	The policy would still have a positive nutritional affect even if non-compliant foods were allowed to be eaten in	3	4	Nodes\\Perceived Nutritional Effect\Non-compliant food can be eaten in moderation
Non-compliant FS	Non-compliant FS have an unfair advantage, whether they are within the vicinity of the school or are in the school and claiming to be compliant when they are not.	1	1	Nodes\\Threats\Competition\Non-compliant FS
Not at high school level	The policy does not improve the nutritional intake of students at the high school level.	5	7	Nodes\\Perceived Nutritional Effect\Negative nutritional effect\Not at high school level
Not enough options on campus	The policy has resulted in lack of variety on campus, pushing students off-campus to non-compliant FS.	1	2	Nodes\\Threats\School related\Students can leave campus\Not enough options on campus
Online student feedback	Feedback from students was obtained by FS through online means.	1	1	Nodes\\Strengths\Customer Service\Involving stakeholders\Involved parents\Online student feedback
Opportunities	Opportunities are EXTERNAL things that may be helpful to the achievements of an	18	118	Nodes\\Opportunities
Other FS may not be compliant	FS believes that other FS may not be compliant, creating an uneven playing field.	3	6	Nodes\\Threats\Compliance\Other FS may not be compliant
Other reasons for poor youth health	Alternative routes (to P/PM 150) to improving student health as recommended and	3	5	Nodes\\Threats\Other reasons for poor youth health
Overwhelming for students	Too much nutritional information availability is overwhelming for students	1	1	Nodes\\Threats\Unappealing to students\Overwhelming for students
Passionate		2	2	Nodes\\Underlying tones\Positive tones\Passionate
Perceive as communal and not business	Suggestion for FS to perceive serving schools as communal and not as a business (or as a money maker).	2	3	Nodes\\Opportunities\Perceive as communal and not business
Perceived nutritional effect	The policy's perceived nutritional affect on students.	15	53	Nodes\\Perceived Nutritional Effect

Perceiving sales as communal and not business		1	2	Nodes\\Strengths\Perceiving sales as communal and not business
Policy changes	Changes that can be made to the policy that would facilitate its implementation.	6	16	Nodes\\Opportunities\Policy changes
Policy is worthwhile	FS believes the policy is worthwhile and should be kept.	3	3	Nodes\\Opportunities\Positive thoughts\Policy is worthwhile
Policy more for elementary level	The policy is more successful at the elementary level than at	4	7	Nodes\\Opportunities\Neutral thoughts\Policy more for elementary level
Policy was in response to parents	Policy was in response to parents' requests for healthier foods in schools.	1	1	Nodes\\Opportunities\Neutral thoughts\Policy was in response to parents
Positive effect on bottom line	FS implementation of the policy has positively affected their bottom line.	0	0	Nodes\\Opportunities\Bottom line\Positive affect on bottom line
Positive feedback	FS received positive feedback regarding their services.	2	2	Nodes\\Opportunities\Positive feedback
Positive nutritional effect only at elementary level	The policy has a positive nutritional affect only at the elementary school level.	1	1	Nodes\\Perceived Nutritional Effect\Positive nutritional effect\Positive nutritional affect only at elementary level
Positive nutritional effect	The policy improves the nutritional intake of students directly and indirectly.	11	20	Nodes\\Perceived Nutritional Effect\Positive nutritional effect
Positive thoughts	Positive thoughts regarding the policy.	4	6	Nodes\\Opportunities\Positive thoughts
Positive tones		5	5	Nodes\\Underlying tones\Positive tones
Preparedness and awareness of policy	The FS was aware of the policy well before its introduction.	6	9	Nodes\\Strengths\Preparedness and awareness of policy
Presence of accountability	FS are held accountable to parents, schools, or government.	10	16	Nodes\\Opportunities\Presence of Accountability
Process	The steps taken to implement the policy.	3	6	Nodes\\Strengths\Process
Product development	Challenges related to product development.	11	35	Nodes\\Weaknesses\Product development
Product related strengths	Good qualities of FS product.	15	55	Nodes\\Strengths\Product related strengths
Profit dependent on contract with board	The contract with the school boards differ so that the FS does not have to absorb all of the loss in profit because of the	1	1	Nodes\\Threats\Bottom line\Profit dependent on contract with board
Proud of FS		1	1	Nodes\\Underlying tones\Positive tones\Proud of FS

Provide additional services	The food service agreed to provide administrative services so the schools would not need staff/parent volunteers.	1	2	Nodes\\Opportunities\\Increased business\\Provide additional services
Providing enough food within restrictions	Providing enough food to satisfy child within restrictions, especially high school students.	2	3	Nodes\\Weaknesses\\Product development\\Providing enough food within restrictions
Reasonable guidelines	FS believes P/PM 150 has reasonable guidelines.	2	2	Nodes\\Opportunities\\Positive thoughts\\Reasonable guidelines
Reasonable prices	The FS claims they provide a product that is reasonably priced.	3	3	Nodes\\Strengths\\Reasonable prices
Reduced business	Food services lost business opportunities because of the policy.	2	3	Nodes\\Threats\\Sales dropped\\Reduced business
Relationship with communities	By the implementing the policy food services' relationships with their communities have improved.	1	1	Nodes\\Opportunities\\Relationships\\Relationship with communities
Relationship with Public Health Departments	The food service developed a positive relationship with Public Health Departments through the policy's	1	1	Nodes\\Opportunities\\Relationships\\Relationship with Public Health Departments
Relationship with school staff	Relationship with school staff facilitated the implementation of the policy for FS.	1	1	Nodes\\Strengths\\Customer Service\\Involving stakeholders\\Relationship with school staff
Relationship with schools	The food services relationships with schools improved by implementing the policy.	3	3	Nodes\\Opportunities\\Relationships\\Relationship with schools
Relationships	Relationships made by FS due to their implementation of the policy.	3	5	Nodes\\Opportunities\\Relationships
Removal of best sellers	Non-compliant foods that provided FS with a lot of their business must be removed, reducing sales for the FS.	1	1	Nodes\\Threats\\Sales dropped\\Removal of best sellers
Repeal the policy	Remove the policy.	1	4	Nodes\\Opportunities\\Policy changes\\Repeal the policy
Sales	Either no impact on sales, or improved sales of FS products to schools.	5	6	Nodes\\Opportunities\\Sales
Sales dropped	FS sales dropped after the implementation of the policy.	10	31	Nodes\\Threats\\Sales dropped
Sales dropped for specific kind of FS	Specific kinds of FS have lost sales (especially pizza sales)	2	3	Nodes\\Threats\\Sales dropped\\Sales dropped for specific kind of FS

Sales dropped in high schools	Sales dropped in high schools after implementing the policy.	4	9	Nodes\\Threats\Sales dropped\Sales dropped in high schools
Sales similar for elementary and high schools	Sales similar for elementary and high schools after the implementation of P/PM	1	1	Nodes\\Opportunities\Sales\Sales similar for elementary and high schools
School not compliant	FS believes some schools are not compliant with the policy.	4	5	Nodes\\Threats\Compliance\School not compliant
School related	School related barrier to FS implementation of the policy.	12	42	Nodes\\Threats\School related
Serve in high school cafeterias	The food service was asked to serve in high school cafeterias after implementing the policy.	2	2	Nodes\\Opportunities\Increased business\Serve in high school cafeterias
Should differ across the board	Restrictions should differ for elementary schools and high schools because students need different amounts of foods to be	1	1	Nodes\\Threats\School related\Should differ across the board
Smaller FS have less resources	Larger FS have more resources to work with, making it difficult for small FS to compete.	2	2	Nodes\\Weaknesses\Product development\Smaller FS have less resources
Some compliant foods not as healthy	There maybe a negative nutritional affect on students because of the low nutritious value of some compliant foods.	1	1	Nodes\\Perceived Nutritional Effect\Negative nutritional effect\Some compliant foods not as healthy
Strengths	Strengths are INTERNAL characteristics of the organization that help it achieve its goals	17	101	Nodes\\Strengths
Student involvement	Involving students in decision making related to P/PM 150.	2	3	Nodes\\Strengths\Customer Service\Involving stakeholders\Student involvement
Student nutrition is not government's responsibility	The nutrition of students is not the government's responsibility (vs. the parents' responsibility)	3	6	Nodes\\Threats\Lack of Accountability\Student nutrition is not government's responsibility
Students can leave campus	Students can leave campus and buy non-compliant food elsewhere.	9	31	Nodes\\Threats\School related\Students can leave campus
Students rebelling	Students leave campus as a form of rebellion against the policy.	2	4	Nodes\\Threats\School related\Students can leave campus\Students rebelling
Suppliers unaware	Suppliers were unaware of the policy's introduction.	1	1	Nodes\\Weaknesses\Lack of awareness regarding the introduction of PPM150\Suppliers unaware
Technologically advanced	The FS claims they are technologically advanced, especially in things related to the policy.	1	1	Nodes\\Strengths\Technologically advanced

Threats	Threats are EXTERNAL things that may hinder the achievements of an organization's objectives	17	170	Nodes\\Threats
Time to prepare	Time to prepare compliant foods for students along with non-compliant foods for regular customers.	2	2	Nodes\\Weaknesses\\Product development\\Time to prepare
Too much access to food	FS suggests the government focus on the students' increased access to food.	1	2	Nodes\\Threats\\Other reasons for poor youth health\\Too much access to food
Training staff	Training staff to make compliant foods for schools when they are accustomed to the regular menu. The time and cost of doing this creates a	1	2	Nodes\\Weaknesses\\Product development\\Training staff
Unappealing to students	Nutritional foods are not appealing to students.	11	26	Nodes\\Threats\\Unappealing to students
Underlying tones		10	17	Nodes\\Underlying tones
Unknown nutritional effect	The policy's nutritional affect on students is unknown.	1	1	Nodes\\Perceived Nutritional Effect\\Unknown nutritional effect
Variety	The FS claims they have a variety of products for schools, parents, or students to choose from.	1	1	Nodes\\Strengths\\Product related strengths\\Variety
Versatility of small FS	Small services are more versatile and, hence, have an easier time competing with large FS.	1	1	Nodes\\Strengths\\Versatility of Small FS
Very upset		1	1	Nodes\\Underlying tones\\Negative tones\\Very upset
Weaknesses	Weaknesses are INTERNAL characteristics of the organization that hinder it	11	43	Nodes\\Weaknesses
Whole wheat	Whole wheat is not appealing to students.	6	12	Nodes\\Threats\\Unappealing to students\\Whole wheat
Will improve with time	FS believes their experience with the policy will improve with time.	1	1	Nodes\\Experience with policy\\Negative experience\\Will improve with time
Willingness to joke		1	1	Nodes\\Underlying tones\\Positive tones\\Willingness to joke
With conviction		3	3	Nodes\\Underlying tones\\With conviction
Working closely with suppliers	Maintaining a close relationship with those that supply FS with products.	2	2	Nodes\\Strengths\\Customer Service\\Involving stakeholders\\Working closely with suppliers

## **APPENDIX G: Nodes List**

Name	Sources	References
Nodes have been organized by SWOT analysis, the food services' experiences implementing the policy, and then the food services' perceived nutritional affect of the policy.		
Strengths	17	101
Product related strengths	15	55
Customer Service	7	9
Preparedness and awareness of policy	6	9
Process	3	6
Marketing	3	5
FS compliant	5	5
Consistent	3	4
Reasonable prices	3	3
Perceiving sales as communal and not business	1	2
Technologically advanced	1	1
Versatility of Small FS	1	1
Weaknesses	11	43
Product development	11	35
Lack of variety	1	3
FS not compliant	1	3
Lack of awareness regarding the introduction of PPM150	1	2
Opportunities	18	118
Increased business	8	20
Education	6	18
Presence of Accountability	10	16
Policy changes	6	16
Neutral thoughts	4	8
Positive thoughts	4	6
Sales	5	6
Healthier brand	4	5
Relationships	3	5
Bottom line	2	3



	Increase school budget	2	3
	Perceive as communal and not business	2	3
	Positive feedback	2	2
	Elementary students can't leave campus	2	2
	Helps parents provide healthy treats	1	2
	More variety in store	1	1
	Impact students' lives	1	1
	Extend ppm150 to FS around school	1	1
Threats		17	170
	School related	12	42
	Sales dropped	10	31
	Unappealing to students	11	26
	Lack of Accountability	9	19
	Competition	5	17
	Bottom line	6	13
	Compliance	7	12
	Other reasons for poor youth health	3	5
	Lack of parental awareness regarding child's eating habits	2	3
	Distributor disinterest	1	2
Experience with policy		18	45
	Negative experience	10	24
	Good experience	10	20
Perceived Nutritional Effect		15	53
	Positive nutritional effect	11	20
	Healthy eating starts at home	7	13
	Negative nutritional effect	7	9
	Little nutritional effect	4	4
	Non-compliant food can be eaten in moderation	3	4
	Unknown nutritional effect	1	1