

# What the World Eats

[Home](#) | [The Irony of Modern Nutrition](#) | [Unit I - Lesson Plans](#) | [Obesity and the Fast Food Culture](#) | [Unit II - Lesson Plans](#) | [classroom tools and overheads](#) | [slide shows](#) | [Recipes](#) | [References](#) |

Changes in technology over the past decade, lifestyle issues that impact the amount of time a family spends eating together, and the need for increased awareness through education need to be examined when assessing the need for change in the school environment. Today's current North American culture of a fast paced, media -driven society further influences the diet and overall health of Canadian/American youth. While parents continue to verbalize the importance of eating as a family, the realities of two-income families and the strain on their already limited time, often outweighs the practicality of eating together. This situation has led to an epidemic of obesity in American adults and is showing a trend towards epidemic proportions in today's youth as well. In light of these developments, it is important to investigate the role of teachers, educators and school policy in addressing these issues in an attempt to combat serious health problems and their future impact on the country's health and welfare organizations.

This unit is an introduction to one of many food related social issues that this course will deal with in an attempt to educate students on the significant factors that affect their lives daily. Food is an important component of everyone's daily routine, and the choices we make daily affect us throughout our lives. An understanding of the disparities between countries is essential in making informed choices about one's own eating habits. Provoking thought and discussion around issues of access that students take for granted will broaden their frame of reference.

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## Introduction

The issues facing today's youth regarding health and diet are an increasing area of concern. Today's educated young men and women are leaving the family home to live on their own with very little knowledge of the skills needed to prepare food for themselves and their families. As cited in a study by Soliah, Walter, and Antosh (2006) the two dominant reasons for being unable to prepare basic foods are; they have never been taught (knowledge barrier) and they have no interest in learning (attitude barrier). The changing social structure and communities are leading the way towards a much faster paced lifestyle, leaving less time to complete the daily practices that were once seen as routine.

Changes in technology over the past decade, lifestyle issues that impact the amount of time a family spends eating together, and the need for increased awareness through education need to be examined when assessing the need for change in the school environment. Today's current North American culture of a fast paced, media -driven society further influences the diet and overall health of Canadian/American youth. While parents continue to verbalize the importance of eating as a family, the realities of two-income families and the strain on their already limited time, often outweighs the practicality of eating together. This situation has led to an epidemic of obesity in American adults and is showing a trend towards epidemic proportions in today's youth as well. In light of these developments, it is important to investigate the role of teachers, educators and school policy in addressing these issues in an attempt to combat serious health problems and their future impact on the country's health and welfare organizations.

The World Health Organization declared a worldwide epidemic of obesity in 1997 (Report of WHO, in Starky, 2005). This critical issue affects North American students and has harsh implications on their health and well being. Education in health and nutrition, accompanied by practical skills, serves to provide young adults with a sound base from which to form lifestyle choices that will positively influence their health and the health of future generations. However, education of nutrition knowledge has been stagnant for the last two decades and has addressed the skill-based issue in only a very broad manner.

Having spent the better part of 25 years in the food service industry, in combination with raising three children, this researcher finds the issues facing today's youth regarding health and diet to be an ever-growing area of concern. This background leads to the belief that addressing this issue in the classroom provides the opportunity to educate students and provide them useful skills for the future. The objective of this paper will be to present the factors influencing the decline in food preparation skills and review the literature that suggests changes in curriculum and teaching methods have a potential for positive connections to influence student's nutritional attitudes.

### Statement of Purpose

The purpose of this paper is to review the literature related to the key factors hindering the transference of food preparation and meal planning to the youth of today; and the possible application of new curriculum to assist nutrition educators in addressing the gap. A second purpose is to use this research to develop a plan of experiential learning, which provides skill based nutrition education.

### Conceptual Framework – Experiential Learning Theory

*Tell me, and I will forget; show me, and I may remember; involve me, and I will understand.*

*(Confucius)*

John Dewey (1859-1952) emphasized the importance of education based on experiential learning in the early 20<sup>th</sup> century. Since then, experiential learning has played an important role in various types of education. It is utilized consistently in outdoor education and athletic training and as a learning theory in educational settings. Even before it was theoretically defined, it was the method favored in apprenticeship and journeymen programs and one of the most important factors in John Dewey's writings on education. In the 60<sup>th</sup> Anniversary edition of Dewey's writings on education and experience, the editors write; "Dewey proposed a school as a laboratory in which students and teachers learn together through experience and intellectual explorations of the world around them" (Day and Mabie, as cited in Dewey, 1998, p. 4). Dewey's (1938) notions of experiential education were progressive in the early part of the twentieth century and the resistance for educators to fully engross themselves in this type classroom interaction has been a slow evolution.

Dewey (1938) professed that progressive education is rooted in experience (Fairman, 2006). The key component is not simply being present for the experience; it involves a much deeper awareness and involvement in the process, as such, Dewey recognized the importance of selecting experiences to enhance learning (Dewey, 1938). He emphasizes that selection of experiences must be considered (Dewey, 1938). He noted, "The central problem of education based on experience is to select the kind of present experiences that live fruitful and creatively in subsequent experience" (Dewey, 1938, p. 28). This idea leads to the importance of continuity of experience, which further assists the learning process. As such, Dewey (1938) theorized that, "if an experience arouses curiosity, strengthens initiatives, and sets up desire and purpose that are sufficiently intense to carry a person over dead places in the future, then continuity works in a very different way"(p. 38).

In relating his work to education, Dewey (1938) emphasized the importance of the educator in a role that created learning for both the pupil and the teacher (Dewey,1938). However, while acknowledging that the educator is also a learner, Dewey did focus on the previous experience and maturity of the educator when he wrote, " The greater maturity of experience which should belong

to the adult as educator puts him in a position to evaluate each experience of the young in a way which the one having the less mature experience cannot do” (Dewey, 1938, p. 38). This progressive insight into the relationship between the student and the teacher represents an ideology of education, based not on power, but formed on mutual respect for the experiences of both the student and the teacher. Experiential learning in a kitchen involves the passing on of skills that will provide the learner with a base from which to build future skills.

This ideology is emphasized in Dewey’s (1938) interpretation of education, he wrote, “ (educators) have that sympathetic understanding of individuals as individuals which gives him an idea of what is actually going on in the minds of those who are learning” (p. 39). Connecting the experiences of the learning and understanding their capital culture allows the educator to connect to the learner in such a way as to form a bond of mutual respect for each other as individuals with the potential to learn from one another. When the subject is one that is relevant to the learner and one the learner identifies as something they will make use of in their later lives, then the learning can be recognized as a benefit to the student.

Nutrition education is a subject area that every student will have the opportunity to draw on throughout his or her lives. The experiences that help form their knowledge in this subject will have a profound affect on them how they take care of themselves and others in the future. Positive practical experiences that influence nutrition knowledge are the type of experiences Dewey believes will live fruitful and creatively in subsequent understanding (Dewey,1938).

Critics of Dewey have felt that Dewey is not concerned with the intellectual exercises of gaining knowledge but instead he “seeks a conception of knowledge grounded in action, where each person is not simply a passive consumer of knowledge but a participant – a creator and user of knowledge.” (Festermacher and Sanger, 1998, p. 468) and that, for Dewey, “people are not spectators to bodies of knowledge, that are out there somewhere. They are, rather, creators of knowledge as they engage the world beyond the self” (Festermacher and Sanger, 1998, p. 468). This criticism infers that Dewey is perhaps focusing too much on the experience and does not take into consideration the prospect of incorporating other learning methods. Sanger and Festermacher (1998) emphasized here that Dewey does not appear open to combining the method of education that is teacher centered, and that a combination of methods may in fact provide more opportunities for learning. Sanger and Festermacher (1998) also suggested that Dewey’s philosophies of experience and education need not be embraced as a single form of education, that its’ attributes can be used in conjunction with other theories of education. That in fact,

Not all who make use of Dewey’s conceptions of knowledge reject strong empiricist approaches to the social and behavioral sciences. That is, these scholars exhibit a regard for forms of propositional knowledge generated by the more formal application of scientific methods while also valuing the knowledge and knowing that arises from experience. (p. 473)

In practice, as educators apply their trade, they learn to adopt and adapt many approaches to education in order to deliver their message more effectively.

On the other hand, Rudolf Steiner (1861-1925), an educator during the same time of John Dewey, further supported this ideology, of education and experience, in his own research and developed the philosophy of education used in Waldorf education.

Speaking with teachers at the first Waldorf School in Stuttgart in 1921, Rudolf Steiner (1996) made the following observation: “Head knowledge can give nothing that is of value for human inner life. And herein lies the reason why we fail to come into touch with the boys and girls who have reached this all important moment in their lives, when they should be bringing the soul and spirit into reciprocal relationship with the bodily-physical side of their nature. How are we to find the right approach to these young people, at the hour when life itself is prompting them to try to bring their soul and spirit into connection with their physical nature? (Steiner, 1921, as cited in Fairman, p.4 )

Steiner recognized the invaluable importance of the student as an individual and the connection between doing and learning. Delivering knowledge that does not connect the student to the material is an effort wasted on both the educator and the learner. Teaching approaches used for students in their teens must be considered from an approach that will promote the most connection to the student.

Many of John Dewey’s philosophies were put into practice in the Waldorf Education system, developed by Rudolph Steiner. Steiner and Dewey, born within years of one another, had many of the same views on experiential education. As mentioned, in 1921, Steiner opened the first Waldorf School and put into practice the philosophies of experiential education that continue to be used today in this long-standing educational program.

In his paper discussing the benefits of enlivening learning for adolescents in the Waldorf Schools, Eric Fairman (2006) emphasized the importance of Dewey and Steiner’s philosophies of education and experience.

From seven to fourteen, the child’s active participation in learning appears to decrease, so that by grade six, the learning process has transformed itself into one of a more sedentary nature. It is at this stage that teachers need to seriously assess their approach, for although the syllabus for the later years introduces subjects of a more intellectual nature, it does not necessarily follow that ‘will’ imbued learning has to be relegated to a thing of the past! (pp.5)

Even as children mature and are developmentally more adept at learning in a sedentary, lecture type environment, it is not necessary to dramatically decrease active participation in learning. Education need not be restricted to a sedentary style, delivered by the teacher; in fact, the benefits of participation can assist in linking the material to the learner’s experiences and in turn serves the development of a broader frame of reference. From Steiner’s writings, *The younger generation*, (1967), quoted in Fairman (2006);

Education can be a very isolationistic experience for students, when what they experience in their 'everyday lives' does not find its mirror image within the domain of the classroom and school, and vice versa. It is important that subjects are not taught in isolation from the 'real world', in isolation from life, but rather that which is taught has meaning and relevance to life in general. (In Fairman, 2006, p. 7)

The importance of incorporating real life skills into education brings connection and relevance to the learner.

This learning theory is essential in hands on hospitality and nutrition education programs and would be the preferred method of teaching to enhance the development of practical skill in food preparation. These philosophies of experiential learning will be the lens through which the review of the research will be evaluated. Nutrition education has been taught in a manner that provides information, not practical skill. Dewey and Steiner's theories on experiential education suggest that a deeper connection can be made if the learner is completely vested in the topic. Experiential learning would tie the concepts of nutrition knowledge to that of the skills needed to accomplish healthy eating. Experience in the actual process of preparing food provides the learner with not only the basic skills but also with practical knowledge. This practical knowledge will allow the learners to understand that the factors affecting healthy eating can prevail when they have the skills to prepare food. For example, time constraints cease to become such an overwhelming obstacle if the cook has practical skill.

## Literature Review

The review of literature will look at the effect the loss of food preparation skills has on the learner and the possible degrees of retention found in nutrition education through knowledge, versus, nutrition education through practical skill. It will also investigate the manner in which educators are approaching the current health crisis through education, and what approaches are being used to best address the nutrition policies in current education. Then, the literature review will inquire into the experiential learning strategies educators have used in delivering the existing curriculum. Models that involve the principles of experiential learning will be examined for their efficiency and retention qualities.

## Influencing Factors to the Current Obesity Epidemic

Changes in technology over the past decade, lifestyle issues that impact the amount of time a family spends eating together, and the need for increased awareness through education need to be examined when assessing the need for change in the school environment. The research will look at the declining trend of preparing food at home and the rising trend of eating outside the home, and the resulting consequences.

Advances in technology since 1900 have played an important role in the changes in food preparation in modern society. In the investigation of the decrease in food preparation skills in young adults, the changing roles of women in the home and the workforce represent a significant factor. Bowers' (2000) article, *Cooking trends echo changing roles of women*, discusses the impact of technology in the kitchen as well as the changes in gender relationships. The changes in the number of women in the work force have seen a dramatic shift since 1900. In addition Bowers' noted that the percentage of married women has increased to equal all of women in the workforce. In 1900, only 20 percent of women were in the labor force, and only 5 percent of them were married. Consequently, in 1999, 60 percent of women participated in the workforce including 61 percent of married women (Bowers, 2000). This is an important analysis as it indicates a dramatic change over the last century, which could be a contributing factor to the changes in cooking skills of today's young adults. Changes in the way people eat and prepare food have contributed to the obesity epidemic in North America.

Time factors have been positively impacted by the advances in technology in the kitchen and around the house. Technology has changed dramatically in the past century. Bowers' showed a significant decrease in the number of hours women spent preparing meals and cleaning up after them. Between 1900 and 1975, the time spent preparing and cleaning up after meals decreased from 44 hours per week to 10 hours per week. This denotes a major impact due to two major changes. The first are the changes in technology found in the kitchen and the second are the changing trends towards lighter and simpler foods. The addition of electric and gas lines reaching an increasing number of homes and the increasing number of new and specialized utensils decreased the amount of labor involved in food preparation (Bowers, 2000). Bowers' (2000) noted that as early as the 1890's dry cereals were introduced as health foods to replace cooked breakfasts. The initial introduction of home economists in public high schools was a reaction to the new science of nutrition, to new ideas about efficient organization of housework, and to new appliances (Bowers, 2000). However, the forces affecting women's life choices accelerated in the 1960's and 1970's, due to the impact of labor saving household technology and the civil rights revolution. As more women moved away from the role of housewives and into what was then considered men's domain in the workforce, traditional roles began to change slowly. However, even today, women perform more of the household duties in two income families than men.

With the increase of more than fifty percent of women in the work force by 1980, the trend towards eating out had moved away from being a special occasion to that of a weekly occurrence (Bowers, 2000). In 1998, 47 percent of the food dollar was spent on food away from home, compared with only 30 percent in 1965 (Bowers, 2000). However, this article did not distinguish between families of varying socio-economic status. In his novel *Fast Food Nation*, Eric Schlosser (2000) confirms this statistic, writing, in 1970, Americans spent about \$6 billion of fast food in 2000; they spent more than \$110 billion. Such an increase in

food dollars spent on food away from home would influence significantly more on families with lower incomes. This dramatic increase over the 30-year span has undoubtedly affected food spending and eating habits. Perhaps investigating this gap would provide additional factors accounting for changing trends. Nevertheless, these changes in cooking trends have added to the knowledge and attitude barriers facing today's youth in acquiring skills that are necessary for providing adequate nutrition to their families both economically and efficiently. This lack of skill component directly relates to this research in addressing the current needs for institutions such as schools to provide hands on education for today's youth. The more people disregard eating healthy as a priority, the less they value the importance of why food preparation skills are the key to healthier eating. The key is to identify, as a society, the importance of changing today's outlook on food and nutrition. Further investigation of this literature will help identify the causes of the decrease of home-prepared meals and its affects on the growing waistlines of the population.

Lifestyle issues are affecting the amount of time a family spends eating together at home. Past studies have shown that eating together as a family, at home, has positive impact on a child's progress academically as well as their psychological performance (Gillman et al, 2000). Further investigation is attempting to determine additional impact on children's' diets and overall health. The objective of the study by Gillman et al (2000) was to examine the associations between frequency of eating dinner as a family and the extent this affected diet quality. Research involved over 8500 American girls and over 7500 American boys between the ages of 9 and 14 years, who were children of participants in an ongoing Nurses' Health Study. Race and ethnicity were not noted, however, all families were selected from a University nursing program. The study indicates that while 80 % of parents rank eating dinner together as one of the most important family activities, the proportion of children and parents eating together was not high. The portion of families eating together decreases as children grew older. Surveys that include younger children indicate that 41% - 46% of them eat together every day, compared with 27% in families of 12 – 17 year olds (Gillman, 2000). The study investigates whether there is a correlation between a healthier diet and eating together as a family at home. The study supported this hypothesis in reporting a direct link between the frequencies with which 9- to 14- year old children eat dinner with their families at home and the higher consumptions of fruits and vegetables and the decreased consumption of saturated and trans fat, soda, and fried foods. Gillman commented that the findings suggest that eating dinner as a family at home could lead to fewer ready – made dinners, which in turn results in a better-quality diet. Gillman also noted the increasing number of women in the workforce has made it more difficult for families to find the time to eat together. Regardless of the cause, the deterioration of the at home family mealtime represents a significant trend towards the loss of food preparation skills and a definite negative impact on the health and well being of today's children. This study relates directly to those issues facing families surrounding meal preparation and the affect on children's diets. It further supports the need for policy to be developed outside the home to assist the health and nutritional development of adults and children. This study, similar to other literature reviewed has either stated outright, or alluded to the idea that women's presence in the workplace is a major reason for the decline in the quality of nutrition. In other research as women's presence in the workforce increased, they have unjustifiably, been blamed for the demise of the nuclear family (Stacey, 1990, in Fensterbusch, 1994). This unjustifiable conclusion is carried forward in the decline of the family mealtime. The experiences of the individual and the connection to real life are important characteristics to consider. Connecting experience to the situation as well as practical skill are elements that Dewey would have linked together, in order to further the educational experience.

America and Canada are currently dealing with a health crisis due to the worldwide trend of obesity. The World Health Organization (WHO) recognized this worldwide epidemic in 1997. They concluded that:

Without societal changes, a substantial and steadily rising population of adults will succumb to the medical complications of obesity; indeed, the medical burden of obesity already threatens to overwhelm health services. The spectrum of problems seen in both developing and developed countries is having so negative an impact that obesity should be regarded as today's principal neglected public health problem. (Report of WHO, in Starky, 2005)

The Canadian Community Health Survey indicates that approximately 58.8% of Canadian men and women were either overweight or obese in 2004. The Library of Parliament report, *The Canadian Obesity Epidemic*, suggests "that the prevalence of overweight and obesity on Canada is not restricted to the adult population; data for children mirror the trend among adults" (Starky, 2005.p.4). The 2004 survey results for children indicate eighteen percent of children ages 2 – 17 are overweight, and an additional 8.2% are obese. The study suggests that a health approach that includes the entire population, adults and children, must be considered when determining the factors influencing obesity. This study is limited to Canadian statistics and does not provide data for America; however, trends are similar in the United States and WHO has recognized obesity as a critical global issue. However, at the time of this study, 2005, there was no definition of overweight and obesity for children, that was recognized internationally (Starky, 2005). The International Obesity task force continues to work on developing a standard weight classification for children (Starky, 2005). This relates to this research when looking at the lifestyle factors that are influencing the poor nutritional consumption of food choices made by adults and children.

Public awareness for any critical issue is an important first step in the drive forward to address such an issue. While recognized as a critical global issue, countries must then take the next step to further educate their citizens of the issue in order to begin the process towards reform. This becomes increasingly difficult when those entrenched in the situation are not as objective. In Blanzencic et al. study (2006), *How much are children and their parents objective about the children's eating behavior and body composition*, the authors addressed the attitudes of parents and children in relation to body composition and eating habits.

While this study was not based in North America it did address an important issue facing families and in particular and a cultural attitude in general. The study was carried out to investigate the nutritional status in Belgrade schoolchildren and as a

secondary objective; to compare the children and parents view about the children's nutritional status (Blazencic et al. 2006). The results indicated that of the 1555 children that completed the study, 18.1% of boys and 11.3% of the girls were obese (Blazencic et al. 2006). The most interesting finding from this research, in regards to this researcher's review, was that children were more objective in estimating their overall health than their parents (Blazencic et al. 2006). When asked about general health and body weight, the children, were more accurate in assessing themselves than were their parents. A generalized interpretation of this research could be that as a population, parents do not clearly see the health effects on their children. Awareness of a critical issue is imperative when looking at avenues for change. It is not surprising then to observe that only 4.71% of parents of children surveyed opted for the free counseling offered to deal with eating behavior (Blazencic, 2006). It is unclear whether the location of this study (Serbia and Montenegro) would account for a different view from the parents and children involved in this study. Exposure to nutrition knowledge, media and its affect on the cultural capital of the participants could be a factor in any attempt to generalize the results to North America.

In order to understand the changes in body composition of North Americans in the past decade, much research is being done to determine the factors that have influenced the current eating habits of Americans, in hopes that solutions will result from this information. The popularity of dining out has had significant impact on the diets of North Americans, especially children and diet choices may be exacerbating the trend toward increasing obesity and other health problems among the Nation's young people (Lin, 2001). Two studies by Lin et al. (1998, 2001) of the Economic Research Service of USDA, focus on these exact issues. Both articles used data from USDA's food consumption surveys from 1977-1994 for Lin Guthrie, and Frazao (1998) and 1977-1998 for Lin et al. (2001). The changes in where children obtain their food affects their food choice and therefore the type of food chosen has a direct affect on their diet. Lin et al. noted that in 1978-78, 10% of meals eaten away from home were purchased at fast food restaurants. The increase in fast food purchases has increased three-fold to 33% in 1994-96 (Lin et al., 2001). The increase in the number of fast-food operations and the accessibility of fast food is clearly represented in these statistics. In 1977-78, children consumed 80% of the calories from food served at home (Lin et al. 2001). In 1994-96, the amount of food eaten at home decreased to 68% (Lin et al. 2001). The trend of more frequent dining out can be seen in the decrease of food eaten at home.

Although it appears contradictory, there has been a positive influence in the fat intake of children since 1977. The study showed that since 1977 children have reduced their fat intake from 39% to 33%(Lin et al. 2001). The School Meals Initiative for Healthy Children showed decrease in fat intake since 1994, however, results in 1999 still indicate that fat intake in school meals exceeds the recommended level (Lin et al. 2001). The positive attributes of the School Meals Initiative for Healthy Children will be addressed later in the literature review.

Lin et al. (2001) also accessed the USDA's sodium consumption levels, and noted that; sodium intake continues to rise in epic proportions. Children in the 2- 17 age range continue to exceed sodium intake by three times the recommended amount (Lin et al. 2001). While obesity is a critical issue, health risks due to too much salt, must also be addressed when looking for solutions in eating behavior.

This study, *American children's diets not making the grade* from the Economic Research Service of USDA (Lin et al. 2001), identifies two challenges to be met, the first, to "increase the intakes of some nutrients and food components, such as fiber, calcium, and iron, and second; to limit others, such as fat, saturated fat, cholesterol, and sodium" (p. 16). They concluded;

Away from home foods are no longer the occasional treats they were two decades ago. Children and their parents need to recognize away-from-home foods for their effect on the overall diet. Furthermore, since eating out is expected to continue trending upward, nutrition policy, education, and promotional strategies need to stress the importance of making wise food choices when eating out. (p. 16)

These conclusions support the premise that education and nutrition policy must work together to promote change in the fast food culture of the 21<sup>st</sup> century. This study did not distinguish between additional factors that contribute to the increase in fast food consumption, such as time management, income level and socio-economic background, in particular the relative expense of fruits and vegetable compared to the filling the hunger gap with fast-food.

Building on the impact of women in the workforce, it is also important to look at how income level affects families' constructions of time for food preparation and eating habits. Socio-economic status is a key component of most critical issues and obesity and its health issues are no exception. The objective of a study of Jabs et al. (2007), funded by the National Cancer Institute, was to develop an understanding of how employed mothers constructed time for food provisioning for themselves and their families. This study involved interviewing 35 low-waged employed mothers varying in occupation, race/ethnicity, household composition, and age. The study incorporated a comprehensive range of working mothers, from the ages of 25-51 years old, from a relatively even distribution of Black, Hispanic, and White ethnicities (Jabs et al., 2007).

As seen in other studies, time was the significant contributing factor that negatively affected mothers' preparation of food for their families. Results indicated that single mothers, those who were solely responsible for childcare, cooking, and other household tasks, felt the greatest issues of time scarcity (Jabs et al., 2007). Time scarcity was overwhelming for these mothers while mothers with older children were impacted less (Jabs et al., 2007). Similarly, mothers with more flexible work schedules also had greater personal flexibility that limited their feelings of time scarcity (Jabs et al., 2007). Due to the pressure of yet another chore to carry out, "Many mothers saw cooking as just another task that was a barrier to other activities, and they wanted to complete it as quickly as possible. With such a view, cooking is neither pleasurable nor a way to express creativity or identity through food."(Jabs et al., 2007, p.23) The current fast-paced environment leaves little time for parents, in particular mothers; to think

coherently about the food choices they are making for their families. Jabs et al. (2007) concluded that; “The current study suggests that mothers recognize that convenience food and fast food may not be the most healthful food choices, but these types of food help them meet their priority of feeding their families in a time-scarce environment”(p.24). Healthful food choices can be time saving as well, however, it is as much a conscious lifestyle choice as it is a search for more time. This study did not recognize other primary caregivers other than mothers. It focused on working mothers and the impact of time on their schedules and lifestyles. This indicates a bias against the contributions men make in the household.

This is not to say that time constraints are not a significant element, they are, and are themselves affected by many factors. Income level and the number of parents in a family are two of the most influencing factors when determining the amount of time available for food preparation. The effects of poverty on nutrition are significant and the addition of the time factor adds additional pressure. Rose (2007) contended that time constraints should be an important aspect of nutrition policy in the U.S. His research indicates, “Several empirical studies have shown how poverty rates differ from official rates when time is considered, confirming highest rates are for single parents.” (p. 227) This is explained in his analysis of a nation wide American food program; The Thrifty Food Plan, which provides assistance in the form of food purchases for families living in poverty. The Thrifty Food Plan: (TFP) is an estimate of a market basket of food, each designed for a specific age-gender group (e.g. 19-50years old). The cost of the basket is calculated each month and provides the basis for inflation adjustments to the monthly allotments received by participating households. The bases of these costs are that all food and snacks are purchased at stores and prepared at home (Rose, 2007). Since the TFP is based on the premise that raw food items are prepared at home, there is a significant gap in determining how much time these families have to prepare raw food products (Rose, 2007). As the food basket is based on food that must be prepared, it follows that time and preparation skill is therefore necessities when implementing this program.

The weekly plans do contain suggestions for meals and include many recipes, however, Rose (2007) determined that the cooking and preparation times averaged 16.1 hours per week for the recipes provided, not including shopping and clean up. Rose’s further investigations into the current amount of time spent cooking, cleaning, and shopping, suggests that women spend a lot less time in meal preparation than is thought to be necessary by TFP (Rose, 2007). The amount of time accounted for in the recipes that accompanied is an estimate of time necessary in preparing food. Many recipes suggest guild lines of time allowances in the recipe text; however, this is generally the maximum amount of time required to complete the tasks. The chart from Rose’s article is entitled, Food stamps, the thrifty food plan, and meal preparation. (Appendix A)

The importance of time dimensions for US nutrition policy, clearly shows two important facts. The first is the discrepancy in the fewer number of hours workingwomen have to prepare, clean up and shop. The second is the significant decrease in the number of hours both working and non-working mothers spend in the kitchen since 1965.

The structure of North American society has changed dramatically in the past two decades. As technology has increased so to has the pace of our daily lives. Our outlooks on time and convenience have kept pace with today’s rapidly evolving culture. The way we look at food is one of the major perspective shifts in the 21<sup>st</sup> century. Betts et al. (1997) surveyed 1475 young adults between the ages of 18-24 in an attempt to understand how young adults view food.

This quantitative study, surveyed young adults in seven states, through a questionnaire designed to measure commonly stated factors that influence young adults’ food intake. The mean age was 21 years old, of which 635 were male and 780 were female.

Similar to this researcher, Betts et al. was interested in identifying nutrition education methods that will be more successful for young adults. The limitations for this survey were racially based, as 88% of the sample was white. The survey did focus on a lower income level, as 70% of the sample reported income under \$15,000 (Betts et al., 1997). The findings determined that the overall value to this age range was convenience. The largest division from the respondents was based on education. Different outlooks were noted between those young adults no longer in school(either in the work force or unemployed) and those still pursuing post secondary education. Nutrition was valued more by young adults who were students in post secondary school, while for non-students (those who were working or unemployed), eating nutritious was less important than feeling full (Betts et al., 1997). The frequency of eating out appears to be consistent with other research, however, while the average for eating fast food was three times per week, the highest reporting in this category was striking, at 40 times per week. The author believed that improving the outlook on nutrition would serve this age range well.

“The 18-24-year-old age group is also one that will be responsible for their own children’s food habits. It is unknown whether young adult food intake patterns change with increasing age or with child rearing, but it would seem prudent to assume that attempts to improve the dietary intake of young adults could have positive effect on later food intake and on their children’s food intake.” (Betts et al. 1997, p.78)

The literature reviewed indicates that there are many impediments facing food consumers when making healthy food choices and in juggling time and money to prepare food. Since 1997, when the declaration of a world wide obesity epidemic by WHO, both Canada and the United States have looked seriously at addressing this issue. Initiatives have been taken in many areas and public awareness has increased due to ongoing research and the delivery of this research to the public. This raised consciousness is a slow moving struggle, much like the battle to address the negative health risks associated to smoking in the past 50 years. The struggles to educate consumers over the horrible affects of smoking have been lengthy and costly. Accordingly, various programs are currently in place to assist consumer education about the health factors related to obesity and over eating.

Education and public awareness go hand in hand when tackling sensitive critical issues such as this. Nutrition has long been addressed in the public school system in both Canada and the U.S. Canada's Food Guide, and the American version My Pyramid, have been taught as part of both elementary curriculum for decades. However, this has not been sufficient to offset the changes in lifestyle that have contributed to the health issues of weight gain and obesity seen today. Programs that are more aggressive are called for to address this situation. A change in the way society value food and health begins with a level of grass roots education. Since 1999, The Society for Nutrition Education has attempted to focus on the bridge, the connection, between agriculture and health. Making nutrition more relevant means connecting it to the problems people see (Clancy, 1999). Programs currently in place are addressing some of the issues outlined in the first half of this literature review. The following three programs will be presented in order to examine the types of programs currently in place to tackle food and nutrition issues in schools; *Healthy People 2010*, Cooking with a Chef program (CWC), and School Meals Initiative for Healthy Children. The review will then concentrate on the current self-efficacy of teachers in Canada and examples of constructive educational tools used in popular culture.

*Healthy People 2010* is a comprehensive set of disease prevention and health promotion objectives for the Nation to achieve over the first decade of the new century. It was established by the U.S. Department of Health and Public services. Since, "a healthy diet is considered a critical pathway in influencing chronic conditions such as hypertension, diabetes, cardiovascular disease, cancer and obesity" (Viswanath and Bond, 2007, p. S20), the federal government, as a part of its *Healthy People 2010* goals, has identified as a critical objective an increase in the proportion of children and adults who consume fruits and vegetables (Viswanath, 2007). The chart (Appendix A) details the goal of Healthy People 2010 for overweight and obesity in the United States.

The potential for achieving these goals within the next year and a half seem unlikely. Realistically, Healthy People 2010 will need to re access its initiatives and continue to pursue its goals. This program focuses on public health communication and identifies a number of factors that contribute to poor communication. Viswanath et al. (2007) note that there is substantial evidence to indicate that public health communication can be successful in preventing risky behaviors and promote healthy behavior as observed in smoking and cancer education.

The study focused on social determinants to examining diet and communication and determined socio economic status (SES) as a factor, relating to education, income, and occupation (Viswanath et al., 2007). These factors have not yet been overcome in a sufficient manner to accomplish the desired objectives of this program. While the program has identified that education, income, occupation, and race and ethnicity, require different delivery methods it has not made satisfactory headway as of yet, and does not provide examples of proficient methods.

The research however is helpful to educators as it provides evidence that a variety of methods need to be developed in order to reach specific socio-economic and cultural groups. Viswanath et al. (2007) confirmed these findings. Education level affects the cognitive skills necessary to process nutritional information. While, income level has a direct correlation to the resources necessary to purchase communications and the higher cost of fruit and vegetables.

Addressing campaigns for geographical areas and race and ethnicity is also identified as a key concern. Some of the concerns identified were, the delivery methods of message, the need to culturally tailor messages to be consistent with beliefs and values, to provide education to modify dietary practices based on cultural or traditional foods that are not as healthy and to provide alternatives for lower fat and sodium versions. (Viswanath et al., 2007)

This study recommends continued research into more effective ways of communication. However, other assessments of the program criticize this approach and feel a more significant effort should be made to deliver solutions that are more practical. Freeman in her paper on *The Oppression of Fast Food* (2007) referred to this initiative in a negative manner she stated that;

Healthy People 2010 identified lack of information as the main source of health problems related to poor nutrition and declined to take a more active role in providing healthy food to communities with inadequate access to it. The report assumed that people are willing and able to make healthy choices, an assertion that reflected a reluctance to intervene in a realm traditionally considered a matter of private responsibility and choice." (p.2241)

This criticism is consistent with the idea that simply providing the information is not the most effective way to encourage change. Education that provides a stronger skill base, while incorporating methods that deal with the varying factors can provide a base for learning that does not isolate the learner from the knowledge.

The National School Lunch and Breakfast Program was introduced in 1946, when concerns about hunger among poor school children were identified (Henry, Allison, Garcia, 2003). It has provided assistance to American school children ever since. Within the United States, there are over 26 million children who receive school lunches every day (Stang et al, 1997). Many changes have been made to the program over the years. The changes made to the Dietary Guidelines for Americans, prompted the USDA to introduce the School Meals Initiative for Healthy Children. This initiative required all schools that participate in the National School Lunch and Breakfast Program to comply with new menu standards, based on the Dietary Guidelines for Americans (Stang et al, 1997). Stang et al. research focused on the current practices, perceived barriers and the future training required to meet the

## U.S. dietary guidelines.

In this study, Stang et al. reviewed the data on continuing education for food service staff. The objectives of the study were;

1. Determine changes already in place,
2. Identify barriers staff faced from making changes,
3. Identify self- perceived training needs of school food service staff,
4. Determine the amount and type of nutrition education food service personnel provide in school,
5. Identify the barriers that prevented food service staff from providing nutrition education (Stang et al., 1997, p. 152).

The staff identified that consumption of at least five fruit and vegetables was rated as important (Stang et al. 1997). However, they identified a number of barriers to delivering these items under the dietary guidelines. The barriers identified were; poor acceptance on the part of the students to lower fat and sodium reduced foods, higher food cost of more nutritious items, and the lack of time to prepare them (Stang et al., 1997 ). Barriers to providing nutrition education was noted by the managers and directors of these programs, “83.2% of directors and 88.2 5 of managers said they did not have enough time to provide nutrition education.”(Stang et al., 1997, p.154) Interestingly, no differences were noted due to school location, size, type, or staff position title (Stang et al. 1997).

Positively, the majority of school food service personnel reported having made changes to school meals in the past five years and over 51% reported that their schools were being monitored to determine compliance. The period of this study is significant here because enforced compliance most likely projects that compliance percentages will have risen in the past 10 years.

Stang et al.'s study focused on the food service personnel responsible for making the food for the National School Lunch and Breakfast Program. It did not look directly at the nutrition education of the educators and students. However, the examples set within the school itself have a direct impact on what children learn. Since, children learn through their environment the impact of the National School Lunch and Breakfast Program is experienced by the children involved. Further criticism to this program concerns the types of food offered in the program. Freeman (2007) criticizes this program because her own research indicates that, the fast food sold in high school cafeterias is not subject to the same nutrition standards that govern meals sold under the National School Lunch Program (Freeman 2007). The schools offering the National School Lunch and Breakfast Program must comply with the Dietary Guidelines for Americans; however, school cafeterias are not bound by the same legislation (Freeman, 2007). The only federal regulations on competitive foods and beverages prohibit the sale of "foods of minimal nutritional value" (i.e., carbonated soft drinks, chewing gum, water ices, and certain candies made primarily from sweeteners) in the food service area during school meal periods. However, foods of minimal nutritional value may be sold outside the cafeteria at any time (O'Toole, Anderson, Miller, Guthrie, 2007). Providing easy access to unhealthy foods in the school environment appears contradictory to programs whose goals are to increase the fruit and vegetable consumption of today's youth.

In 2007 Michaud studied the effectiveness of culinary and nutrition education programs and determined, “There is an apparent need for nutrition education to go beyond MY Pyramid and the 2005 Dietary Guidelines for Americans, with collaboration between dietitians and culinary professionals in teaching skills necessary for applying dietary recommendations through hands-on, skill building cooking activities.” (Michaud,2007, p. 19) In Michaud's (2007) review of obesity in America, she notes that from 1985 to 2000, Americans increased their caloric intake by 12% or approximately 300 calories per day. Weight gain occurs when the body takes in more calories than it uses during any given day. An increase of 3500 calories will result in a one-pound weight gain. A 12 % increase in calories, without sufficient activity to burn these calories, will affect a person's weight.

Michaud's (2007) research confirms the barriers to healthy eating detailed earlier in this paper. She finds that,

Families in the lower socio-economic strata are especially susceptible to barriers that inhibit consumption of a healthy diet. Limited access to healthy food items, restrictive food budgets, personal and family food preferences, minimal or incorrect information about dietary recommendations and time are all obstacles these families face. (Michaud, 2007, p. 21)

These barriers are becoming the focus of current studies as an area of growing research in the field of nutrition education. There is a limited but growing body of research examining the effect of cooking behaviors on diet quality. Michaud explains that; some studies have simply used questionnaires to evaluate participants' food preparation skill level and knowledge, while others demonstrate that including a hands-on cooking element in nutrition education interventions may have a positive effect on dietary quality (Michaud, 2007).

Michaud focused on a program that incorporates nutrition education with cooking skills at Clemson University. The program, entitled Clemson University Healthy Eating Food Specialists (CHEFS) offers Cooking with Chefs. CWC sessions are lead by a professional chef and a dietitian who facilitate hands-on cooking activities and nutrition education discussions (Michaud, 2007). The goals of CWC are to increase consumption of fruits and vegetables, increase self-efficacy for and incidence of home meal preparation, and increase the use of herbs and spices to reduce the use of salt (Michaud, 2007). This program focused on low income earners of preschool children. It was analyzed in a quantitative manner to determine the effectiveness of learning cooking skills in a hands-on manner, as well as, whether self- efficacy improved with the presence of a chef as facilitator (Michaud, 2007).

Data analyzed from this qualitative evaluation of CWC indicated that there was a “high level of potential in the CWC program for building self-efficacy, changing the home environment by improving availability and accessibility of produce, and increasing the frequency of at-home cooking with fruits and vegetables.” (Michaud, 2007, p. 39) Research also suggested that

increased awareness and knowledge of fundamental cooking and nutrition topics, culinary skill improvement, and diet-related behavior changed results from active participation in CWC (Michaud, 2007).

This study did not distinguish race or gender as factors in its analysis. It is unknown whether the parent population was comprised of both parents or only one. In addition, it was aimed at parents with young children, not teens or young adults. However, parents of young children are an important focus for determining the nutrition levels of children and how the impact of practical skill can affect the method of delivering healthy food.

Michaud (2007) summarized that preliminary findings indicated that building cooking skills may not only lead to an increased incidence in cooking at home, but may also lead to increased consumption of fruits and vegetables (Michaud, 2007). “Additionally, gaining and improving skill in the kitchen can lead to greater self-efficacy, improved knowledge, and increased interest in cooking activities” (Michaud, 2007, p. 39). She further concluded that;

An examination of intervention programs with nutrition education and hands-on cooking lessons indicates that the public’s ability to follow dietary recommendations may be impaired by their lack of food preparation knowledge and skill. For those programs that do include cooking activities, participants have shown increases in skill development, knowledge about cooking, frequency of cooking at-home, and consumption of produce. Therefore, facilitators of nutrition education programs should seek to include interactive cooking activities for participants to develop necessary skills for sustaining healthy, balanced diets. (Michaud, 2007, p. 26)

Michaud’s (2007) conclusion supports the ideology of incorporating practical skill with food and nutrition education. Cooking with a Chef is one of the few programs currently operating to support nutrition education in this hands on manner. Studies that emphasize the benefits of experiential learning in the capacity of food preparation skills; provide a retention level that when connected to the learner’s lifestyle, has deeper meaning and relevance to the learner.

A 2007 study of 103 pre-service teachers at a Canadian university offers an idea of the knowledge base teachers in their 20’s are bringing to the classroom. The majority reported a high fat intake (65%) and a mid to low nutrition level (72%) (Rossiter et al. 2007). The authors investigate the impact the school environment affects healthy eating. They reference a number of publications to support the role of the school environment, the role of school nutrition policy, and the role of the teacher as important influences on students. The results indicate that the personal health practices of the prospective teachers surveyed might act as barriers to positive role modeling for students. There is standard for nutrition self-efficacy in teacher education, therefore, educators are not equipped with the content knowledge of nutrition education to either deliver curriculum or act as positive role models for students. In addition, they conclude that prospective teachers may lack the knowledge to achieve self – efficacy in nutrition, therefore affecting their ability to teach without a strong background in the content knowledge. Rossiter et al (2007) further concluded that including a compulsory nutrition component in comprehensive health education curricula would assist teachers in developing competence. This survey made assumptions that teachers, as role models, should take on this additional role of representing healthy eating habits. This leap from teacher to health or fitness role model is not one that is necessarily accurate. Teacher education programs do not have the capacity to address all critical issues in the classroom, nor can they provide proficiency in all these areas.

#### Examples of educational tools used in popular culture

Popular perception of the obesity epidemic has not yet reached the level of societal concern similar to the awareness of other critical issues. In Freeman’s (2007) writing on *Fast Food and Oppression*, she makes a poignant comparison between the tobacco industry and the fast food industry.

Popular perception of the tobacco industry as diabolical was a crucial element of the struggle that eventually led to smoking regulations, substantial lawsuit settlements, and a decrease in cigarette-associated deaths and diseases. Consumers are only beginning to see the fast food industry as similarly malevolent with the help of media exposes.” (Freeman, 2007, p. 2251)

Not until a complete understanding of the issues is promoted and publicized, will communities truly understand and embrace the health risks of unhealthy eating and obesity. The battle to educate consumers of the negative health affects related to smoking has been an ongoing battle for over 30 years. Similar dedication to education is necessary in nutrition education. Since, the year 2000, there has been a drive to educate and expose these issues through popular culture. As a teacher and parent of middle and secondary school children, this researcher has seen the use of these materials first hand. [Fast Food Nation](#), [Super size Me](#), and [The Sign of the Burger](#) are examples of teaching methods currently used in classrooms for cross curricular and nutrition education. While observing in a grade 7/8 classroom in South-western Ontario, this researcher realized the positive influence this type of material has on young adults.

In 2001, Houghton Mifflin published Eric Schlossler’s controversial novel, [Fast Food Nation](#). This novel, was the catalyst in exposing the harmful effects of fast food to the public. Followed shortly by a documentary of the same name, it provided consumers a detailed look at the practices of fast food corporations. The following year, another book, [The Sign of the Burger](#), by Joe L. Kincheloe, was published, discussing McDonald’s and the culture of power. [Super Size Me](#), was a low budget documentary created by Morgan Spurlock, who endeavored to eat only McDonald’s food for one month and measure the effects on his health and well being (Freeman, 2007). “To the dismay of his doctors, his vegan girlfriend, and the filmmaker himself, Spurlock’s health rapidly deteriorated and the movie featured sharply poignant images such as Spurlock vomiting in the car in the middle of his

lunch. *Super Size Me* did very well for a documentary in its theatre release” (Freeman, 2007, p. 2252). These novels and documentaries provide significant insight into the social justice issues of corporate power and the uninformed consumer.

Eric Schlosser’s *Fast Food Nation* also had a strong impact on the public perception of fast food companies. Schlosser took a broad look at fast food, examining the content and quality of the food and its effects on society, from obesity to food poisoning (Freeman, 2007). “It further exposed harmful food production techniques, bad corporate practices, and the global impact of fast food.” (Freeman, 2007, p. 2253) These examples of popular culture have the potential to convey a strong message to students. As an education tool, these products deliver extremely powerful statements. For example, from Schlosser’s (2000) work the reader learns that;

In 1970, Americans spent about \$6 billion of fast food; in 2000, they spent more than \$110 billion.

Americans now spend more money on fast food than on higher education, personal computers, computer software, and new cars.

In 1960, the typical American ate 81 pounds of fresh potatoes and 4 lb of frozen French fries. Today the typical American eats about 49 lbs of fresh and 30 lb of frozen French fries (Schlosser, 2000).

Incorporating the social justice issues presented in these works of literature with nutrition education, the teacher of this grade 7/8 class was able to relate directly to real world issues that were important to students. In a follow up visit with the class a year later, this researcher was informed that 5 of the 14 students had become vegetarians and were continuing to embrace this lifestyle. This example is limited to a small number of students, as the class size was only 14 children. In addition, this program’s mandate is to ensure that scholastics, arts, and global education are the pedagogy that drives this program of choice in the Hamilton Wentworth District School Board.

The use of popular culture in the classroom and programs such as *Cooking with a Chef* have proven to be very effective in educating youth and young adults about the importance of healthy eating and the effects of poor nutrition. Overall, the studies conclude that more must be done to combat this current obesity crisis and the literature reviewed agrees that changes in policies must be addressed in order to accomplish this goal. Freeman (2007) sums up the next steps for government. Freeman advocates for strong government influence to:

Acknowledge and terminate its complicity with the fast food industry.

Nutrition education beginning with a racially inclusive and vegetarian revision of the federal food guidelines.

Support nutrition programming that targets areas affected most by health crisis.

State government should ban junk food from schools (Freeman, 2007).

These first steps are supported by much of the literature that has been reviewed here and can be related to Dewey’s (1938) learning theory that advocates the connectedness of the material to experiences that are relevant to the learner.

### Conclusion

Today’s current North American culture of a fast paced, media -driven society, further influences the diet and overall health of Canadian and American youth. While parents continue to verbalize the importance of eating as a family the realities of two-income families and the strain on their already limited time, often outweighs the practicality of eating together. This situation has led to an epidemic of obesity in American adults and is showing a trend towards epidemic proportions in today’s youth as well. Patricia Michaud’s (2007) recommendation that facilitators of nutrition education programs should seek to include interactive cooking activities for participants to develop necessary skills for sustaining healthy, balanced diet; makes sense when connected with John Dewey and Rudolph Steiner’s theories regarding education and experience. The experiences of learning food preparation skills will create positive retention of these skills because they are connected to students’ lifestyles. Freeman’s (2007) second recommendation, that nutrition education beginning with a racially inclusive and vegetarian revision of the federal food guidelines, in practice, suggests that the education environment must be reflective of cultural capital of the learners. Providing learning experiences that are adapted to the specific cultural capital of targeted audience will have greater impact on the learning.

The recommendations reinforced by Michaud (2007) and Freeman (2007) support this researcher’s ideology regarding the importance of learning life skills that carry through with maturity and the perceptions of fast food that must be addressed when educating the public regarding the health risks that arise from unhealthy food choices. Attempting to change such an ingrained ideology, as represented by the fast food culture, and the current lifestyles that have contributed to the obesity epidemic, is a daunting task. However, the literature indicates that the issues are of critical importance. Therefore, steps must be taken to convey this message to the forefront of popular society.

## Definition of Terms

**Overweight and Obesity:** Overweight and obesity are defined as abnormal or excessive fat accumulation that presents a risk to health. A crude population measure of obesity is the body mass index (BMI), a person's weight (in kilograms) divided by the square of his or her height (in metres). A person with a BMI of 30 or more is generally considered obese. A person with a BMI equal to or more than 25 is considered overweight. (Obesity, retrieved from WHO website, June 27, 2008)

**Food preparation skills:** Basic cooking and baking skills required to prepare well balanced healthy meals

**Nutrition education:** Understanding the components of the MyPyramid or Canada's Food Guide and the significance of vitamins, minerals, fats, carbohydrates, proteins, and caloric intake.

**Experiential education:** A philosophy of education that focuses on the transactive process between teacher and student involved in direct experience with the learning environment and content. (Wikipedia, 2008)



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