2005

Children and healthy eating: A global, policy and school curriculum perspective

Erica Logan
Edith Cowan University

Recommended Citation

Logan, E. (2005). *Children and healthy eating: A global, policy and school curriculum perspective.*
https://ro.ecu.edu.au/theses/1569

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CHILDREN AND HEALTHY EATING: A GLOBAL, POLICY AND SCHOOL CURRICULUM PERSPECTIVE

Erica Logan

Student No: 3021956

This portfolio is presented in partial fulfilment of the requirements
for the degree of Doctor of Education

USE OF THESIS

The Use of Thesis statement is not included in this version of the thesis.

ABSTRACT

Healthy eating is a topic most people would consider they have an understanding of, yet it is an area which is not often addressed from a critical perspective. Healthy eating is freely discussed in society. It is a dominant discourse used commercially and frequently appears in educational 'texts', however the discourses surrounding healthy eating for children are not well analysed and are most often controlled by the media and often not challenged. A critical perspective to children's eating is adopted for this portfolio and multiple perspectives bought to bare regarding the globalisation of food cultures, and governance and policy influences on healthy eating for children. Healthy eating for children is presented and problematised as a concept while family changes in eating patterns and curriculum influences are interpreted and challenged through the development of a case study investigation of an educational intervention. Findings of the intervention indicate that families are struggling with the notion of healthy eating through a range of parental pressures whereas and any additional assistance regarding healthy eating for children is well received by parents and accepted by children.

DECLARATION

I certify that this portfolio does not, to the best of my knowledge and belief:

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ACKNOWLEDGEMENTS

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INTRODUCTION

Healthy eating is a term that most people would consider that they know the meaning of. Some would say it means salad and carrot sticks, others might view that as a definition for healthy eating in adulthood, but think that kids can/should eat whatever they like. Nutritionists would suggest that healthy eating is eating a well balanced diet incorporating the messages of the dietary guidelines (Health Department of Western Australia, 2003). But isn't utilising the convenience of fast food outlets to preserve sanity around meal times good for mental health? Maybe 'healthy eating' is a combination of all of these things. Certainly, it is a term that needs to be questioned and explored critically. Like 'health', healthy eating is something that needs to be recognised as an historically, socially and culturally constructed phenomenon. This opening chapter focuses on that construction and at the same time problematises, issues that are key to the interest in 'healthy eating' in children. It also introduces the case study presented in this portfolio, which addresses children's healthy eating in regard to school lunches and snacks and in so doing directly connects with contemporary concerns relating to 'overweight' and 'obesity' in children.

A Cultural Change - Are We Getting Heavier?

Hope (2002) and Pirani (2002) suggest that the claims that we are all getting fatter, regardless of age, sex, class, ethnicity or nationality, have been received, if not with glee, then at least with enthusiasm by people championing a startling diversity of causes. Some geneticists have claimed that fatness is primarily a problem for molecular biology and, not surprisingly, implore governments to direct more research funds their way. Neo-Darwinists have announced it as proof that our modern lifestyles are out of step with our prehistoric and biologically determined natures (Engel, 2002; McMichael, 2002). Family values

advocates have seen the obesity issue as yet another lamentable outcome of fragmented modern families which they claim no longer partake in wholesome, communal family meals nor take time to enjoy idyllic (kilojoule burning) walks and picnics (Gard, 2004, Shanahan, 2002). On a global perspective obesity is for some people, another ill which can be blamed on multinational corporations and globalisation of culture.

As indicated above, there is an obvious willingness in both popular and academic literature to accept the proposition that an 'obesity epidemic' is sweeping the world. It is portrayed in a manner that, 'if you are not careful you too might catch it' (-if you haven't already got it). Yet, this scare mongering and use of terminology may not be what is needed to assist people live healthy lives. Gard (2004) pursues the argument that the idea that Western societies are in the grip of a generalized crisis of obesity, affecting 'everyone everywhere' is at least controversial and probably mistaken. Having said that there is no doubt that obesity has increased dramatically over the last 20 years. The message surrounding the issue needs to be more strategically considered and promote healthy eating equaling a healthy life. The language therefore around the issue and messages being promoted need careful consideration.

For the number of children who are classified as overweight, and the increasing number of children who are obese, the literature and media surrounding the health issue is causing more negative impact for the people who are overweight than the actual medical impact of being overweight. Headlines such as, 'Aussie alert as fat kills 3 yo girl' [sic] (Maiden and Pirani, 2004); 'Obesity fight hardened by soft drink' (McKimmie, 2004); 'Kalgoorlie-Boulder fast food capital' (Buckley-Carr and Tickel, 2004); 'Soft drinks linked to cancer' (O'Leary, 2004); 'UK choking on fat, says shock study' (Marsh, 2004); 'Healthy menus a fat joke – why your kids may as well eat McDonald's and KFC instead of 'health foods' from the school canteen' (Wilson-Clark, 2004); and 'School lunch key to beating obesity' (Kramer, 2004) play a part in generating/reaffirming particular perceptions about food and nutrition in the community. Meanwhile, major international and national health groups, the World Health Organisation, the Commonwealth Department of Health and Ageing, the National Health and Medial Research Council, the Australian Medical Association, and National Heart Foundation, consider obesity to be among the most urgent health priorities for the present and future. This position is based on a growing body of research

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highlighting obesity as being at 'epidemic' proportions and associated with considerable adverse health effects, resulting in many life years lost to death and disability, and a great cost to health systems and economies, not to mention the social effects within society (Egger, Raza, 1999; Egger and Swinburn, 1997; Gill, 1997; James, 1992; Swinburn, 2003; Swinburn, Garner and Wooley, 1997).

Global evidence of the impact of overweight and obesity was presented on May 22 2004, with the World Health Organisation, World Health Assembly adopting the *'Global Strategy on Diet, Physical Activity and Health'*. More than 80 countries provided input to the strategy as well as global organisations such at the United Nations and World Bank. The Strategy provides an outline and focus for nations for the future to recognise and address the issue of obesity and physical activity. Obesity is being measured in Asia, a continent that has not in the past been associated with obesity, and are now also showing signs of increasing childhood obesity. Australia now has the second highest rate of childhood overweight and obesity in the world and it has since been identified as an issue of national health significance (Catford & Caterson, 2003). In Australia the Commonwealth Government has established a standing committee to curb the increasing trend of obesity and most States and Territories have similar focuses for physical activity and nutrition.

The United Kingdom has moved to ban advertisements for junk food during children's television programs as the British Government tries to reduce obesity in the young (Hennessy, 2004). Mr John Reid, Britain's Health Secretary at the time, banned companies from targeting children with advertisements for a range of 'unhealthy foods', including burgers, crisps, fizzy drinks and sweets. This action follows the report that a three-year-old British girl weighing 38kg died from heart failure brought on by obesity (Marsh, 2004). In Canada, the report 'Improving the Health of Canadians 2004', focuses on obesity and concedes that obesity has a major impact on the burden of disease in Canada and that obesity is not just a problem for adults in Canada, but is also having an impact on children's health (Canadian Population Health Initiative, 2004).

What is Healthy Eating in Children?

Everyone knows the answer – don't they? A variety of fruits and vegetables, lean meats, dairy and grains – isn't that what children need? The National Health and Medical Research Council (2003) identify healthy children as those who enjoy a wide variety of foods – especially breads, cereals, vegetables, fruits and protein, rather than higher fat, energy dense convenience foods. However, the literature around healthy eating in children has become circus like. One advertisement titled, 'Fighting childhood obesity should be child's play', talks about helping parents to 'fight' the battle of the bulge for their children (DiMallina, 2003). These discourses create a level of fear and helplessness in parents and the community in general, and they do not provide rational solutions.

Four Government funded reports provided the basis for the development of a new Australian Food Guide: The Dietary Guidelines for Australian's (NHMRC, 2003), the Dietary Guidelines for Children and Adolescents (NHMRC, 2003), the Recommended Dietary Intakes for use in Australia (NHMRC, 1991), and the Role of Polyunsaturated Fats in the Australian Diet (NHMRC, 1992).

The Australian Guide to Health Eating (2003) was developed to establish and improve health and nutrition understanding and behaviour in Australia (Figure 1). Prior to this the five food groups was Australia's food selection guide. Most people would be familiar with the five food groups, carbohydrates, fat, protein, dairy, fruits and vegetables, and some people would be familiar with the healthy eating pyramid (Figure 2). The need for review of the guidelines was brought about by the increasing concern about diseases of 'over consumption' (Department of Health, 2003). For example, obese children may have a range of medical conditions including; hypertension, dyslipidemia, and Type II Diabetes and other problems such as musculoskeletal discomfort, obstructive sleep apnoea, heat intolerance, asthma and shortness of breath, which greatly affect their lifestyle (Must, Spadano & Coakley, 1999). Medical conditions are accompanied by social implications – a lack of social acceptance, athletic competence and 'inferior' or seemingly 'unacceptable' physical appearance are well known to obese children and affect their sense of social and psychological wellbeing (Strauss, 2000).
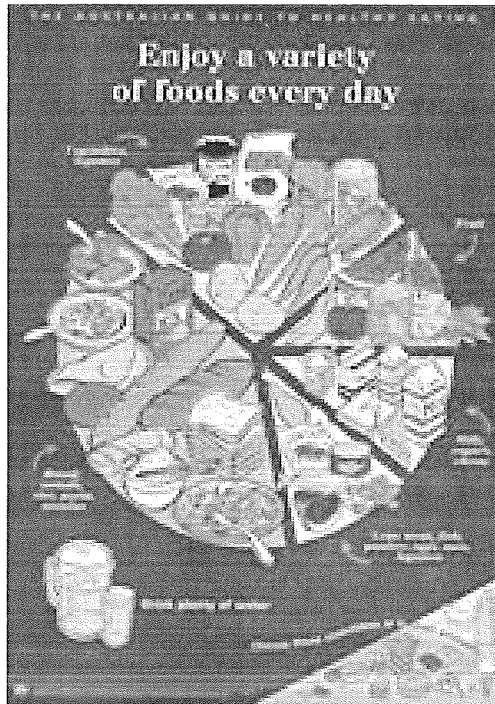
Figure 1
Australian Dietary Guidelines
Department of Health (2003)
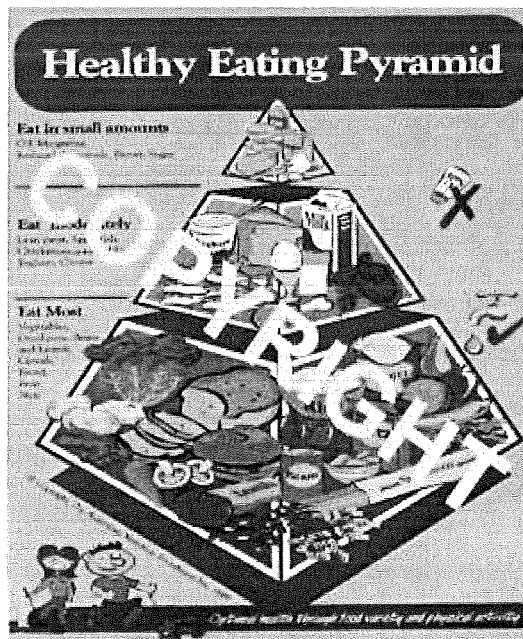
Figure 2
Healthy Eating Pyramid
Australian Dietetic Association (2004)

The Australian Guide to Healthy Eating (2003) is designed to provide information about the kinds of foods that Australian's should choose in their diet each day. The Guide suggests that the word diet should not mean weight reducing or special diets. Rather, it should refer to all of the things usually eaten or drunk every day. Central to the Guide is a model and recommendations similar to what most people would know as the 'healthy diet pyramid'. The updated version is now pie shaped, showing larger portions of the pie for each of the five food groups rather than the tiers of amount. Both the original pyramid and the new pie are used as an education tool which converts scientific knowledge of food composition and nutritional requirements for health into a practical guide for food selection (Pennington, 1981).

The 'healthy food pie' has additional components to the food pyramid. 'Snacks' and any foods that do not fall into one of the five food groups are suggested to be 'extra foods' and are to only be eaten sometimes and in small amounts. The label of 'snack' highlights that food is inextricably now linked to behaviours and social practice. Arguably, any food in a small amount, eaten between 'main' meals, might be deemed a snack. Yet, it is only certain foods that are specifically identified as 'snack foods' – healthy or not.

One of the issues overlooked in the 'healthy food pie' is serving sizes. When people see the Australian Guide to Health Eating Pie they might recognise that some foods should be consumed more than others, yet they may not consider serving sizes. The Guide suggests we need to eat five serves of vegetables a day. Many people may not know that one serve is measured as half a cup of cooked vegetables, one cup of salad vegetables or one small potato. In addition, many people do not realise that this measure is for adults and that recommendations for children are in one sense, the same - they should be consuming five serves per day, *but* each of their serves are measured as half of an adult serve. The Guide provides clear details on this in the separate information provided for nutrition educators, however as it has been recognised, the visual component for recognising portion size is so necessary for the general community, it may have been useful to include something in each pie piece as a suggestion of servings. Serving size differences are highlighted when looking at what people define as a serve of bread. For some people, for example, a serve may be considered to be two slices, while others would consider a serve to be one slice. For the Australian Guide to Healthy Eating, one serve of bread is equal to two slices. The questions

could then be asked, is that then the same for children or is it half of the adult as indicated above?

The evidence that eating two serves of fruit and five serves of vegetables per day has major physical benefits is now well established (Gillman, 1996; Key, Thorogood, Appleby and Burr 1996). Yet with the evidence presented, particularly for children, perceptions and opinions are undeniably important. Food perception plays an important role in the opinions children develop regarding fruit and vegetables. Food perception and opinion can be developed without even trying the food. For example after hearing a friend express a dislike of vegetables – "I hate vegetables" or "vegetables are horrible", children can come to identify themselves as also not liking vegetables. Further to this parents and others may then also come to believe that the child 'does not like vegetables' and respond accordingly. This can happen without the child ever trying particular vegetables (Horne, Lowe, Bowdery and Egerton, 1998). Having stated this, we might very well contend that the inverse must also be true, i.e. if significant friends or those of influence over a child's opinions suggest 'Maccas' and hamburgers and chips are nice, then that may foster positive attitudes to an as yet, untried food (and eating experience).

A further issue surrounding fruit and vegetable is that people can be quick to determine that they do not like particular fruits and vegetables after trying them only once. As most people know fruits and vegetables go in and out of season, can be prepared many ways and 'go off' if left too long. If any one of these are present when particular fruits and vegetables are sampled for the first time a negative outcome may result. With repeated tastings, the taste of those foods may come to be increasingly liked or, at least, not disliked. A number of studies have shown that repeated tastings of food enhances preference for that food (Birch and Marlin, 1982; Birch, McPhee, Shoba, and Steinberg, 1987; Pilner, 1982). There is a cultural history with vegetables post WWII where it was common for parents to require children to 'finish their plate' or miss out on dessert. Negative experiences with vegetables in parents of today may have been held over from their youth. Studies suggest that children need to be exposed to new foods at least 8 to 10 times for them to develop an increased preference for that food (Birch and Marlin, 1982). Yet understandably, parents may feel

thwarted after a couple of tries with a new food or even after the first try, and may not be aware that they need to 'hang in there' for many more tries.

Trends in Dietary Intake

It is well documented that children of 'overweight parents' (defined as a BMI over 25) often become 'overweight adults' themselves. Likewise, modelling of healthful dietary behaviour is associated with children developing low fat eating patterns, lower dietary fat intake and higher consumption of fruits and vegetables in their children (Tibbs et al. 2001). Therefore we might well propose that children of 'underweight parents' will become 'underweight adults'.

Eating patterns are changing among children (Nicklas, Morales, Linares, Yang, Baranowski, deMoor, 2000). In the USA total energy intake has increased in children over the past 25 years (Morton and Guthrie, 1998; Nielsen, Siega-Riz and Popkin, 2002; US Department of Agriculture, 2001 a, b; Wright, Wang, Kennedy-Stephenson and Ervin, 2003). Trends in children's food choices coincide with trends in nutrient intakes and trends in the food supply. Most people would be able to provide examples of this, including increased restaurant food consumption and other eating outside of the home, larger portion sizes, shifts in beverage consumption, meal patterns and meal frequency, and school meal participation. Influences over children's eating patterns have been documented by Story, Neumak-Sztainer and French (2002). They determine three levels of influence: individual, social environmental, and physical environmental. Of the physical environmental influences, they determined that community settings play a major role in eating behaviour. The physical environment within the community influences accessibility and availability of foods. Community settings most proximal to students and influential in affecting their food choices include; schools, fast food outlets, restaurants, shopping malls, vending machines, and convenience stores.

In a study to explore the meaning of food to students Chapman and Maclean (1993) used qualitative research to investigate meanings of food among 93 Canadian adolescent girls. The major food classification scheme that emerged from the data was the dichotomization of food into two groups; 'healthful food', and 'junk food'. Eating junk food was associated

with pleasure, being with friends, weight gain, independence, guilt, affordability, and convenience. The perceived characteristics of healthful food were in direct contrast to those of junk food; eating healthful food was linked with family, meals, and being at home. Eating and liking junk food was seen as a normal behaviour for adolescents, whereas liking healthful food was seen as an oddity.

In an attempt to benchmark Western Australian child and adolescent physical activity behaviours, eating patterns and physiques, a research project between West Australian Premiers Physical Activity Taskforce, Healthway, Department of Health and Notre Dame University was completed in 2004 (Hands, Parker, Glasson, Brinkman and Read, 2004). The Child and Adolescent Physical Activity and Nutrition (CAPANS) survey determined that, "getting children and adolescents to establish an active lifestyle and healthy eating habits is vital to improve the short and long term health and wellbeing of our young people" p. 1).

Nutrition findings found Western Australian children's reported fruit and vegetable intake fell well short of minimum recommended daily intakes. Recommendations suggested focusing on nutrition at school and ensuring adequate accreditation in all school canteens, and sustained funding of the WA School Canteen Association, and developing a set of resources and a professional development program for teachers around healthy eating habits for life (Hands et al. 2004). Average intakes of meat and alternative foods were substantially greater than the minimum recommended, particularly for younger children and average reported milk and dairy food intake for secondary school females was only two-thirds of the amount recommended (Hands et al. 2004).

These results suggest Western Australian families may benefit from nutritional assistance through the curriculum, the community and health resources. Similar results were found for children in the 1995 National Nutrition Survey.

The Australian National Nutrition Survey of 1995 (McLennan and Podger, 1997; McLennan and Podger, 1998; and McLennan and Podger, 1999) provides a comprehensive picture of the eating habits and foods and nutrients consumed by a representative population sample of Australian children. Over 12 months, interviews were conducted with

1221 children aged two to 11 years regarding the foods they consumed on the day before the interview. Results indicated children were not meeting the dietary guidelines for children and adolescents (NHMRC, 1994). Key points from the National Nutrition Survey 1995 are presented in Table 1. Yet, research has also shown that adolescents may not perceive much urgency to change their eating behaviour when the future seems so far away (Neumarck-Sztainer, Story, Perry, & Casey, 1999; & Story & Resnick, 1986). The feeling that "I'll worry about it later in life", is prevalent. Meanwhile the globalisation and normalisation of fast food in every aspect of their lives makes eating 'junk food' the norm rather than the exception. Fast food outlets have normalised consumption of this type of food simply by their accessibility of purchase and saturation of message. Storey et al. (2002), argue food is inextricably intertwined with issues of identity, self concept, friendship, security, independence, and authority. Thus, to give up eating 'junk food' would be to give up much more than the food itself.

This speaks to the importance of changing social norms around 'healthy eating'. However the health food industry simply does not have the financial capacity to do that. Most importantly, the health food industry doesn't have any thing *better* to offer. The globalisation of transnational fast food companies, with multi-million dollar marketing campaigns and prime real estate locations is simply too big to overcome. Fast food seems to be winning the obesity race.

Table 1

Australian National Nutrition Survey, 1995

Cereals

- Over 98% of children had eaten cereal foods on the day before the interview, but 4 – 7 year old girls, and 8 – 11 year old boys were not eating enough of these.

- The children ate a considerable amount of other cereal based foods, such as biscuits, cakes, and pastries, rather than the recommended breads, breakfast cereals, pasta, fruit, grain-based nutritious snacks and rice.

Fruits

- Among 8 – 11 year olds, just 56% of boys and 62% of girls ate fruit on the day before the interview.

- The number of serves (fresh, cooked or canned) consumed decreased with age.

Vegetables

- Vegetable consumption increased with age, but was less than the minimum quantity recommended.

- About one in four of the children consumed no vegetables on the day before the interview.

Milk, yoghurt, cheese

- The minimum number of serves recommended was not achieved by any age group.

- The number of children consuming milk on the day before the interview decreased with age or its products also decreased with age.

- The proportion of children eating yoghurt, milk substitutes and dishes containing milk or its products also decreased with age.

Meat, eggs, fish, nuts

- Children were consuming the minimum recommended number of serves of these.

Snack food, soft drinks

- Just over a third of 8 – 11 years old children ate snack foods (potato chips, corn chips, etc) half ate confectionary and over a third drank soft drinks, flavoured mineral waters or electrolyte drinks on the day before the interview.

(McLennan and Podger, 1997).

The Australian Dietary Guidelines suggest that to improve the diet of Australian children, more breads, rice, pasta, and grain based products (e.g. low fat and low salt breakfast cereals and wholegrain foods) need to be eaten rather than cakes, pastries, biscuits and high fat fast food. Daily consumption of fruits, vegetables and milk, yoghurt or cheese should be encouraged, while nutritious snacks should replace less nutritious snack foods and

beverages (Department of Health, 2003). Of the range of nutrients reported in the Australian National Nutrition Survey 1995, the quantity consumed increased with age, and boys generally consumed more than girls (McLennan and Podger, 1998). Levels of most nutrients per unit of energy were similar, although girls had lower calcium intakes. Both boys and girls consumed more fat than protein, and more sugars than starch (the reverse of that for adults).

The dietary guidelines focus on promoting more calcium and iron in the diet, particularly in girls. The National Nutrition Survey suggests the intake of calcium and its key milk-based sources need to be higher, particularly as intakes continue to decrease in adolescents (McLennan and Podger, 1997; 1998). Adequate intake of calcium is not just for meeting the needs of growth but of optimising peak bone mass and establishing appropriate lifetime food habits. Similarly, iron levels, particularly in girls, need to be increased and appropriate food habits (e.g. more cereal foods, lean meats, green vegetables, legumes) established and continued into adolescent years.

How Then Should Parents Respond to this Global Problem- Particularly Regarding School Lunches?

Parents appear to have been somewhat marginalized in healthy eating strategies of recent years. While many schools have made considerable improvements in the food choices made available for children, the case study findings reported in this portfolio illustrate that school teachers' feel that parents are sending 'unhealthy food' to school. Furthermore, we see parents who are openly unsure of what to provide for children's lunches to ensure they are healthy, transportable and are eaten.

Children's diets are complex and certainly not only influenced by factors immediate to home and/or family. Rather, the factors involved range from the marketing practices of multinational corporations to the positioning of vending machines in schools and communities. School canteens and vending machines present food manufacturers with a lucrative means of reaching out to children and encouraging consumption of their products. In New South Wales, it is estimated that in 90% of school canteens there is some kind of 'unhealthy option' on offer, which includes high-fat food, and soft drinks (NSW Childhood

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Obesity Summit, 2002). The bombardment of multinational fast food outlets often locating themselves very close to schools, or in the case of America, *inside* them, along with television mass media, means that it is hardly surprising that parents and children find it difficult to make and maintain healthy food choices and eating habits.

Children's School Lunches

Rising rates of childhood overweight and obesity show that families are clearly struggling to address the issue of childhood nutrition by themselves and that lifestyle influences are playing a key role in food preparation. While parents have ultimate control of children's nutritional requirements, they have also been shown to be important role models for their children's eating behaviour (Steinbeck, 2000). Many primary school-aged children in Australia take a home-packed lunch with them to school each day, with the contents of the lunch box generally including a snack for recess, a drink and the main lunch meal. This portfolio includes a case study of teachers' and parents perceptions of childhood healthy eating and has identified that the contents of some lunchboxes are less than optimal in terms of a child's nutritional requirements. Information collected suggests that while a sandwich is still the most common item for lunch, parents are resorting to uninspired and often high fat fillings along with quick snack foods that are high in fat, sugar and salt.

Children's Eating Patterns

A study of children's lunch boxes conducted by Huddy, Adams, Holden, Newell, Van Beuden and Dietrich (2003), found that 34% (82) of children studied had no fruits or vegetables in their lunchboxes. 54% (129) had fruits but no vegetables, 5% (12) had vegetables but no fruit and only 8% (18) had both. Huddy et al concluded that many pre-schoolers have insufficient intake of fruit and vegetables. Childhood eating patterns are also recognised as affecting health in adulthood, as food choice behaviours can be traced from 6th through 12th grades (aged 12 to 18 years) into adulthood (Newman, Freedman, Voors, Gard, Srinwansan, Cresanta, Williamson, Webber & Bercson 1986; Kelder, Perry, Klepp & Lytle, 1994). Eating fewer than the recommended number of daily servings of fruits and vegetables is a risk factor for major diseases and many studies support Huddy et al, and have shown that children are not meeting current recommendations for daily intake of fruits

and vegetables (Cleveland, Cook, Wilson, Friday, Ho & Chahil 1997; Krebs-Smith, Cook, Subar, Cleveland, Friday & Kahle, 1996; Munoz, Krebs-Smith, Ballard-Barbash & Cleveland, 1997).

Sandeno, Wolf, Drake and Reicks (2000) determine that teachers who provide education intended to increase intake of fruits and vegetables, should encourage adoption of easy behaviours that fit into children's routines. Behavioural approaches emphasising strategies that will help children to add additional servings throughout the day may be most helpful. In a telephone interview survey conducted by Foerster (2000) to determine Californian teenage eating, exercise and nutrition behaviour, results indicated that only 2% of the 1,213 teenagers surveyed met all of the five dietary recommendations. Almost half of the teens reported eating no vegetables at all in a typical day, with only 29% reporting that they are getting the recommended amount of physical activity per day, with girls exercising the least. Twice as much time was spent by the children watching television or playing video games as being physically active. 68% of the children reported consuming two or more servings of pastries, fried foods, chips, desserts, lollies or soft drink on the day preceding the interview. 27% reported eating one meal or snack from a fast food restaurant on the day prior to the survey. While it is clear consumption of soft drinks has increased among children (Morton 1999), the survey found 70% are getting the recommended daily dairy requirements of three or more servings of milk products, which leaves approximately one third of children who are not. Calcium is especially important for fast growing bones, and diseases such as osteoporosis in adults are directly related to calcium consumption and retention during childhood and adolescent growth years. Other studies have shown that children who watch less television gain less weight over time. It also means less exposure to targeted kids' advertisements for high kilojoule food products (Cohen, 2000).

In Melbourne, a study conducted with 314 adults (Hardus, van Vuuren, Crawford & Worsley, 2003) sought to determine people's perception of the causes and prevention of obesity among primary school children. Participants completed a questionnaire in which they rated the importance of 25 possible causes of obesity and the importance of 13 preventive measures. Results indicated the most important causes of childhood obesity were related to over consumption of unhealthy food, parental responsibility, modern technology and the mass media. The most popular prevention activities were aimed at

children. Analysis of the data indicated eight factors highlighted by the participants as contributing to; parental responsibility, modern technology and media, over consumption of unhealthy food, children's lack of knowledge and motivation, physical activity environment, lack of healthy food, lack of physical activity and genes.

These results indicate that the general public appears to hold quite sophisticated views of the causes and prevention strategies for childhood 'healthy eating' and obesity. Results also suggest that prevention strategies would be widely supported by the public, especially parents. This has been supported in the case study presented in this portfolio through the development of the 'Lunch Right' menu planner project, as respondents were particularly keen to use the new resource. Parents felt that they needed ideas for healthy lunches and snacks and were therefore enthusiastic about participating in the study reported here.

Research interventions to help children and adolescents to change their dietary or physical activity behaviours may be justified on a number of grounds: Immediate social and health benefits may be obtained; critical periods in childhood may require certain behaviours to lead to healthy outcomes in adulthood; chronic diseases and their elevated risk factors detected in youth may track into adult years; and the behaviours established in childhood may track into the adult years. In their study on parental perspectives of promoting healthy diet and exercise patterns in primary school children Hart, Herriot, Bishop and Truby (2003) found that parents preferred interventions that focused on behavioural techniques rather than fact transmission, and the promotion of parental self awareness to reduce negative influences within the family food environment. Providing realistic definitions of appropriate behaviour and empowering parents to tackle children's weight issues were identified as important targets for future education programs. Parents are thus acknowledged as potentially powerful education providers for children because of their ability to impact upon children's developing food behaviours and attitudes through the behaviours that they model and reinforce (Campbell & Crawford, 2001), the opinions they express, the food opportunities they control (Robinson, 2001) and the information they impart directly to their children (Gibson, Wardle & Watts, 1998).

Considering when to target an intervention for healthy eating in children, Sandeno, et al. (2000) advise that intervention prior to the sixth grade, when behaviour patterns are less

resistant to change may be beneficial. At this age, children are learning the basics for improved choices and the consequences of 'unhealthful' practices. A study by Gibson et al. (1998) that examined mothers' nutritional knowledge, found that frequency of fruit consumption and attitudes were independent predictors of their children's fruit intake. Resnicow, Davis-Hearn, Smith, Baranowski, Lin, Baranowski, Doyle and Wang (1997) found that fruit and vegetable consumption by primary school children was weakly correlated with preferences and positive outcome expectations. Self-efficacy, social norms, asking skills, and knowledge were not significantly associated with consumption. In another study, availability of fruits and vegetables had a direct effect on motivation that, in turn was associated with consumption of fruit and vegetables by third grade children (Reynolds, Hinton, Shewchuck and Hickey, 1999).

Barriers to Healthy Eating

In a focus group study of 285 people (126 adults and 152 children) to determine what prevents children from eating fruits and vegetables, Cohen (2000) found that children and adults largely agree on the barriers to healthy eating. Parents said their children do not eat fruits and vegetables because:

- It is too expensive to keep in the house at all times;
- Seasonal fruit and vegetables are not readily available, children refuse to eat certain fruits and vegetables; and
- It is not packaged to be convenient to eat.

Parents said that they would not be surprised if their children refused to eat vegetables and fruit at school, no matter what the reasons. Children said they do not eat fruit and vegetables because:

- They are not convenient to eat; and
- They can be messy.

(Cohen 2000)

Parents in Cohen's study commented that the price of fruit and vegetables was off putting; it takes too much time to prepare fresh foods; and that there is a lot of wastage with fresh foods. Parents overwhelmingly agreed that prepared foods, and especially fast food, are much cheaper and easier to purchase, (e.g. from drive-thru windows), simpler to prepare and serve and more likely to be eaten. The indication is thus that parents may not understand product prices in the supermarket and may not have the skills to prepare fruit and vegetables in a simple way. If parents had an understanding of the price of convenience products per kilo as compared to fruit and vegetables, they may be shocked. For example, bananas may cost $1.99 per kilo with 0.1 grams of fat per 100 grams in the supermarket, compared to a regularly used snack food packaged muesli bar at a cost per kilo of $26.67 with 28.2 grams of fat per 100 grams.

With regard to the amount of time required to prepare nutritious healthy meals; many of the parents in Cohen's study felt that they were simply too busy to cook. Working outside the home, doing housework, helping children with homework, and commuting leaves little time to prepare healthy meals. One parent in the study said; "I feel like a chauffer, babysitter, counsellor, teacher and coach. There is little time to be a chef" (p11). The literature suggests that this perception is a common one. There is arguably a need for recognition that, children will be better placed to do all of the activities mentioned, homework, sport and cope with emotional issues if they are afforded a healthy nutritious diet.

Perceived access to fruit and vegetables and ease of preparation

Access to food and ease of preparation is important to parents who have busy lives. Cohen (2000) says "*McDonalds* has over 280,000 outlets worldwide and in any suburb the 'golden arches' can be seen on nearly every second street corner, grouped with other fast food chains" (p. 5). Some of these outlets are open 24 hours a day, seven days a week, while others open early for breakfast and close at midnight. Supermarkets and stores specialising in fruit and vegetables are scarcer in urban areas, and have more restrictive hours. While access is important, so is ease. Parents with small children can get food from fast food outlets without leaving the car, and can now pay by credit card and EFTPOS at the drive-

thru window. Except for home deliveries of groceries and takeout foods, nothing is simpler or more available than drive-thru windows in fast food outlets.

Waste of fresh foods is also a concern for parents, who with good intentions sometimes purchase fruit and vegetables, only to have them rot. One parent in Cohen's focus group study commented, "things look so good in the store, so firm and green, but I never know what to do when I get home" p12. Cohen (2000) says that other parents agreed, feeling that fruit and vegetables are "not user friendly". This may indicate that improved marketing of fruit and vegetables, focusing on their storage, preparation and use is required. According to Cohen (2000) parents said they have little time in the morning to peel and prepare fruit for breakfasts and snacks, and even less time when they get home from work. When parents were asked how to get children to eat more fruit as a snack, their response was to make fruit and vegetables more 'ready to eat'. Parents also suggested that a 'Pokemon' character could be used to market fruit and vegetables on television on Saturday morning and after school. These responses further highlight the perception that fruit consumption and preparation is difficult. A key suggestion by parents is the notion of 'savvy' fruit and vegetable marketing.

Parent's Perceptions of Children's Eating Habits

Cohen (2000) reported that parents in his focus groups felt overwhelmed by their children's eating habits. Many responded that they were tired of "forcing their kids to eat healthy foods". Mealtimes had become a 'battleground', with one parent saying, "with fighting to commute to work, and the idiocy of my job, I lack the strength to fight with my kids to eat" (p11). The awkward schedules of family lives and lack of routine in preparing home cooked meals, create a wide latitude in decision making for meals. If both parents work, the decision of who is the cook is often unclear, and if it is the mother, stopping in at a drive-thru after a long day may be a highly attractive option. Parents know that their children will like the taste of the fast food purchased and that dinner will get eaten.

When Cohen (2000) conducted the children's focus groups, children's perceptions about the look of fruit and vegetables were revealed. One child questioned, "Why does fruit have to turn brown? I hate that!" This indicates a reality that children are engaging with. In

contrast, advertised food is perfect in appearance, portrayed as highly portable, and convenient to eat and 'fast food' is finger food and always manageable. The perception is that fruit and vegetables are messy, discolour and are too much of a 'pain' to bother with. Children's perception of food consumption and their own practices with eating has moulded the belief that food should be quick, with no mess, and be fun. These perceptions have developed through the ease of access to fast food, marketing and advertising and the changing nature of demands on time (Cohen, 2000).

Huon, Wardle and Szabo (1999) found children would choose food according to convenience, image, price and social or cultural trends when left to their own decision making. In their study children also reported liking most fruits but their behaviour did not reflect this. Children reported liking a small number of vegetables and the way in which they are prepared influence the ones they like. Preferences are also influenced by colour – independently and interactively with flavour.

In another study conducted by Hart, Herriot, Bishop and Truby (2003), focus groups were conducted with forty one parents of children aged 7 – 12 years to determine parents' perspectives of promoting a healthy diet and exercise patterns amongst primary school children. They found that children do not consider the possibility of diseases associated with overweight as a threat, and perceived healthy food as being 'boring'. Hart et al. (2003) determined that parents are considered to be 'education intermediaries' as they have the ability to impact on their child's developing food preferences, behaviours and attitudes. This can be achieved through their own behaviour that they model and reinforce, by their opinions and information that they give their child and through the food opportunities which they can control. It was found that parents from a high socio economic group were more inclined to restrict and enforce food rules at home, for example restricting fizzy drinks and chips. Parents from lower socio economic groups were concerned with making sure an adequate quantity of food was consumed (Hart et al. 2003). Hart et al. (2003) concluded that intervention programs aimed at parents should include strategies for awareness raising that promote internal focus for health behaviours and that support family responsibility for diet and exercise. Also, positive moves towards whole-diet, whole-family advice regarding behaviour and positive food environments; and the promotion of "dietary

variety to tackle the myth of healthy eating as restrictive, expensive and unattainable" (p.90).

Access and exposure to a range of fruits and vegetables in the home is important for the development of preferences for these foods in children, and parental knowledge, attitudes and behaviours related to healthy diet and physical activity are important in creating role models (Campbell and Crawford, 2001). In order to do this however, parents need the understanding and motivation needed to interpret dietary guidelines. Nutrition knowledge may influence attitudes and commitment; and equally, attitudes can influence the translation of knowledge into practice and skills (Green, Kreuter, Deeds, and Partridge, 1980).

Snacks and Healthy Eating

The Nutrition and Physical Activity for Australian Children supplement in the Medical Journal of Australia (2000), suggests that snacks are just as important as meals in ensuring adequate energy and nutrient intake for children. Snacks should be planned so that a variety of healthy choices are offered. Regular snacks prevent extreme hunger, and hopefully reduce the likelihood of children responding by eating large amounts of any available, and often unsuitable, food (Maffeis, Pinelli and Schultz, 1996). The Nutrition and Physical Activity for Australian Children supplement in the Medical Journal of Australia (2000), suggests that children need regular meals and snacks at least 5 to 6 times per day. The limited energy storage capacity of young children means they cannot meet their energy needs for growth and activity in three meals only. For older children, snacks are estimated to provide half to a third of their energy intake. It is therefore important that the snacks offered contribute nutrients in proportion to energy contribution. The Australian National Nutrition Survey 1995, indicated that 33% of energy for 2 – 7 year olds was derived from snack items, such as cakes, pastries, chips and sweet drinks, as opposed to basic core foods, such as bread and cereals, fruit and vegetables, and dairy products (McLennan and Podger, 1997). This survey also found that 30% of 2 – 7 year olds ate no fruit, and a similar proportion ate no vegetables, on the day of the survey.

In a Victorian study, 88% of parents reported that they provided playlunch – the meal eaten at morning play time in schools, to 5 – 8 year old children. While parents stated fresh fruit was the most common food offered, followed by crisps, muesli bars, 'rollups' (a processed sheet of fruit) and biscuits, teachers reported that they rarely saw fresh fruit being eaten, and reported crisps as the most common item (Department of Human Services, 1997). A New South Wales study indicated that, of the 90% of children who had a snack at recess, 39% had crisps (Scarlett and Lilburne, 1993).

Pressures on Parents and Parental Pressures

It seems that we are living in a time where not a day goes by without us being bombarded by new information that presents yet another issue of concern for parents. More than ever before 'our kids' are becoming the centre of attention for impending health crises (Millar, 2004). With media messages, such as; 'Kids in crisis'; 'Childhood obesity on the rise'; 'designer drugs take on new status with young people'; 'childhood stress reaches all time high', parents are undoubtedly under pressure to respond, to make the 'right choices' for their children, and instill certain behaviours in them.

It may be that the reason the media and scientific literature are putting strong messages into the public arena is that they themselves are shocked and bewildered by the current childhood weight and lifestyle issues. The American Dietetic Association has now broadened the focus of dietary guidance to address children's 'over consumption' of 'energy dense', 'nutrient poor' foods and drinks and physical activity patterns (American Dietetic Association, 2004).

Most parents want the very best for their children in all aspects of their lives, and want their children to be healthy. It is a common dialogue for soon to be parents when asked 'do you want a boy or girl?' Most often the response will be something like, 'it doesn't matter as long as the baby is healthy'. This statement transpires to all aspects of the child's life including nutrition. However, factors other than concerns for their child's health, such as taste preferences, cultural norms, and food availability, and price, influence food choices (Hornack, Block and Lane, 1997). In many and varied ways, parents have a major impact on their children's eating and physical activity patterns. Food habits and nutrient intakes of

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parents are associated with the development of a child's relationship with food later in life (Branen and Fletcher, 1999). For example, young adult eating habits such as eating all the food on the plate, using food as an incentive or threat, eating dessert, and eating regularly scheduled meals were related to the same feeding practices reportedly used by their parents during childhood (Vauthier, Lluch, Lecomte, Artur and Herbeth, 1996). Consideration of nutrition by young adults when selecting food was related to the memory of their parents talking about nutrition during childhood (Branen and Fletcher, 1999).

The American Dietetic Association purports parents can influence children's dietary practices in at least five areas: availability and accessibility of foods (Hearn, Baranowski, Baranowski, Doyle, Smith, Lin, and Resnicow, 1998), meal structure (Neumark-Sztainer, Hannan, Story, Groll and Perry, 2003), adult food modelling (Tibbs, Haire-Joshu, Schechtamn, Brownson, Nanney, Houston and Auslander, 2001), food socialisation practices (Cousins, Power, Olvera-Ezzell, 1993), and food related parenting style (Baughcum, Burklow, Deeks, Powers, and Whitaker, 1998). Early childhood and the social environment in which the child is fed are widely assumed to be critical to the establishment of lifelong healthful eating habits.

Position of the American Dietetic Association

The position statement for the American Dietetic Association determines that children ages 2 to 11 should achieve optimal physical and cognitive development, attain a healthy weight, enjoy food, and reduce the risk of chronic disease through appropriate eating habits and participating in regular physical activity. The Association determines that the health status of children has generally improved over the past three decades as evidenced by lower rates of infant mortality (Mortality patterns data, 1996; White, 1998) and declines in nutrient deficiency diseases of the past (Public Health Service, 2000). However, the number of children who are overweight has more than doubled among 2 to 10 year old children and more than tripled among 6 to 11 year old children, which has major health consequences (Ogden, Flegal, Carrol and Johnson, 2002).)

To determine the prevalence of overweight in US children a survey of 4722 children from birth through 19 years of age with weight and height measurements were obtained in 1999-

2000 as part of the National Health and Nutrition Examination Survey (NHANES), a cross-sectional, stratified, multistage probability sample of the US population (National Centre for Health Statistics, 1994). Overweight among those aged 2 through 19 years was defined as at or above the 95th percentile of the sex-specific body mass index (BMI) for age growth charts. Findings indicated the prevalence of overweight was 15.5% among 12- through 19-year-olds, 15.3% among 6- through 11-year-olds, and 10.4% among 2- through 5-year-olds, compared with 10.5%, 11.3%, and 7.2%, respectively, in 1988-1994 (NHANES III). The prevalence of overweight among non-Hispanic black and Mexican-American adolescents increased more than 10 percentage points between 1988-1994 and 1999-2000.

'Food Insecurity': the Irony of Food

It is ironic in this time of obesity that in the United States it is estimated that nearly 11% of all US households (11.5 million households) were 'food insecure' at some time during 2001 (Nord, Andrews, Carlson, 2002). This means that families were not sure where their next meal was coming from and if they would have enough money to purchase the food they want to buy. The prevalence of hunger in children was six times as high in single parent families; three times more prevalent among racial and ethnic minorities and 10 times more prevalent in households with income below the poverty level (Nord and Bickel, 2002).

Food insecurity has profound effects on children's emotional, behavioural and cognitive development (Kleinman, Murphy, Little, Pagano, Wehler, Regal, and Jellinek, 1998). Concerns about food insecurity may be alleviated to some extent by the availability of feeding programs in schools and nutrition assistance programs. These programs increase the probability that children will eat breakfast and/ or lunch and thus improve their nutritional and education status. It is a strange world where there are such contrasts between situation; children trying not to eat and those who can't get enough to eat. Both have serious nutritional consequences. Worse is the fact that children in third world countries who are dying from lack of food are not even considered in this discourse.

What Direction to Take

This chapter has presented a wide range of information variously relating to the issue of healthy eating in children. It has sought to build a case that children need to be the focus of more discussion and research about health eating. Messages during the school years need to be reviewed and considered as to their current impact and value. This is also a time when parents remain influential in relation to what children eat, what children can choose to eat, and what foods children will develop a taste for. Many primary school-aged children in Australia take to school each day a home-packed lunch. The contents of the lunch box generally include snacks for recess, a drink and the main lunch meal. However, school lunches are an area where convenience has also crept in and the ease of a snack bar, packet of chips or chocolate bar is becoming more prevalent. Teacher's are noticing that the contents of some lunchboxes are less than optimal for what most people think of when considering a child's nutritional requirements. Information collected suggests that while a sandwich is still the most common item for lunch, parents are resorting to high fat fillings along with quick snack foods that are high in fat, sugar and salt. A study of children's lunch boxes conducted by Huddy, Adams, Holden, Newell, Van Beuden and Dietrich (2003), found that 34% (82) of Australian children studied had no fruits or vegetables in their lunchboxes and 54% (129) had fruits but no vegetables, 5% (12) had vegetables but no fruit and only 8% (18) had both. They determine that many pre-schoolers have insufficient intake of fruit and vegetables. A critical investigation of school lunches and parents perceptions of the difficulties surrounding their contents and preparation is clearly needed. Chapters 5 and 6 of this portfolio focus on just such an investigation. Chapter 2, provides further perspectives on the theme of healthy eating in children that informed the investigation and analysis of data it generated.

CHAPTER 2

GLOBALISATION OF FOOD

In the previous chapter "healthy eating" was identified as a complex, and contested issue of local, national and international interest and concern. Eating was identified as not merely a matter of interest for dieticians or nutritionists, but also, governments and multinational companies. Furthermore, eating is not only a matter of health interest; it is a social, cultural and commercial practice. Inevitably and unavoidably, eating and specifically, 'healthy eating' has global dimensions. This chapter focuses on those dimensions and their local implications in relation to an understanding of the construct of 'healthy eating' amongst and 'for' children in Western Australia.

Globalisation is the expansion and intensification of linkages and flows of people, goods, capital, ideas and cultures across national boarders (Women and the economy, 2003). The world as a global community is seeing more and more of the same images and sharing more of the same values. Globalisation is the process of creating and providing languages, services, experiences, and products that apply not just to an individual neighbourhood or city or country, but to the whole world. As a phenomenon and process, globalisation has bought many benefits, particularly in the field of medical health, to many people, including access to services from around the world (Women and the economy, 2003). It has given people access to an increasingly wide range of products and services, with merging economies, foods grown in other countries and foods that are out of season locally are now invariably readily available and relatively cheap. The development of the internet has significantly advanced us towards a 'global community', while multinational corporations (such as fast food outlets and clothing merchandisers) mean that people from different countries and cultures now eat many of the same foods and wear the same clothes. But as a global community we experience as many of the negative aspects of globalisation as we do the positive rewards. Globalisation has meant that priorities have changed. Rather than growing food for local markets, attention in some countries has shifted to export potential. This can easily lead to 'food insecurity', reduced nutrition and ability to monitor and prepare traditional food (Women and the economy, 2003). This chapter highlights many

and varied ways in which global influences and food sources can be seen to shape, in potentially powerful ways, our thinking about healthy eating and foods, our eating patterns and food choices.

Global and Local Food Cultures

Since the beginning of time people have shared food, traditionally the men hunted it and the women prepared it, and crops and gardens were grown to add to the meal. Interaction over food is the single most important feature of socializing (Muntz, 2004). Cultures and families define themselves through foods, and cultures are built on it. For example, Muslims eat Halal, Jews eat Kosher, and Catholics forgo meat on Fridays. People also eat for many emotional reasons, when they are happy, sad, welcoming a friend home, or seeing someone off (Kluger, 2004). Food choices and eating habits are inherently linked to cultural and national identities. The type of food people eat, and when they do so, signals particular identities. To eat a croissant or bread and cheese for breakfast in Australia would probably be considered maybe a Sunday treat, yet in France it is common place. To eat an evening meal in Italy before 9pm would be uncommon, to eat raw Herring fish in The Netherlands is a delicacy and in other parts of the world unheard of. Yet food in all of these cultures is celebrated, talked about and holds a level of social capital. Klueger (2004) comments that if you ever find yourself dining with a family in the South African Kingdom of Lesotho, you had better have a taste for eyeballs – that is, if you are the male head of the household. Tradition requires the host to honour your family in a truly special way: with the cooked head of a sheep. Everyone will share the feast but only the male guest will be offered the eyes.

So, what of recent trends? What are modern food cultures and furthermore children's food cultures? In many parts of the world, scarcity has been replaced with overabundance and undernourishment with obesity. The traditional roles of hunter gatherer have long past, but so too, it seems has the evening family meal. The access and convenience of food globally is at a level never before experienced. A new global 'type' of food has emerged, where people of all cultures are eating the same foods and the same drinks and are under pressure to do so. Certain foods have global meaning and status, not least of which is *McDonalds* or

Mars Bars or *Coca Cola*. With the loss of structured meal times comes the loss of meal and portion control.

LaVelle (2004), determines the death of official meal times may have played the greatest role in the obesity problem. She says, "By the time children go to middle school many families have basically stopped eating together, and by age 10, everyone in the family can feed themselves whatever they want – and they do" (p. 55). The now famous documentary director Morgan Spurlock who conducted his own personal experiment by eating no other food other than *McDonalds* for one month in the movie, "Super Size Me", conducted a sight recognition test with five year old children. Out of a group of picture cards the only picture or symbol all of the five year olds recognised and could determine was Ronald McDonald. Children in most other Western cultures would probably be able to demonstrate the same results. The power of the global culture of food is quite remarkable.

There is global concern about the spread of 'western foods' into foreign markets. The World Health Organisation (WHO) and the Food and Agriculture Organisation (FAO) are investigating the role of multinational companies in their global business in the developing world (Tillotson, 2004). The WHO and FAO are questioning the role food and beverage multinationals serve in the rapidly changing diets in the developing countries. The WHO and FAO are attempting to pursue aggressive policies that they believe will stem the duplication of obesity and diet-related chronic diseases (World Health Organisation, 2003). One of the discourses around this issue is whether or not global food companies are acting as saviours, are immoral, or inevitable dietary change agents in the developing world (Tillotson, 2002). A major cause for concern regarding the influx of multinational companies around the world is the propensity of health care systems to afford the effect of such food availability. This is daunting as current medical services in many developing countries are stretched to their limit treating infectious diseases rather than chronic diseases.

The WHO and FAO in their report titled; 'Diet nutrition and the prevention of chronic disease' (2003) have highlighted the need for limits around the availability of foods that are high in sugars, fats and salt; requiring daily physical education for students; and modifying nations' tax policies to promote healthier lifestyles (WHO, 2004). Interestingly, and

possibly not surprisingly this WHO/FAO initiative has become controversial with food and beverage multinational and their governments, particularly with US interests (WHO, 2004).

Globalisation of Food and Eating: The Commercial Dimension

An important feature of global food systems has been the consolidation of agricultural, food, and retail companies into large multinational corporations. More than half of the market in most main foodstuff in Europe and America is produced by a handful of corporations such as Unilever (Chopra and Darnton-Hill, 2004). These companies are now challenged to continue to make profits when the market for food is saturated in developed countries (the food supply already contains 15.9 macro joules or 3800 kilocalories for every adult and child in the United States – that is, nearly twice what is needed on a daily basis). Chopra and Darnton-Hill (2004), explain that multinationals are approaching this in several ways: By convincing people to consume more, and more energy dense foods through relentless advertising and ubiquity of outlets; by increasing serving size and adding price inducements to order the larger sizes; by opening up markets in transitional and developing countries; and by substitution. Substitution is the progressive reduction of agricultural products (real food), to simple industrial inputs that allows replacement by increasingly non-agricultural components. Margarine, manufactured from cheaper intermediate ingredients as a substitute for butter, is an early example of substitution. Sugar, salt, fats and oils are the most commonly added ingredients to increase the 'added' value of foods taking advantage of the biological fondness for sweetness and the easier to overcome satiety of sweet and fat foods (Egger and Swinburn, 1997). In 2002, more than 11,300 new food products were introduced in the United States alone (Nestle, 2003).

The influence of the food industry is thus entwined in our lives in many ways – shaping our thinking about certain foods, whether we should eat them, in what amounts, and what impact doing so will have on our health and wellbeing. Advertisements, labelling, and availability – all are significant in this process and multinationals actively use each and all of these avenues to shape thinking, purchasing and eating practices. No-one can deny their success. Leading fast food and soft drink brands are now international 'household' names, socially and culturally significant products. Coca-cola reports that today it sells more than 70% of its soft drinks in countries other than America, with high hopes for future growth in

the frontier nations (Financial Times, 2003). KFC has more than 1,000 of its fast food outlets already in China, and *McDonalds* has more than 580 outlets there (Liu, 2004). The speed of dietary change in these 'new markets', including many developing countries has been dramatic. A dietary revolution has literally, swept the world – driven by commercial and economic agendas – over and above any serious interest in peoples', and particularly children's health. The impact of the availability and intense marketing of the multinational's products, needs to be recognised as having economic, social and cultural, not merely physiological, effects. 'Fast food' particularly is very visibly, about all of these things. The term is one that is inextricably tied to certain multinational organisations, certain types of food outlets, products and experiences.

The number of so called 'fast food restaurants' has risen steadily over the last 25 years. In the USA they have risen from around 75,000 outlets in 1972, to almost 200,000 in 1997 (Jekanowski, 1999). Expanding the number of outlets has been directly linked with increasing accessibility, thus making it more convenient for consumers to purchase 'fast food'. Fast food has become an increasingly prominent and valued element of many people's diets, and holds particular appeal (and is designed to appeal) to the adolescent population. Unlike many other restaurants, fast food restaurants welcome teenagers and children and provide a clean, friendly, brightly lit atmosphere and socially acceptable place to spend time with friends. Fast food outlets are also a prime employer of adolescents around the world.

Advertising: Shaping Understandings of 'Healthy Food' and 'Healthy Eating'

Neither the social acceptability, nor extent of consumption of 'fast food' has happened inadvertently – it has all been by design – and as a result of carefully orchestrated, highly financed, marketing and development. In 1998, *McDonalds* spent (US) \$571 million, Burger King spent \$407 million, and Coca-Cola spent \$277 million dollars on advertising (Roberts, Foehr, Rideout, & Brodie, 1999). Food industry advertising dwarfs any nutritional health promotion campaigns. The food industry – or more specifically, the significant few multinationals, are running their own campaigns. *McDonalds* today has more than 250,000 outlets in 9 countries. Most of the corporation's revenues now come from operations outside the United States, and a new restaurant opens somewhere in the

world every 17 hours (Watson, 2000). Food advertising has also risen in developing countries; it has tripled in South East Asia, for example. Within a few years of their introduction, 65% of the Chinese population recognised the brand name of *Coca-Cola*, 42% recognised *Pepsi*, and 40% recognised *Nestle* (Lang, 2001). Mexicans now drink more Coca-Cola than milk (Jacobsen, 2000).

Commercial campaigns do not go unchallenged or unnoticed by governments. Legislation on the food industry, similar to restrictions made on the tobacco industry may be the only hope for control. A restricted time where food advertisers can market their brand and products, for example, an exclusion period between 3:30pm and 5:00pm, a time where many children are watching television and legislative restrictions within schools to sanction advertising or supply of brand names and products, may be solutions. While some would argue that these suggestions threaten free market ideals, others would point out that our health systems may not stand the consequences of the fast food industry. Yet even if there was a sanction on television advertising, little effect may be seen. One top marketing executive pointed out to the Consumers Union Education services (1990) that, "It isn't enough just to advertise on television…you've got to reach kids through the day in school, as they're shopping in the mall… or at the movies. You've got to become part of the fabric of their lives". Furthermore, there is a need to acknowledge that ultimately, political/moral agendas to promote healthier eating habits and/or lifestyles may well be compromised or compounded by economic issues and incentives. But in addressing marketing, advertising and availability, we can also reflect that it is not just the 'junk food' market that is burgeoning. The 'health food' industry is also a growing and global one, that is playing to consumers' fear of sickness and their new found awareness of health issues.

Global Health Food Campaigns

The average person is likely to classify foods such as vitamins and nutritional supplements; traditional medicines, such as ginseng; low salt, low fat or processed foods, and fruit and vegetables as "health foods" (USDA Agricultural Trade Report, 1997). Members of the 'health food industry' include several additional categories of food items in this definition such as:

- organic foods, which use no pesticides and contain no preservatives (including additives and colourings);
- natural food, which contain no preservatives; and
- commercial health foods, which use pesticides and contain preservatives, for example, low salt, low fat foods.

In addition there are also health foods that make a health *claim*. For example, foods that claim the presence of a nutrient that provides a general health benefit or reduces the risk of a disease condition when the food is consumed as part of a total diet (USDA Agricultural Trade Report, 1997). With the variety and spread of food types falling under the umbrella of 'health food', the health food industry has developed as a viable commercial enterprise in the western world. Consumption is becoming more common as the mass media is increasing awareness of products and affecting purchase behaviours. The USDA Agricultural Trade Report determines that major consumers of 'health foods' are between the ages of 25 and 50 and are more highly educated and affluent. In many instances the targeting of 'healthy food' products is not that of 'eating pleasure', but that of prevention and awareness of 'sickness and health'.

The 'older aged' target group is in contrast to that of the global fast food, beverage and snack market who develop mass media campaigns to target children from two years of age and aggressively market products as children grow, in the aim of developing strong brand loyalty. One thing that is clear is that the 'health foods' market is expanding rapidly with estimates of market growth ranging from 20 to 40% annually in volume terms over the next five years. There are a number of clear indicators for these strong growth forecasts, they include; consumers becoming increasingly health conscious; some people are becoming more affluent and paying more attention to the foods they are eating and are willing to pay higher prices for premium, healthy products; the nature of globalisation has led to exposure of alternative lifestyles; and the ageing population with increasing awareness of sickness has contributed to the interest in health foods (USDA Agricultural Trade Report, 1997).

The strength of the health food industry is based to some extent on marketing campaigns which promise remarkable health benefits. For example, Okie (1997) sites in the Denver Post, marketing claims such as; "Ginkai – proven to improve memory and concentration

proven for life"- which was aired as a commercial for a herbal extract made from ginko leaves; "Lower your cholesterol without drugs"- from a magazine add for Cholestin, a product made from an extract of Chinese red rice yeast; and "DHEA – feel younger and sexy with this amazing anti-ageing pill", found on an internet advert from a company selling the steroid hormone dehydroepiandrosterone. It is clear the herbal remedy health industry is marketing itself as quick fix products and very much focused on disease prevention. This industry however, has few constraints and no government regulations have evaluated their safety, checked purity or evaluated the data to see if the marketing campaigns work as they advertised (Okie, 1997). With its target at the older population the health food industry uses the health insecurity of this population. As the 'baby boomers' confront their own mortality, the health food industry is capitalising on their fears – of cancer, heart disease and all of the other lifestyle health issues people have (possibly caused by multinational fast food companies). Marketing targeted at adults and children can therefore be seen as shifting focus as food needs to be considered 'healthy' as well as fun to eat and attractive.

An interesting accompaniment to the 'supplement health industry' is the need (and increasing pressure) for 'regular' food products to promote themselves as 'healthy'. *Heinz* tomato ketchup needed to boost its sales, so it spent $20 million US to promote its product with a healthier angle emphasising the 25 tomatoes that fill each bottle. Here, advertisers are clearly targeting influential parents. Advertising vision shows mum pouring ketchup onto a hamburger, and a child biting in to it with glee (Balu, 1998). In contrast, yoghurt, a product which has developed an image of something to be eaten only when dieting, needing a branding makeover so that it was not considered only healthy. Nanette Franco-Diyco (2001 p. 3) of 'Business World' says, "Yoghurt was launched many years ago and was subsequently allowed to disappear from a market that seemed unprepared for healthy chilled food". Yet in his role as Nestle Vice President, Robby Sicam has worked to boost yogurt sales and has said, "There were gross misimpressions regarding yoghurt in the earlier years. Yoghurt was originally identified as a diet food and that it was simply sour, and as is the perception of almost every dieter, diet foods bring sorry images of stark deprivation and pain. So as one shuns dieting, one dislikes yoghurt as unpalatable" (Franco-Diyco, 2003, p. 3). The *Nestle* yoghurt company has subsequently relaunched its yoghurt

products as food that is simply good tasting, yet as an added value is also health too. Their new slogan reads; "Eat it just for the taste. Health is an added extra".

Global marketing and the systematic moulding of taste by multinational corporations have been argued to be a central feature of the globalisation of the food industry (Chopra and Darnton-Hill, 2004). However, these investments in global brands are being reinforced by active promotion and use of the opportunities arising from the increasing liberalisation of trade to develop new markets. Chopra and Darnton-Hill (2004), believe public health attempts to restrict multinational fast foods are being resisted fiercely by the food manufacturers and companies, and that the food industry tactics are similar to those used by the tobacco industry – supplying misinformation, use of supposedly conflicting evidence, and hiding negative data.

There is the contention, that there is no such thing as an unhealthy food, only unhealthy diets. Yet it can be assumed that an unhealthy diet is likely to be made up of largely high fat foods as 'healthy foods' may be defined as those foods having characteristics that contribute to a diet that is in line with the National Dietary Guidelines (NHMRC, 2004). In addition to the food people eat, multinational corporations and the health and medical field contend that the problem is not the excessive diet but the reduction in physical activity (Bhargava and Guthrie, 2002).

The growth of the multinational food industry is intricately linked to the process of globalisation. So how successful are the campaigns and how established is 'fast food' as part of global youth culture and identify? What are children's understandings of 'fast' and 'healthy' food and eating patterns?

Kids as Consumers and Brand Recognition

The food and beverage industry views children and adolescents as a major market force and as a result, children and adolescents are now the target of intense and specialised food marketing and advertising efforts. This is a barrier to nutritious food consumption in children and adolescents and it is little wonder why parents have trouble introducing healthy food options when there are such strong alternative influences. Story and French

(2004) say food marketers are interested in youth as consumers because of their spending power, their purchase influence, and their future as adult consumers. Multi-strategy techniques are used to reach youth, beginning when they are toddlers, to foster brand building and influence food product purchase behaviour. Foods marketed to children are predominantly high in sugar and fat and do not meet national dietary guidelines. Companies utilise television advertising, in-school marketing, product placement, supermarkets, cinemas, the Internet, toys and products with brand logos, and youth targeted promotions, such as cross selling.

While multiple factors influence eating behaviours and food choices for children and adolescents, a major force is food advertising (Story, Neumark-Sztainer and French, 2002). Children live in a media saturated environment and are cognisant with advertising images from a very early age. Over the past 10 years, children and adolescents have increasingly been targeted with intensive and aggressive forms of food marketing and advertising practices through a range of channels (Kraak and Pelletier, 1998). McNeal (1998) and Strasburger (2001) estimate adolescents in the United States spend $140 billion per year and children under 12 years of age spend another $25 billion, but may influence another $200 billion of spending per year. It makes sense then for companies to want to capture some of the spending yet it must be questioned, how far should this advertising go as it is potentially to the detriment of child health?

Advertising and promotion are central to the marketing of the food supply. In the United States the food marketing system is the second largest advertiser in the economy (after the automobile industry). The food industry spends around $11 billion annually on advertising; food manufacturers spend $7 billion and fast food establishments spend $3 billion. Most of the advertising focuses on highly packaged and processed foods. Advertising expenditures on fruit and vegetables are negligible (Gallo, 1999). Adolescents are a key target for marketers as they have tremendous discretionary spending power. Of the $140 billion adolescents spend a year, $94 billion is money they earned. Adolescent boys spend an average of $59 a week, and girls spend $53, of their own money. About 15% of this spending is for fast foods and snacks (Storey & French, 2004). Adolescents and children also influence their parents spending, particularly grocery purchases. Adolescents and

children will also spend money in the future and marketers will focus on this to develop loyalty to brands (Kraak & Pelletier, 1998).

Television advertising by fast food chains dominates children and family viewing times on television, with the level of such advertising in Australia and New Zealand just behind that of the United States and more than twice that of most European countries (Figure 3). The New South Wales, Centre for Health Promotion (2002) investigated the breakdown of television advertisements during children's viewing times. Analysis was undertaken of television advertising in five Australian capital cities during children's viewing times over one week in June 2002. Approximately one third of all commercial advertisements were for food, with the greatest proportion of food advertisements occurring during the weekday afternoon timeslot. On average a child viewing television in any of the major Australian capital cities during this study period would have been exposed to eight food advertisements per hour (three minutes of food advertising). Confectionery was the most commonly advertised food category during children's TV viewing hours, followed by 'fast food restaurants' and 'dairy'. Approximately half of these advertisements would have been promoting food products not considered essential or desirable for a healthy diet, according to the 2001 National Health and Medical Research Council dietary guidelines for Australian children.
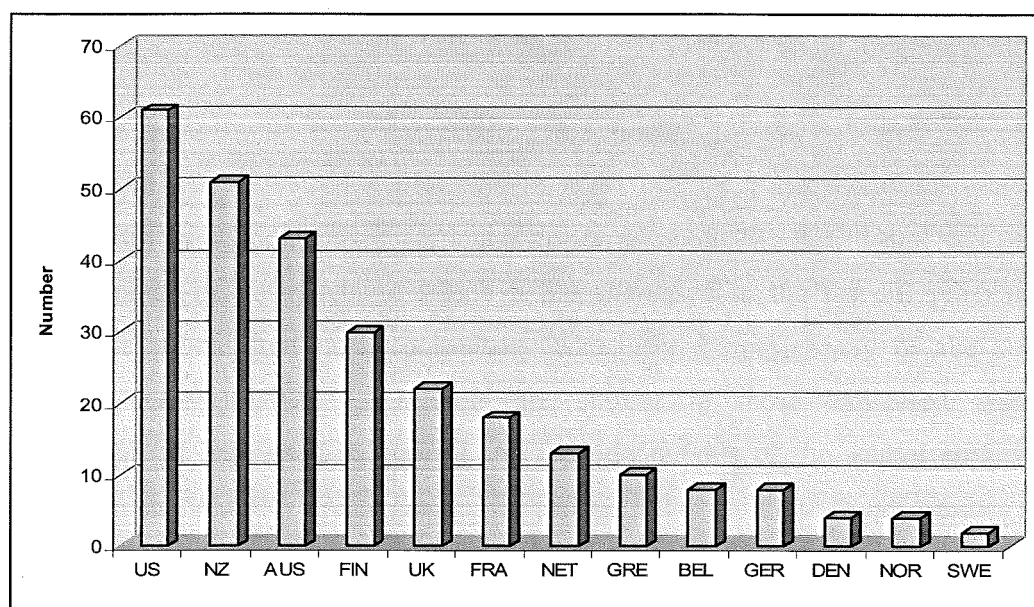
Figure 3. Number of advertisements for fast food restaurants in a 20-hour sample of children's television in selected western countries.
(Adapted from Horgen, Choate and Brownell, 2001)

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The influence of marketing on children is evident in their food choices outside of the home. One third of all teenage eating occasions take place outside the home. More than half (52%), of out-of-home eating occasions take place at school, followed by fast food restaurants (16%), other locations (16%), and vending machines (6%) (Storey et al. 2002). The physical environment in the community has a large impact on adolescent eating by influencing access to and availability of foods, and influencing perceived norms regarding eating behaviours. For example, it may now be considered normal to purchase 'fast food' every day.

The power of influence and appeal of multinational food products should be recognised for the mushroom effect it has had. For example, a global study of children, known as the ABC Global Kids Study, was conducted to determine the attitudes and preferences of children in the United States, United Kingdom, France, Germany, Japan, and China to American fast food brands. One hundred percent of the 7 – 12 year old US children recognised Ronald McDonald, with 82% of the Chinese children also recognising him. In all nations the children rated *McDonalds* as their favourite restaurant. The chocolate *M&Ms* product with their cartoon characters have ingrained themselves in global culture with 99% of American children, 94% of French children and 61% of German children recognising the branding (ABC Global Kids Study, 1997). This influence is strong around the world, amongst children and the general community and there currently is no limit to how far it can go.

Advertising in Schools

Commercialism in schools raises particular concerns about the health and wellbeing of children, because of the extent to which it has increased in the last 10 years and the vulnerabilities of children in a compulsory education system. Many of the concerns surrounding commercialism in schools are similar to those expressed about the commercialism of childhood in general. As they do outside of the school environment, advertising in schools may create desires for products that children do not need or cannot afford and that are harmful to them over time. Advertising to children has expanded and so has its presence in schools (Palmer, Cantor, Dourick, Kunkel, Linn and Wilcox, 2004). School Principals and Councils should be especially concerned with in-school commercialism because the effects of advertising may be stronger in the school context.

Palmer et al. (2004) suggest that students at school are a 'captive audience', required to attend and therefore experience maximum exposure and the effects of advertising may be stronger in the school context as the school may be perceived as having the implied endorsement of the school. Advertising in the school can influence food preferences and food consumption.

In response to the level of food advertising to children in schools the American Public Health Association (2004) released a resolution titled, 'Food marketing and advertising directed at children and adolescents: implications for overweight', calling for the removal of food adverts from schools, requesting governments protect youth from food marketing that is leading to negative effects on weight and health. The APHA recommends designating schools as advertising free zones. This would include the removal of sales of vending machines products, "pouring rights" contract beverages, brand name fast food and fundraisers, food and beverage ads placed around the school, corporate sponsored education programs, sports sponsorships, incentive programs and coupons. These recommendations are valid and when thought through alarming in that marketing in schools has developed to such a level. It will be difficult, particularly in the USA where school advertising and sponsorship has taken such a hold on school funds and who draws the line with advertising in schools? Many school staff members and parents would possibly be ambivalent about the incursions of advertising into schools, however many want to see schools as commerce free zones. Kenway (2004) says the ideal to remove advertising from schools may be difficult to uphold when school funding is tight and when some governments encourage links with commercial companies. For example the UK Secretary of State for Education welcomed the sponsorship of a potato chips company to support books for schools; and the UK Minister for Sport recently approved an initiative by Cadburys – Get Active campaign to exchange sports equipment in return for tokens from special packs of chocolate (Kenway, 2004).

Megan Santosous (2000, p.1) writes of an experience she had while attending an adult education class at a local schools, she says:

While wandering aimlessly through dimly lit and surprisingly ill-kept hallways, I came across a sight that I found truly appalling. It wasn't graffiti, cracked linoleum or a surly teenager that stopped me in my tracks; it was a full-colour, poster size advertisement displayed prominently outside the guidance officer's door. Above the larger-than-life bag of candy pictured on the ad was the message, 'M&Ms... better than straight As'. A dubious proposition at best, but in an institution devoted to learning, downright subversive.

The conclusion to be drawn from Santosus' words is that advertising is not even subtle on school grounds and particularly not suitable with the message suggested by *M&Ms*. Advertising is not education, it does not improve the quality of life or opportunities for children and therefore should not be accepted within schools.

Schools: Global Targets for the Fast and Health Food Industries

The world as a global community is seeing more and more of the same images and sharing more of the same values. This is also true for the school environment. With the development of self managing, or deregulated schools many schools have turned to the business community for partnerships and enterprising opportunities. Governments, who have reduced funds available to local schools, in a time of deregulation and globalisation, have encouraged schools to seek resources from a willing business community (Robertson, 2000). Equally, business has sought either to co-opt local schools to their productive endeavours or to enter the new schooling marketplace in search of profitable activity. Robertson (2000) argues that what advertiser's value is the extra legitimisation they feel an academic environment, such as a school and teachers, offers their products.

The pressure on education funding in Australia is opening the way for multinational fast food corporations, to 'assist' schools with fundraising. Zimmer (2001), found businesses seeking entry into the lucrative education market, such as *McDonald's* fast food outlets, exploiting schools' lack of funding. In one deal, schools received 25% of the profits from 'fun nights', in which students and parents went to *McDonalds* to eat. In another scheme, schools ran 'cheeseburger days', where *McDonalds* charged schools $1.60 per cheeseburger, which the schools sold for $2.50 (Zimmer, 2001). Vending machines and the

full force of the global market appears to be 'just around the corner' for Australian schools. Short of funds, many schools sell candy, crisps, and soft drinks to raise money for programs and activities. All but non-existent just a generation ago, food and beverage vending machines are nearly universal in American secondary schools and attract $1 billion annually in student snack spending (Story & Neumark-Sztainer, 1999). It appears schools are pressured to ensure students utilise the vending machines as monetary rewards for the schools count on consumption.

In 1993, the Toronto School Board in Canada gave the *Pepsi* Company monopoly rights to advertise its products on school property. For little more than one million dollars, *Pepsi* gained the right to install its drink dispenser machines in all schools across the city for three years. Despite protests from teachers, students and health groups, board trustees believed there was little alternative available to them in the face of cost cutting (Gallo, 1996). The money offered was simply too overpowering, rather than consideration of childhood health risks.

This immersion of marketing into all aspects of social-life, leaves health promotion professionals, teachers, parents, and students themselves, many of whom who would like to curb the increase in overweight and obesity, at a loss as to how to counter and reduce poor food choice behaviours. A study conducted by Samuels (2000), to determine fast food prevalence in California's high schools, found that 53% of responding California school districts reported that their high schools sold Taco Bell, 22% sold Subway; and 19% sold Domino's Pizza *in* the school cafeteria. Meanwhile, the Colorado Springs school district signed a 10 year, exclusive contract with *Coca-Cola* that guaranteed to bring in $7.5 million, provided that its 32,500 students bought a sufficient number of soft drinks from the schools' vending machines (Pendergrast, 2000). Pendergrast (2000) reports a school district official wrote a letter to each of the Principals saying, "We must sell 70,000 cases of product at least once during the first three years of the contract". To do so, he urged schools to "allow students to purchase and consume vending products throughout the school day", and to place a greater number of vending machines in the school. The Osseo school district in Minnesota also approved an arrangement to offer exclusive rights of the district's vending machines to a soft drink company, and is projected to earn $473,750 a year for the school districts (Story & Neumark-Sztainer, 1999). Well known 'public activist' Michael

Moore comments in his book, 'Stupid White Men', that the 1990s saw a phenomenal 1,384 percent increase in exclusive agreements between schools and soft-drink bottlers. Two hundred and forty school districts in thirty-one states have sold exclusive rights to one of the big three (*Coca-Cola, Pepsi, Dr. Pepper*) to push their products in schools. He also says, "Ever wonder why there are more overweight kids than ever before", (Moore, 2001 p110).

Horgen, Choate & Brownell (2001) reported on a partnership arrangement between schools and the Whittle News and Advertising Corporation who provide 'free' technology in exchange for guaranteed audiences of a news program for students. A contract with Whittle Communication for schools means that a given school must be able to guarantee that "ninety percent of pupils watch ninety percent of the time...ten minutes of 'news' and two minutes of commercials... every school day for three to five years". The repercussion from this is that the 'two minutes' of advertising, in school, every day, is made up of fast food and soft drink commercials. David Ludwig (2004 p. 59), who wants to eliminate 'junk food, fast food and soft drinks' from schools says, "Students are a captive audience and the first step to assisting kids to make healthier choices is to get rid of soft drinks".

Cultural Changes in Australia - Meals Away from Home

The classic image of a 1950's household with mum moving around the kitchen in an apron, with the rest of the family at the dinner table waiting patiently for the latest 'dish' to be tried is long gone. These days mum is probably finishing a business deal at work, is getting ready to fly out the door to get home to have time with the family and is hoping that someone has thought about what to have for dinner. Eating at the kitchen table has changed and fewer families eat meals together. However Gillman, Rifas-Shiman, Frazier, Rockett, Camargo, Field, Berkey and Colditz (2000), determine children who eat dinner with their families at home have a better quality diet than those who do not. They also tend to have higher intakes of fruit and vegetables; fibre; folate; calcium and iron, and lower intakes of saturated and trans fatty acids, soft drinks and fried foods.

Australian culture has always been influenced by imported cultural products, and indeed has been largely built on selective adoption of overseas cultural practices (Waterhouse,

1998). Just as other Western nations have embraced the global fast food culture, so has Australia. With this embrace of fast food consumption, comes the equally 'world standard' consumption patterns. According to economic research firm BIS Shrapnel (2000), food eaten away from home accounted for around 28% of the food expenditure in Australia. In 1999 this market was valued at 19 billion dollars and almost half of this expenditure (an estimated $8.5 billion) went on fast foods. According to research group MINTEL, Australians are the fourth largest consumers of snack foods behind the United States, Britain and Ireland and Australian households spend on average AUD$600 per annum on snack foods (American Academy of Pediatrics, 2003). In addition, the consumption of carbonated drinks continues to rise and it is suggested an average teenage (12 – 18 years old) soft drink consumer in NSW would drink between 300 – 600 ml of soft drink each day. Apparent consumption of carbonated and aerated beverages in Australia has increased from the late 1980s figure of 87 litres consumed per capita to 113 litres per capita in 1998-99, an increase of 30% in a decade (Australian Bureau of Statistics, 2000). This mean intake of soft drink for all ages rose from 26 to 31 cans per year in two years between 1997-99 (BIS Shrapnel, 2000).

In the US in 1997, nearly half of family food expenditures were spent on food and beverages outside the home, with over one third of the total food dollars spent on 'fast foods' (Putnam and Allshouse, 1999). As children age, they consume a higher proportion of meals away from home, with preschool children eating out 18% of the time and middle school children 26%. Fast food restaurants accounted for more than half of away from home meals and contributed an overage of 10% of children's total energy intake (Lin, Guthrie, Frazao, 1998; Lin, Guthrie and Frazao, 1999). Children consuming fast food had higher intakes of fat, saturated fat, cholesterol and sodium and lower intakes of fibre, calcium and iron than those who did not (Lin et al. 1999).

With changes in our culture, with both parents working and the huge variety of fast and convenient food, isn't it that families are simply adjusting to 'the here and now' in the same way as any generation did in history. It might be that choices taken regarding food consumption need to be addressed by corporations providing food and by the families that organisations serve. We can see this change in the multinational corporation *McDonalds*. Their new 'Healthy Choice' menu has reduced fat options, they sell fruit and provide

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nutritional panels on all food packaging – however, that doesn't seem to be enough. Furthermore, as the following chapter highlights, provision of information on food labels and nutritional panels is itself part of the global marketing game.

This chapter has highlighted that healthy eating in children can never be regarded as a simple or distinctly local issue. It is always and inevitably influenced by global social, cultural and economic developments. Global players are very much at work in the battle to transform the eating and more importantly, purchasing habits of young Australians. The following chapter therefore examines what actions are being taken nationally and internationally by governments and the food industry itself, to restrict potentially unhealthy choices and/or healthy eating habits by children in schools.

CHAPTER 3

POLICY ISSUES SURROUNDING
HEALTH EATING FOR CHILDREN

It is clear that the influence of the global food market is now intrinsic to most people's lives. Particularly those who have grown up with marketing and brand building advertising since they were toddlers. With the success of multinational food and beverage corporations come the consequences of delivering lifestyle practices. This chapter investigates possible measures and strategies, with particular reference to children's eating in Western Australia, being developed and undertaken to address these issues.

School canteens may well be the largest 'fast food' restaurant for Western Australian students, yet there is a lack of government and industry regulation around the foods available to students while they are in school in Australia. In Western Australia of the 178 Department of Education and Training policies none refers to food served at schools or the school canteen, and the Duty of Care for Students and the Student Health Care policy for students do not mention food consumption. No results are found when searching the Departments website for food. This is of concern as food is served to students, under the duty of care of the Department of Education, every school day.

National Healthy Eating Interventions

At a National level notable steps are being taken regarding children's health and wellbeing, with the establishment of the 2002 Australian Health Ministers National Obesity Taskforce. All Health Ministers agreed that overweight and obesity are significant public health problems that threaten the health gains made by Australians in the last century. They decided that the problem required an Australia–wide response, and established the Taskforce to develop a National action plan for tackling overweight and obesity, and to identify roles and responsibilities for implementing the national plan (National Obesity Taskforce, 2003). The strategic intent of the Taskforce is to assist Australians to enjoy the

highest levels of good health in the world by promoting healthy weight. In response to the escalating prevalence of childhood overweight and obesity, the initial focus of the National effort is on children and adolescents (0 – 18 years) and the families that influence and support them. The two focus areas of the Taskforce include; supporting environments; and prevention of obesity. As part of the settings strategies for schools, the Taskforce suggests that 2004 actions should include; "promoting widely the implementation of the NHMRC Dietary Guidelines for Children and Adolescents and Australian Guide to Healthy Eating by introducing standards for school canteens, vending machines, fundraising, sponsorships, special events, and by strengthening nutrition education in the curriculum" (National Obesity Taskforce, 2003; p. 8).

Strategies of the Taskforce for media and marketing suggest that 2004 actions only need to "monitor and assess the effectiveness of the Children's Television Standards and the revised regulatory framework for food and beverages advertising to children in meeting health objectives, and to recommend modifications if necessary" (National Obesity Taskforce, 2003; p9 . No mention is made as to the development of restrictions on the immense advertising currently displayed during our children's television viewing times. There are currently no restrictions, other than voluntary codes for advertising, for nutrition on television and no restrictions regarding food supply in school canteens.

The Government has supported the National Obesity Taskforce by providing considerable funds for initiatives, directed towards changing children's eating habits and food choices in school time, and encouraging them to be more physically active. The $116 million financial support to schools is part of the 'Building a healthy, active Australia package', and includes $15 million for school healthy eating practices (Jordan, 2004). As part of this package parent associations, school auxiliaries, canteens and other groups can apply for grants up to $1500 per school to fund activities that promote health living and health eating. This might include the development of healthy school canteen menus, school vegetable gardens, healthy cooking classes and lunchboxes, and awards for students. Further proposed use of the $116 million funding includes the requirement that education providers implement a minimum physical activity of two hours per week for primary and middle school students. There will also be a National advertising campaign on nutrition and the importance of physical fitness for growth (Williams, 2004). To reassure parents who are reluctant to allow

their children to play outside because of safety concerns, $90 million will be put towards establishing after school physical activity programs in schools and approved outside school hours care services. A further $15 million has been set aside for grants to community organisations linked with schools, such as parents and citizens' associations, to promote healthy eating. In an attempt to assist parents in the home, $11 million will be directed to providing families with practical help and information about how to make healthy eating and activity an integral part of everyday life (Williams, 2004).

At a West Australian State level there are now a number of state government initiatives which look at the health and wellbeing of West Australians. These include the Early Years Strategy[1], Physical Activity Awareness Day[2] (Crane, 2004), Walk There Today, Find Thirty – its not a big exercise[3], Step Out All Year Round (Department of Planning and Infrastructure, 2004)[4], and the Premiers Physical Activity Taskforce[5]. Yet the only State government initiative that focuses on nutrition is the 'Eat Well Be Active', Department of Health campaign, which has at its core the 'Eat two fruit and five veg.'[6] message. There appears however, to be a large 'gap' regarding food and nutrition for school children and in particular, school canteens in Western Australia.

The Western Australian Premier's Physical Activity Taskforce and the Western Australian Department of Health, have established an 'Eat Well be Active' campaign and the WA School Canteen 'StarCAP' project, yet there is no accompanying or supportive, Department of Education duty of care/food legislation governing the foods presented to students. High fat, high sugar and high salt foods continue to be sold in school canteens to students who are in the care of the school. These foods include; pies, pasties, chips, lollies, chocolates, soft drinks, pizza, nuggets, fish fingers, hot dogs, sausage rolls, pastries and ice-creams. Unless the individual school and canteen voluntarily chooses to develop a menu of healthy food options to sell to the students, and/or restrict the availability of certain foods, the canteen can sell what it likes – and they do. Certainly, we can speculate that the freedom of canteen sales to students may be a significant factor in trends of increased consumption of

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[1] www.earlyyears.wa.gov.au
[2] www.find30.com.au/physical.html
[3] www.health.wa.gov.au
[4] www.dpi.wa.gov.au/walking/walktheretoday
[5] www.patf.dpc.wa.gov.au
[6] www.health.wa.gov.au

high fat, sugar and salt foods and/or relative absence of consumption of fruit and vegetables.

It is also interesting to note that school canteens in Western Australia have followed the fast food industry and supermarkets in introducing 'meal deals' to their canteen menus. Like fast food outlets, a 'meal deal' requires the consumer to purchase a number of food items as a 'deal'. For example, in some schools, a hamburger, chips and a juice or milk drink make up a 'meal deal' for lunch from the canteen. The attraction for the consumer is that the 'meal deal' is meant to be cheaper than if you bought all three items individually. However, without the 'meal deal' consumers may not have purchased so much food nor that they nutritionally need. There does not seem to be any legislation or controls around this new type of mass food selling particularly for school canteens. Needless to say, it is a great way to boost profits though, highlighting another significant issue here, that the school canteen industry is exactly that, an industry, with outlets needing to generate profit to remain in business. The onus, currently, is on the industry to self regulate.

Labelling of Foods in Australia

In December 2002 the Australian and New Zealand Health Ministers agreed that all foods manufactured or packaged must show food labels which include information about the nutritional content of the food; the percentage of the characterising ingredients of the food; and declarations of the presence of potential allergens in foods, however small the amount. All foods containing genetically modified material must be labelled and any irradiated foods must be labelled as irradiated. In addition food labels must contain other information such as; the 'best before' date, and the scale of which ingredients are listed. Ingredient lists are scaled by ingoing weight, from greatest to smallest (Food Standards Australia New Zealand, 2004). ·

In support of food labelling principles the federal government Department of Health and Ageing developed policy principles for nutrition, health and related claims. These support government intervention which focuses on health promotion to consumers. These policy principles include; giving priority to protecting and improving the health of the population; enabling the responsible use of scientifically valid nutrient, health and related claims;

supporting government, community and industry initiatives that promote healthy food choices by the population; and promoting a partnership between consumers, governments and industry in the delivery and responsible use of nutrition which protects consumers from false and misleading information that may result in distorted diets which harm health and increase health inequalities (Food Regulation Secretariat, 2002). Arguably a comprehensive set of principles, but we need to consider the specific regulations and/or investments that are underpinned by them. Specifically, many of these principles seem to be in contrast to the realities of food consumption by school children. It might be suggested that eating a pie and chips with a soft drink every day from the school canteen is a distorted diet which may harm health, yet this possibility could be common practice in our schools. The availability of energy dense, high fat food in our school canteens may lead to health inequality for those students who are consumers. There is a distinct lack of legislation or even voluntary codes within the education system surrounding food.

Since the 2002 requirement regarding food labelling there have been a plethora of new advertising 'lines' for foods. What do 'fat free', 'virtually fat free', 'reduced fat', 'low fat', 'low carb', 'low sugar' really mean? These terms are in all of our shopping centres and consumers are purchasing products featuring certain 'labels' with a certain belief about what it is they are buying and/or the effects it will have as part of a diet. Consumers are reaching for the 'low fat' cheese and/or many other products rather than its full fat neighbour, in the shopping isle and paying more for it (Ironside, 2004), but what restrictions are there on labelling and can they even be assured that 'low fat' is actually *less* fat? In Australia there is a code of practice set by the food and beverage industry, which specifies what conditions a product should meet so it can bear a certain label, however, these standards are not policed. Nutrition information panels are the most important food messages on a product as they provide a breakdown of the ingredients of the product and the percentages in which they are present. All products in Australia are required to have a nutritional panel. It is interesting to compare the nutritional panel of a 'full fat' yoghurt product and one that is 'fat free'.

Fat-free yoghurt

Average Quantity	Per 100g
ENERGY	369kj
	88 cal
PROTEIN	5.1g
FAT – TOTAL	0.13g
- SATURATED	0.10g
CARBOHYDRATE	
- TOTAL	15.4g
- SUGARS	15.0g
SODIUM	68mg
CALCIUM	158mg

ENERGY
Has 103kj less than the full-fat kind
FAT
Very low fat content; has 3.7g less fat than the one below
CARBOHYDRATES
With15.4g, this contains more carbohydrates than the full-fat yoghurt
SUGAR
Between 5-10g is okay; this has a lot of sugar
SODIUM
The full-fat yoghurt has 14mg *less* sodium than this low-fat kind
CALCIUM
The recommended daily intake (RDI) is 800mg; this is 20 per cent of the RDI

Full-fat yoghurt

Average Quantity	Per 100g
ENERGY	472kj
	113cal
PROTEIN	4.2g
FAT – TOTAL	3.9g
- SATURATED	2.5g
CARBOHYDRATE	
- TOTAL	14.1g
- SUGARS	13.8g
SODIUM	54mg
CALCIUM	130mg

ENERGY
300kj is ideal; any more than 650kj is too much for a healthy diet
FAT
3g of fat is a small amount; 20g would mean it is very high in fat
CARBOHYDRATES
Carbohydrates should make up 55-70 per cent of total kilojoule intake
SUGAR
Like the low-fat kind, this has a lot of sugar
SODIUM
If it has less than 120mg then it is fine
CALCIUM
The has 28g *less* calcium than the fat-free variety.

Verdict: We can not make assumptions about content or comparative content of 'full' or 'low-fat' foods. Differences are subtle and labels need to be read carefully.

Low fat or fat free

According to Ironside (2004) low fat foods should have less than 3 grams of fat per 100 grams and liquids should have less than 1.5 grams per 100mL. Yet low fat does not mean low in sugar. Ironside (2004, p. 165) says "Products with reduced fat often have to make up for lack of taste by adding other ingredients such as sugar". It is necessary to compare the kilojoules in the low fat product to the amount in the regular variety. Total kilojoule intake is what is the important measure. Many products now use the claim on their branding to suggest a percentage fat free, for example, '98% fat free', or '97% fat free'. For

manufacturers to make these claims their product must meet the criteria for low fat foods. However, 95% fat free means you will eat 5 grams of fat per 100 grams. Therefore if you have a 300 gram muffin, which equals 15 grams of fat – you eat a considerable amount and half of the recommended daily intake for fat in one muffin (Department of health, 2003).

No added sugar or sugar free

Foods with less sugar are healthier but should still be consumed in moderation. For example, fruit juices may not have any 'added sugar' but can it still be present in large amounts because sugar is naturally produced by fruit. Understanding of food labels is needed to ensure true food value.

Lite or Light

These claims on foods are the most deceiving of all as they have nothing to do with the kilojoule value of the food and most of the time these labels refer to the texture or colour of the product! For example, potato chips may be lightly salted or even just thinly cut, which makes them 'lighter' in weight. With olive oil, the word 'light' only refers to the colour as all oils are 100% fat (Ironside, 2004).

Low joule or diet

Many soft drink products use these labels and it indicates that the kilojoule content has been reduced by 25%, which means less sugar. Many soft drink companies use artificial sweeteners which are made up of a lot of salt to make up on taste.

New Lean Beef Burger

< 9g of Fat + Taste = Guilt Free

The nutrition panel is too hard to see on this advert however, when compared to the Australian Guide to Healthy Eating measure of food consumption this 'Lean Beef Burger' doesn't match with the expectations for healthy eating.

What is a lot of fat?

Per 100g	A little is...	A lot is...
Kilojoules	300kJ	More than 650kJ
Sugar	Less than 5g	More than 10g
Fat	Less than 5g	More than 10g
Saturated fat	Less than 2g	More than 4g
Salt/Sodium	Less than 120mg	400-1000mg

www.health.gov.au/pubhlt/strateg./food/guide

McDonalds – 'Lean Beef' Burger

Nutritional Info	Per Serve
Kilojoules	1250kJ
Fat	8.8g
Saturated fat	3.2g
Sugar	4.4g
Sodium	665mg

The 'guilt free' burger above is higher on all of the measures set for healthy eating except for sugar. This is not to discount *McDonalds* for providing a 'healthier' option for consumers, but we can not avoid the fact that this burger is still over the recommended consumption level for nutrition and a poor match for the levels set by the Australian guide to healthy eating (Department of Health, 2003). The advertising for the *McDonalds* 'Real Fruit Smoothie' suggests that it is 98.5% fat free. Whenever a claim like this is made the first clarification that should be made, is the sugar content. The fruit smoothie has 42.1 grams of sugar per 100grams of product. From the table 'a lot' of sugar is counted as more than 10 grams – the fruit smoothie is four times higher in sugar. The kilojoule content is also very high, 1170 grams.
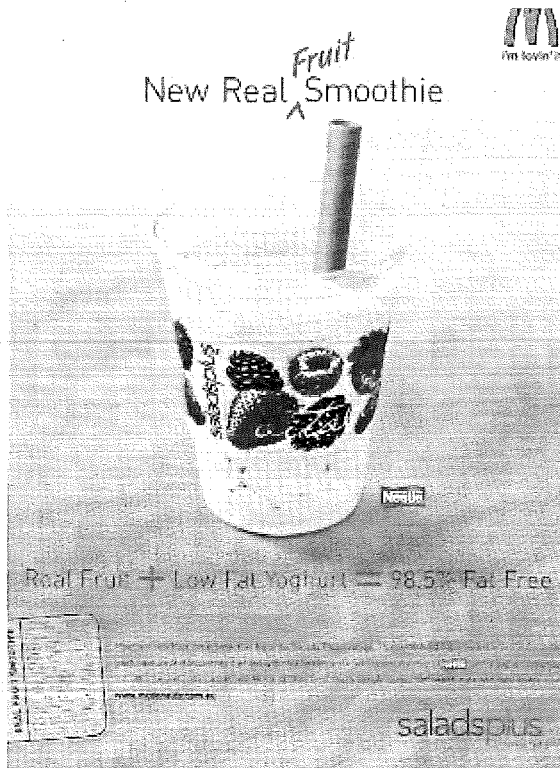
New Real Fruit Smoothie

The nutrition panel is too hard to see on this advert however, when compared to the Australian Guide to Healthy Eating measure of food consumption this 'Real Fruit Smoothie' doesn't match for healthy eating either. The 98.5% fat free is misleading.

What is a lot of fat?

Per 100g	A little is...	A lot is...
Kilojoules	300kJ	More than 650kJ
Sugar	Less than 5g	More than 10g
Fat	Less than 5g	More than 10g
Saturated fat	Less than 2g	More than 4g
Salt/Sodium	Less than 120mg	400-1000mg

www.health.gov.au/pubhlt/strateg./food/guide

McDonalds – **Real Fruit Smoothie**

Nutritional Info	Per Serve
Kilojoules	1170kJ
Fat	4.0g
Saturated fat	3.0g
Sugar	42.1g
Sodium	161mg

Real Fruit + Low Fat Yoghurt = 98.5% Fat Free

saladsplus

It is clear that multinational food and beverage corporations are utilising marketing techniques even with food labelling requirements. The implication for the consumer and particularly children is that they are unaware of exactly what they are eating. There is legislation to regulate food advertising and policy however it is often monitored from within the industry.

Legislation Around Advertising

Beyond government, who should we look to provide regulatory guidelines? The International Chamber of Commerce (ICC) provides a framework for responsible food and beverage communication (table 2). The ICC supports the notion that responsible commercial communications can assist consumers in making appropriate choices about food and beverage products, and in understanding the role of nutrition, diet and physical activity in healthy lifestyles. Yet the ICC has a longstanding view that commercial communications are best regulated by effective self regulation within a legal framework that protects consumers from false and misleading claims (International Chamber of Commerce, 2004). It may be the freedom of self regulation that has caused advertising to

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become so clever and incisive when attracting their target audience. When considering advertising to children, the ICC recognises that children constitute an audience with a more limited capacity to assess information in advertising, which is why it includes specific provisions on commercial communications to children in its guidelines and codes (International Chamber of Commerce, 2004).

In Australia the Australian Association of National Advertisers (AANA) code of ethics has similar principles and is utilised as a means of advertising self regulation for all adverts. The Australian code is used to ensure 'advertisements are legal, decent, honest and truthful and that they have been prepared with a sense of obligation to the consumer and society and fair sense of responsibility to competitors' (AANA, 2004). The AANA code of advertising to children determines that advertisements for food and beverages should not encourage or promote an inactive lifestyle combined with unhealthy eating or drinking habits; and must not contain any misleading or incorrect information about the nutritional value of that product. It can be suggested that when considering the current advertising on television in Australia that the code is very loosely interpreted. For example, the Coalition on Food Advertising to Children wrote a formal complaint to the investigations section of the Australian Broadcasting Authority regarding advertising of *Kellogg's Coco Pops* featuring popular pre-school personality Monica Trapaga, promoting *Coco Pops* for its nutritional content. The complaint specifies that the advertisement contravenes the children's television standards CTS 17 and commercial television industry code of practice by failing to mention that *Coco Pops*, which at a sugar contents of 40% by weight, the products is one of the highest sugar-containing breakfast cereals on the market and definitely not considered to be a healthy food choice by nutritional standards and therefore not suitable to advertise with a health message (The Australian Guide to Healthy Eating, 2003). Most advertising to children regarding food products actually contravene the code. Supporting this is the Food Standards Agency who determine, "children are bombarded with messages that promote food high in fat, sugar and salt, and that these messages do influence children, which when eaten is storing up health problems for their future" (Krebs, 2004, p. 1).

Table 2
International Chamber of Commerce Principles

ICC International Code of Advertising	
ICC International Code of Advertising The following provisions apply to advertisements addressed to children and young people who are minors under the applicable national law.	Advertisements directed towards children for food and beverage products should not create a sense of urgency, or inappropriate price minimisation.
Inexperience and Credulity Advertisements should not exploit the inexperience or credulity of children and young people.	While fantasy, including animation is appropriate in communication with younger as well as older children, care should be taken not to exploit a child's imagination in a way that could mislead him/her about the nutritional benefits of the product involved.
Social Value a. Advertisements should not suggest that possession or use of a product alone will give the child or young person physical, social or psychological advantage over other children or young people of the same age, on that non-possession of the product would have the opposite effect.	Food and beverage advertisements should not mislead consumers about potential health or other benefits from the consumption of the advertised product. In advertisements to children or young people, this includes such things as status or popularity with peers, success in school or intelligence.
Social Value b. Advertisements should not undermine the authority, responsibility, judgement or tastes of parents, taking into account current social values. Advertisements should not include any direct appeal to children and young people to persuade their parents or other adults to buy advertised products for them.	Food product advertisements should not undermine the role of parents and other adults responsible for a child's welfare in guiding diet and lifestyle choices.
Sales Promotion Sales promotions addressed to children and young people should not exploit their credulity or inexperience. No sales which advertised in terms that children understand. is likely to harm children or young people mentally, morally or physically, or to strain their sense of loyalty to their parents and guardians.	Sales promotion offers addressed to children should provide the conditions of the premium offer, sweepstake or contest being promotion should be undertaken Advertisers should strive to be sure that young children have an understanding of the products to be purchased, if any, to receive the premium; and for contests, the conditions of entry, types of prizes and the likelihood of winning.

(International Chamber of Commerce, 2004)

With current discussion surrounding the lack of childhood regulation on food advertising was hope for action to come from the National Obesity Taskforce, which was established by the Australian Health Ministers Conference in November 2002. The National Obesity Taskforce has fallen short of regulating food and beverage advertising and yet the global outcry against marketing to children is getting louder. O'Donahue (2004, p. 1) says, "fast food manufacturers and marketers can breathe a sigh of relief – at least for the moment, as despite consistent pressure from health professional and lobby groups for restrictions on advertising to children, the National Obesity Taskforce has stopped short of recommending regulatory action. This is in spite of the $1.3 billion cost of obesity in Australia".

The Taskforce's first report, 'Healthy weight 2008 – Australia's future: A national agenda for young people and their families', outlines a proposal to monitor and assess the effectiveness of the existing children's television standards and revised regulatory framework for food and beverage advertising to children and, if necessary, implement modifications. It also recommends that research be undertaken to assess the impact of advertising practices on obesity levels (National Obesity Taskforce, 2003). A recent study commissioned by the Food Standards Agency claims to have done just that. The report, 'Does food promotion influence children? A systematic review of the evidence', concluded that food promotion affected children's eating preferences, consumption, and buying behaviour. The study is the first to claim a direct link between television adverts and the type and amount of food that children eat. The report concluded by recommending criteria for children's food and beverage advertising (National Obesity Taskforce, 2003). The World Health Organisation has previously condemned food and beverage adverts that exploit children's inexperience, and determined that messages that encourage unhealthy dietary practices or physical inactivity should be discouraged (WHO, 2004).

Food Served in School Canteens

Opportunities for healthy eating while at school can assist students to develop lifelong eating patterns consistent with the Australian Guide to Healthy Eating, as schools can provide opportunities to practice healthy eating. In particular the school canteen can support healthy eating for children by considering the food choices they have for students. Many children and adolescents decide what to eat at the school canteen with little adult

supervision (Crockett and Sims, 1995). If healthy choices is what is on offer they will be more likely to purchase these foods rather than examples of high fat, sugar and salt foods. Mandell (1993) says the school canteen should provide students with the opportunity to practice healthy eating, and that it should be coordinated with classroom lessons to allow students to apply critical thinking skills taught in the classroom. Mandell suggests, school canteen staff should visit classrooms and explain how they make sure meals meet the guide to healthy eating; invite classes to visit the school canteen kitchen and learn how to prepare healthy foods; involve students in planning the school menu and preparing recipes; offer foods that reinforce classroom lessons, for example, wholemeal rolls to reinforce lessons on dietary fibre; put posters and fliers on nutrition in the canteen; and display nutrition information about available foods and give students opportunities to practice food analyses and selection skills learned in the classroom.

Many school canteens want to serve healthier food but believe or are concerned children will not eat healthier foods and therefore canteen sales may drop. Cross (2000) indicated that, South Australian school canteen experience shows that children will eat healthy foods provided they are good value for money, good quality and tasty. A common discourse around healthy school canteens is that if the canteen sells only healthy foods, students will simply spend their money at the corner shop. Cross (2000) says that the canteen is not the same as the corner shop. It is part of the total school environment and gives a practical nutrition message. There are many things available outside the school environment that are not available for sale inside the school and this is true for foods provided at the school canteen. Once the canteen is a shop inside the school grounds, it is part of the school and as such has an educational role. This sentiment is correct and true if children are to be given healthy choices at school, however, many canteens do not support Cross' comments and demonstrate their opinion through the sale of 'junk food' at school. It is quite contradictory however, to have students learn about the importance of a healthy well balanced diet in the classroom and leave class to find the school canteen full of foods that are not compatible with such a diet – or to find that foods that are core components of the diet are difficult to find in the canteen. Conversely if children learn about nutritious foods and the messages are supported by the school canteen they see the school itself recognising the value of a healthy diet. A further argument regarding children's freedom of choice and right to buy whatever they like at the canteen is often purported by those wishing to promote their products to

schools. This pressure should not be condoned as children can buy whatever they like at other shops, but as part of the school environment the canteen should support classroom nutrition programs. Yet with these suggestions clear to most school canteens there is no legislation, and until recently no policy or even encouragement for them to change unhealthy products currently sold.

Governments in Australia are starting to recognise the issue surrounding foods sold in school canteens yet have not gone as far as legislating to prevent and/or control sale of specific foods. In spite of the 2002 NSW Childhood Obesity Summit, the National Obesity Taskforce and the Federal Governments 'Healthy Weight 2008', there continues to be strategies rather than the required legislation on the issue of school canteens. Smith (2000) says parents were disappointed that fizzy drinks and junk food had not been banned from school canteens as part of the Taskforce's findings. Recognised Australian nutritionist Dr Rosemary Stanton says, "under-funded groups such as the school canteen association had been trying to change the menus of canteens by 'asking nicely' for 30 years, with little effect" (Smith, 2002).

New South Wales however, is leading the way with their strong expectation that all school canteens will start to implement the new 'Healthy Canteen Strategy' by 2005 and in Victoria a media release by the Brack's government in 2003 stated that, "we are encouraging schools to reduce the availability of high fat foods such as hot dogs, dim-sims and doughnuts, and increase the range of healthy foods such as pasta, salads, fruit and sandwiches. We want young people to stop eating junk food and turn to healthy alternatives such as muffins and noodles. Victorian school canteens will serve up healthy food that tastes great and makes students feels good" (p. 1). To support the Victorian Governments claims an education package titled, 'Smart Eating' was provided for parents, canteens and curriculum. The 'Smart Eating' guidelines provide detail and examples of healthier canteen options for schools. The guidelines suggest school councils develop policies for the school canteen that supports its role as providing healthy food to children. The resource suggests; what a healthy school food service should look like; a whole school approach to healthy eating; guidelines for healthy eating; addressing the canteen as a viable operation; ways to get started on a healthy school food service; foods to provide; marketing healthier foods to students; and food hygiene and handling (Victorian Government, 2003).

The response to the NSW Childhood Obesity Summit has seen the most thorough development by the NSW government regarding child health. In response to the obesity summit report, NSW developed the 'Prevention of obesity in young children and young people, action plan for 2003–2007' (NSW Department of Health, 2003). A key strategy was to support the development of 'healthier schools' and a key objective is to improve the nutritional value of food and drinks sold in school canteens. As a response the NSW Government has announced a new healthy menu for school canteens which is based on the complete removal of 'junk foods' suggesting foods such as soft drinks, deep fried foods and lollies be sold at the canteen no more than two times a term. The 'Healthy canteen strategy' designed to improve the quality of food sold in canteens by making it mandatory for all State schools to provide healthy and nutritious food consistent with the Australian Guide to Healthy Eating works on a 'traffic light' model of foods. Foods on the new menu are divided into three groups under the new menu guide:

- ▶ GREEN = fill the menu foods – including breads, pasta, fruit, lean meat, fish, chicken, vegetables, and reduced fat dairy.
- ▶ AMBER = select carefully and offer smaller servings – including savoury commercial products such as pizza and low fat pies, snack food bars, low fat muffins, ice creams and ice blocks.
- ▶ RED = foods high in fat and sugar to be sold no more than twice a term – including soft drinks, lollies, deep fried foods, chips, doughnuts and cream buns (Carr, 2004).

This move by NSW is currently leading the way in Australia and it is hoped more states will follow. At this time no Federal move regarding canteens is evident. Arguably, therefore, it is imperative that schools themselves review the education that they are providing about food, nutrition and healthy eating. The next chapter focuses on the curriculum that children encounter in schools in relation to these issues. Building upon the issues discussed in this chapter it emphasises a need for acknowledgement of the many and varied sources of 'education' within and beyond schools. Learning is identified as a phenomenon that is certainly not confined to classrooms.

CHAPTER 4

THE WRITTEN AND UNWRITTEN CURRICULUM

The previous chapters addressed the issues and questions surrounding healthy eating and children from a global and national perspective and in several instances, drew attention to the significance of schools as places where eating choices may be influenced and habits formed. The pedagogic purpose of schools is to educate children to become responsible citizens regarding health and wellbeing, yet much of the discussion in previous chapters points to schools failing in their role, or more specifically that a health and physical education curriculum is ineffective with childhood and adult obesity continuing to rise in Australia and elsewhere. The question of whether, and how, schools seek to make a difference to students' knowledge, attitudes, beliefs and actions relating to eating and nutrition, is the focus of this chapter. Particular attention is given to the notion of the formal and informal curriculum in schools, and on school canteens as places where teaching and learning about healthy food and eating happens.

Western Australian Curriculum Framework

The Curriculum Framework for kindergarten to year 12 education in Western Australia (WA), (Curriculum Council, 1998) was introduced to Western Australian schools in 1998 and represents a reform of school curriculum in WA. It is built upon a commitment to the philosophy that learning is continuous and the essential purpose is to improve the learning and achievement of all students. The Curriculum Framework sets out what all students should know, understand, value and be able to do as a result of the programs that they undertake in schools in WA. Its fundamental purpose is to provide a structure around which schools can build education programs that ensure students achieve agreed outcomes (Curriculum Council, 1998). The Curriculum Framework for WA is not a curriculum or syllabus, but a framework identifying common learning outcomes for all students, whether they attend government or non government schools or receive home schooling. It is intended to give schools and teachers flexibility and ownership over curriculum in a dynamic and rapidly changing world environment (Curriculum Council, 1998). The

Curriculum Framework has eight learning areas; The Arts, English, Health and Physical Education, Languages Other Than English, Maths, Science, Society and Environment and Technology and Enterprise. The Curriculum Framework makes explicit the learning outcomes for all students and therefore represents a shift in school curriculum from a focus on educational inputs and time allocation toward one that emphasises the desired results of schooling.

A feature of the WA curriculum framework is that it has an outcomes focus. This approach means identifying what students should achieve and focusing on ensuring they do achieve. The emphasis is on outcomes to be achieved and how to facilitate the achievement (Curriculum Council, 1998). In addition the curriculum framework incorporates a K–12 approach which enables students to work along a continuum at their own developmental level rather than working within the constraints of syllabus focused activities.

Health and the Western Australian Curriculum Framework – Personal health and wellbeing is a desired outcome

The Curriculum Framework has 13 overarching learning outcomes designed for students to achieve. These overarching learning outcomes provide an overview of curriculum for Western Australian schools and describe the principles underpinning curriculum to which all eight core learning areas must contribute (table 3).

By taking an outcomes approach teachers identify what students should achieve and focus on ensuring that they do achieve. It is a move away from an emphasis on what is to be taught, to an emphasis on what is actually learnt by each student. The Curriculum Framework sets out a series of outcomes agreed to be essential for all students to achieve and these outcomes describe what students should know, understand, value and be able to do as a result of their curriculum experiences, and students should achieve the outcomes at increasing levels of complexity as they progress through their schooling (Curriculum Council, 1998).

Table 3
Overarching learning outcomes

1.	Students use language to understand, develop and communicate ideas and information, and interact with others.
2.	Students select, integrate and apply numerical and spatial concepts and techniques.
3.	Students recognise when and what information is needed, locate and obtain it from a range of sources and evaluate, use and share it with others.
4.	Students select, use and adapt technologies.
5.	Students describe and reason about patterns, structures and relationships in order to understand, interpret, justify and make predictions.
6.	Students visualise consequences, think laterally, recognise opportunity and potential and are prepared to test options.
7.	Students understand and appreciate the physical, biological and technological world and have the knowledge and skills and values to make decision in relation to it.
8.	Students understand their cultural, geographic and historical contexts and have the knowledge, skills and values necessary for active participation in life in Australia.
9.	Students interact with people and cultures other than their own and are equipped to contribute to the global community.
10.	Students participate in creative activity of their own and understand and engage with the artistic, cultural and intellectual work of others.
11.	Student value and implement practices that promote personal growth and well being.
12.	Students are self-motivated and confident in their approach to learning and are able to work individually and collaboratively.
13.	Students recognise that everyone has the right to feel valued and be safe, and, in this regard, understand their rights and obligations and behave responsibly.

(Curriculum Council, 1998)

Of the thirteen overarching learning outcomes one is particularly relevant to our focus on healthy eating in children. The eleventh outcome explains; 'student's value and implement practices that promote personal growth and wellbeing' (p. 19). The Curriculum Framework suggests students should have the knowledge and skills to make informed decisions that lead to a balanced, managed, active, enjoyable and productive lifestyle and that students should also have the sport and physical activity skills to participate confidently and competently in play and games. Further, students should be able to critically analyse factors in consumer society which will impact on health, wellbeing and family relationships and should be able to design a balanced diet; plan a weekly regimen which balanced physical activity, social activity and study; play a team sport with confidence and discuss the influence of media on health decisions.

In the Health and Physical Education learning area it is notable that a holistic concept of health has been embraced, that recognises the physical, mental, emotional, social and spiritual dimensions of health of the student. It examines the impact of interactions between the student, the family, the wider community and the environment on the health of

populations. The five learning area outcomes of the health and physical education learning area are:

1. Knowledge and understandings – this is where information regarding food preparation and nutrition would be presented and discussed.
2. Attitudes and values – students should be developing attitudes which encourage a healthy active lifestyle.
3. Skills for physical activity – the curriculum suggests students should develop fundamental movement skills and be able to participate confidently in physical activities such as play, games, sports, adventure pursuits and other active recreation
4. Self management skills – students need to develop skills which will enable them to make informed decisions about health issues in their lives.
5. Interpersonal skills – developing the ability to respond to peer pressure, and to be able to negotiate, behave assertively and interact with people effectively (Curriculum Council, 1998, p. 5).

This set of outcomes should enable students to lead healthy and active lives. Looking closely at one of the learning outcome 'knowledge and understandings', we can see exactly what curriculum developmental messages are identified for students from the foundation outcome statement through to outcome level 8 (Table 4).

Table 4. *Knowledge and Understanding Outcome Statements*

Health and Physical Education > Knowledge and Understandings, Self-management Skills, Interpersonal Skills				
Knowledge and Understandings Students know and understand health and physical activity concepts that enable informed decisions for a healthy, active lifestyle.	FOUNDATION	LEVEL 1	LEVEL 2	LEVEL 3
	KU F The student: Demonstrates an awareness of actions to maintain or improve their personal health and safety.	KU 1 The student: Recognises what it means to be healthy and the actions that they can take to optimise personal health, safety and physical activity.	KU 2 The student: Recognises that there are different aspects to personal health and how these contribute to their overall health, safety and physical activity.	KU 3 The student: Understands that personal health, safety and physical activity practices enhance the physical, mental, emotional and social aspects of their own and others' health.
	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
	KU 5 The student: Understands the consequences of actions taken to enhance personal and community health, safety and physical activity, and to avoid or reduce the risks associated with lifestyle behaviours.	KU 6 The student: Understands the social, cultural, environmental and political factors that impact on the health, safety and physical activity behaviours of individuals and community groups.	KU 7 The student: Understands and evaluates a range of strategies that address social, cultural, environmental and political factors to improve their own and others' health, safety and physical activity.	KU 8 The student: Understands the impact of societal, cultural, political and legislative responses to factors affecting the health, safety and physical activity of individuals and population groups.

(Available at www.curriculum.wa.gov.au/ProgressMaps/health.htm)

At the foundation and levels 1 – 3 outcomes may be demonstrated through: describing a healthy person and explaining the features of healthy and unhealthy environments; by having a broadened knowledge of factors affecting their health; and by distinguishing between the different components that people need to be healthy, such as physical health (diet, exercise and rest), and the extent to which peers, food availability, advertising and the media can influence their food selections. Outcomes levels 4 – 6 students would demonstrate this through: the use of tests, questionnaires, self-examination and reflection to record, evaluate and report on aspects of their own and others' health; and by assessing the reliability of food information sources and the effect of common diseases and associated risk factors; for example, heart disease and smoking, high-fat diets, low exercise levels and obesity. As students reach their higher learning outcome levels greater emphasis on global

factors affecting health is presented. Students at outcome levels 7 - 8 would apply their knowledge of strategies for the promotion of health and participate in, research, reviews, comparisons, analysis, reflection and reporting on the impact of the responses on a variety of health issues affecting people. They may identify laws relating to family and domestic violence; look at equity in health for all Australians; compare the effectiveness of current health campaigns and review programs to develop health outcomes (Curriculum Council, Curriculum Framework Progress Maps, 2004).

For the othe Health and Physical Education Outcomes there are similar directions for student achievement. These developmental goals are very positive and should reflect on children in society. Health messages are also regularly represented in the learning areas of Studies or Society and Environment (SOSE) and Science as part of developing students understanding of the world and environment we live in. In the area of SOSE students learn and develop understandings of how and why individuals and groups live together; interact with and within their environment; manage resources; and create institutions and systems (Curriculum Council, 1998). In relation to health and wellbeing students learn the role of self in the environment, place, space, resources, culture and that people's actions have consequences. They may for example, investigate traditional Aboriginal foods or the influence of foods from other cultures and their impact on society; or the cultural diversity surrounding the role of food. Likewise the Science learning area develops students understanding of critical thinking and recognition of how the physical and natural world works. Regarding health and wellbeing this is presented to students through study of body part functions, systems, organs, the skeleton and the interrelatedness of energy and output of food and exercise. Students may investigate and measure the way the body digests food, the various systems of the body and how they interact to ensure health and wellbeing; or the bodies reaction to physical activity and the changes in heart rate and sweating.

Resources for Teachers

The lessons learned by children at school regarding nutrition is an important component of children's health education. However, nutrition is a complex science and not an easy subject to teach without some background. There are many resources available for teachers to assist them cover complex nutrition theory. Many Western Australian teachers may well

still utilise the comprehensive Health Education Syllabus–K-10 (Education Department of Western Australia, 1985), which even though superseded with the Curriculum Framework provides detailed learning opportunities for students. As well there are a number of worksheets which teachers make use of that provide detailed links for teachers to the student outcome statements and provide nutrition content for class material. The Health Education K-10 syllabus focuses on nutrition in its physical health strand, in addition it addresses learning activities for eating and eating habits, physical change and growth, body systems and processes, exercise, and personal hygiene. To support the knowledge component of nutrition education there are many self esteem and assertiveness resources for students to assist with decision making.

Additional examples of learning activities which are incorporated in the health and physical activity learning area regarding nutrition may include the use of teaching packages such as the; 'Food for Thought' package (figure 4) which discusses the types of food Australian's eat, maintaining a healthy balanced diet, organic foods, vegetarianism, food labelling and safety; the 'Healthy Body Image' package (figure 5) which discusses dieting and eating disorders, body image and body perceptions; 'Food and Nutrition in Action' kit (figure 6) a professional development resource to enable teachers to develop teaching skills which empower their students to make health promoting food choices. It comprises a workshop manual for individual and small group use, a teacher's handbook with lesson sequences, nutrition and support materials, references for additional nutrition education material, and a video.
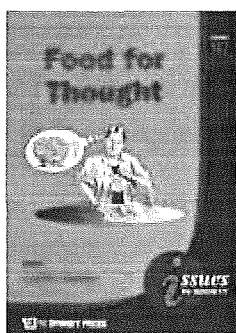
Figure 4
Food for Thought
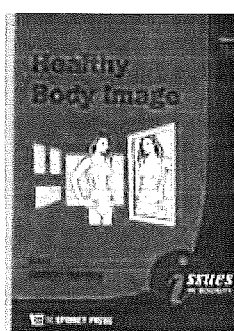
Figure 5
Healthy Body Image
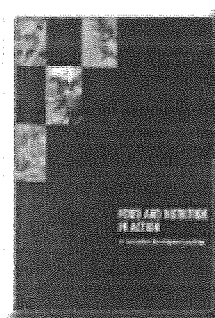
Figure 6
Food & Nutrition in Action

The comprehensive nature of the curriculum framework and very worthy set of desired outcomes is clear. Yet the data and literature discussed in preceding chapters suggest that we are far from achieving these outcomes. Influences outside of the classroom – and specifically, throughout the school, at home, elsewhere in their communities, and through media are considerable. There is clearly a need to reflect upon and explore exactly what children are learning about eating and 'healthy eating' within but also outside of the lesson time.

Informal and Hidden Curriculum

The 'formal' curriculum, explicitly developed and taught within   sons, does not represent the full curriculum experience inherent in schooling. A great   of learning occurs via what we might term the 'unwritten curriculum', that is expressed overtly or subtly in the attitudes and actions of the school students, staff and other agents of the school.

The lessons in the unwritten curriculum however, may well prove to be ones influential for life, powerful and enduring (Wren, 1999). The unwritten curriculum is taught daily through interaction, experiences and the environments that children are exposed to. Potentially it can overshadow the formal curriculum, particularly in relation to 'healthy eating'. Schools thus play an important educative and influential role in sending out messages about food and nutrition, sport and physical education in many and varied ways. An example of this may be student rewards of chocolate frogs or chocolate bars for good work or sporting achievement; or vouchers to local fast food restaurants included with merit certificate awards; or regular 'food days' such as pizza day or hamburger day. The unwritten curriculum is particularly influenced by what food is available in the school canteen, drink vending machines and school health policy.

There are no formal assessments and modes of observation for keeping track of how, when and what is taught in this curriculum, but undoubtedly the unwritten curriculum teaches lessons about respect and tolerance, expected acceptable and unacceptable behaviours. It brings to the fore variation between people of different cultures, economic backgrounds and education levels and it teaches about expectations held for students by adults in a school setting. During the past three decades, researchers have investigated both the beneficial and

detrimental effects of school climate on the socialization process. Bloom (1981) and Baltzell (1979) described how the two curricula (written and unwritten) have worked in a complementary fashion (e.g. in Quaker schools). Kraybill (1991) described how a school for Mennonites (a religious sect that traditionally encouraged separation from worldly affairs) passed on the faith as well as began a program of active involvement in community issues. Jackson (1968) reported that valuing successful competition in the working world had an effect on students' skills, beliefs, and attitudes toward work.

The unwritten curriculum is a powerful means by which to deliver a message and this is true for subtle advertising in schools, energy dense food in the school canteen and lack of school interest in food and nutrition of students.

Taking a Stand on Food and Nutrition in Schools: Duty of Care

In Western Australia there is not a duty of care statement regarding the serving of healthy food to children in schools. None of the 178 Department of Education and Training policies makes reference to duty of care surrounding health eating and food choices available to students. This is somewhat confounding as the Curriculum Framework is so supportive of healthy eating, food choices and active lifestyles. As a result of the lack of policy direction from the Department schools do not have any health boundaries – other than food hygiene. The duty of care for students (Department of Education and Training, 2003) policy paper does not mention care of students nutrition behaviour while at school, nor does the sizeable student health care policy (Department of Education and Training, 2002). Student health care in this instance refers to nursing type requirements such as the school health service, training, emergencies, first aid, communicable diseases, climatic issues, medical records, students with special needs, head lice, anaphylaxis and asthma. These are all health conditions, whereas food consumption would be correctly viewed as a risk factor. Arguably, a policy focusing on food supply at school needs to be developed, not only at the individual school level but at a State level as well. There needs to be a focus on prevention of disease through the opportunity of healthy nutritious food options being available within school canteens.

Parsons, Stears, Thomas, Thomas and Holland (1996) report that the endorsement of the 'health promoting schools framework' concept in education policy and practice has raised interest as to whether schools vary in the student health or health behaviour profiles, and whether this might also be attributable to the characteristics of the school as well as students. And the idea that there might be school effects on health, and that this might reflect more or less (health) effective schools is certainly fundamental to the health promoting schools concept (Lister-Sharp, Chapman, Stewart-Brown and Sowden, 1999), means that schools have a role to play but may need to look at the whole school community rather than the canteen alone – even if the canteen is willing. While it may be some time before we see a government recommendation in WA for nutritious food for children in school, where this has happened it has fostered positive results. A food initiative in schools in Wales demonstrated what can be achieved.

The Pembrokeshire health promoting schools scheme is part of the Welsh Network of Healthy Schools (Perry, 2003). Each school receives support for change from a project advisor who organises meetings and training for area coordinators, who then return to their schools to implement changes for healthy school strategies. The schools have been requested to undertake a whole school approach to health, to include health within the curriculum, to ensure the school meal service and snack availability is suitably nutritious, that vending machines be removed and that water fountains be installed in schools. The schools who have installed chilled water fountains are encouraged to allow student to have water bottles on their desks. Some schools have even purchased 'non tip' water bottles for students. With the success of the new regulations students have developed new school council positions which focus on school nutrition (Perry, 2003).

A further example of initiatives focusing on healthy food choices for students in schools is the UK School Fruit Pilot which saw 280,000 four to six year old school children in London enjoying a free piece of fruit everyday through a lottery funded grant. The grant enabled 1.4 million pieces of fruit to be provided to students each week in London (Stafford, 2003). The opportunity to provide fruit to children in this age group is valuable as children are still developing and determining their food behaviours. The younger the age of the child for developing a positive attitude towards fruit the more consolidated the attitude will be (Lister-Sharp, Chapman, Stewart-Brown and Sewden 1999) and the

Australian Guidelines for Health Eating recommend children should eat two small pieces of fruit per day (Department of Health, 2003). In WA, many individual schools have developed similar fruit strategies. Many WA pre-primaries have 'fruit time' where all children can have pieces of cut up fruit. Yet this positive activity usually stops once children enter year one. A school in the northern suburbs of metropolitan Perth, which is the case study school in the next chapter, has taken this idea and is utilizing it throughout the primary school. Mid morning all students in year one to seven have 'fruit time' and are required to bring with them to school a piece of fruit or healthy snack. The canteen supports the school through fruit time by selling fruit and by following the WA based healthy canteen Star Cap program.

Health Promoting Schools

The case study school is an example of a developing 'health promoting school', where the whole school is involved in the health of children, not just during health education classes. The World Health Organisation (1996) determines a health promoting school is a place where all members of the school community; teachers, students, parents, the local community, work together to provide students with integrated and positive experiences and structures that promote and protect their health.

It includes both the formal and informal curricula in health, the creation of a safe and healthy school environment, the provision of appropriate health services and the involvement of the family and wider community efforts to promote health. What it means is that the teacher is not alone when it comes to teaching health education. Health education becomes only one component of the whole school health experience for students, along with what happens outside of the classroom, at home and within the local community. The advantages of a health promoting school is that it:

- Offers a holistic model of health that includes the interrelationships between the physical, mental, social and environmental aspects of health;
- Provides the opportunity for families to take part in the development of health skills and knowledge of their children;

- Addresses the significance of the physical environment (for example, shaded play areas) in contributing to the health of children;
- Recognises the importance of the social ethos of the school in supporting a positive learning environment, one in which healthy relationships and the emotional wellbeing of students are strengthened;
- Links regional and local health services with the school to address specific health concerns that affect schoolchildren;
- Focuses on active student participation in the formal curriculum to develop a range of life-long health-related skills and knowledge;
- Enhances equity in education and health.
- Provides a positive and supportive working environment for school staff; and
- Enables the school and the local community to collaborate in health initiatives which benefit students, their families and community members.

(World Health Organisation, 1996)

In Western Australia the Health Promoting Schools Association (www.wahpsa.org.au) supports a health promoting schools framework and advocates and supports a whole school and community approach to health and wellbeing. This local association achieves this through education, coordination and collaboration with school communities and health agencies. However, the reality of all schools adopting a health promoting schools ethos is some time away, and whether or not a school has formally taken on the health promoting schools model, the duty of care regarding healthy eating for children is still its responsibility of the school, as well as the formal and informal curriculum of the school, the local community, and parents. It seems however, that it is not only schools, but also parents who need assistance with food choices for children.

School-Home Connections in Learning

It is easy to blame schools and school canteens for poor food choices by children while at school, however, many canteens are moving to healthier food options. Furthermore, home packed lunches are still the most common form of lunch meal in WA, which clearly implicates parents in school lunch nutrition. In the next chapter a primary school case study

is presented which investigated teachers' perceptions of children's healthy eating. Most teachers reported that they felt the school was doing almost all it could to support the health and physical education student outcomes, that the canteen was 'healthy' and that after school sport was offered. In teachers' views, any 'junk food' in the school was coming from home through parents. Hart, Herriot, Bishop and Truby (2003) had similar findings in their qualitative study on parental perspectives regarding healthy diets and exercise amongst primary school children. Many healthy school interventions have failed because they have not engaged with parent perceptions of food and parental influences of food lunch provision (Morris and Latham, 2004). In the case study teachers felt that parental influence in the form of lunchbox food was paramount. Parents, meanwhile, wanted to pack healthy lunches but often did not know what to pack or could not think of new healthy lunch ideas and therefore opted for easy pre-packaged and not necessarily appropriate foods. Again, Hart et al. (2003) had similar findings in that parents did not necessarily possess the understanding and motivation required to assimilate dietary guidelines and concluded that overall there was a demand amongst parents for interventions focusing on behavioural techniques rather than fact transmission and in particular providing realistic definitions of appropriate behaviour and empowering parents to tackle children's weight issues. In the case study to be presented parents reported they simply wanted clear guidance regarding what to put in children's lunchboxes as they sometimes just couldn't think of what to provide. Future interventions and research need to therefore recognise the role parents play as unwritten curriculum providers and utilise and accept the role that the home environment plays in either helping or hindering healthy eating for children at school. Parents should be considered as potential collaborators in curriculum and schooling as they are key players in the whole learning experience for children.

Considering positive curriculum messages surrounding food and nutrition, school canteens should move to healthier food choices, not only as a duty of care, but to support the school health curriculum. For example the continued availability of high fat, high salt and high sugar foods such as hot chips, potato crisps, soft drinks and ice-creams contradict the Australian Guidelines to Healthy Eating (Department of Health, 2003) and do not comply with Western Australian Curriculum Framework outcomes for children (Curriculum Council, 1998). This chapter has foregrounded that there are many factors influencing eating in children, their understanding of healthy eating, and specifically, what they eat at

school. It leads to the proposition that in order to improve and support health eating in children, a curriculum is needed that embraces the complexity and scope of these influences – and this, particularly should extend to parents. Parents need to be encouraged and supported in seeking to provide healthier meals for their children, schools need assistance and direction for canteen menus, teachers need professional development to ensure they are able to teacher nutrition issues to children, children need to be supported and encouraged in becoming more informed, critical and selective consumers. The next chapter addresses perceptions of healthy eating for children within one primary school in Western Australia and details the development of a healthy lunch menu planner resource for parents and children to assist with lunch preparation. The case study research reported was a small but undoubtedly highly informative study, the findings of which have currency well beyond the case study school population.

CHAPTER FIVE

CASE STUDY METHODOLOGY

Previous chapters have highlighted the need for studies that examine what children are eating, the types of food they are exposed to and consuming, and the many social, cultural, environmental influences upon choices, actions and understandings relating to healthy eating. It is clear that school and home environments impact on children's food behaviours, and that parents play a critical role in determining what children eat at school. This chapter reports a case study investigation of teacher's perceptions of 'healthy eating' amongst children and the development and trialling of an intervention entitled 'Lunch Right'. This was developed to provide assistance and direction for parents when considering what to pack into children's lunches. 'Lunch Right' is a healthy lunch and snack menu planner for parents to use when considering food choices for their children's lunches.

The study reported in this chapter needs to be considered within the context of widespread public, political and professional concerns about children's health and eating habits. Specifically, it is relevant to note that according to McKimmie (2004), children have, for the first time in the history of Western Australia, been predicted to have a life expectancy that is lower than their parents. This alarmist comment can only be accepted as a prediction and may be able to be easily contested however, in Australia, one in five children is overweight, and one in ten is considered obese (NSW Childhood Obesity Summit, 2002).

The 'Lunch Right' intervention was specifically designed to assist parents with 'healthy' lunch food choices. Swinburn and Egger (2002) support an intervention and advocate that children be the priority population for interventions surrounding prevention of obesity. Key settings for interventions are schools, homes, neighbourhoods, primary health care services and communities. Acknowledging that most Australians have an inadequate fruit and vegetable intake (Stickney, 1994; CSIRO, 1993 – see chapter one), an intervention targeted a healthy children's lunches may not only need to overcome parental time and preparation constraints, it will need to consider the fact that the parent themselves may not eat the food suggested by the intervention.

Case Study Phases

Teachers play a potentially critical role in addressing healthy eating in children, given the amount of time children spend in school, the role that teachers perform as mentors, and the influence that the written and unwritten curriculum can have in shaping children's understanding (see chapter 4). As well, parents are influential in the food children eat at school with many children in Australia taking a home packed lunch with them to school each day.

The case study had three phases which included in-depth interviews with teachers, focus groups with parents, design and development of a healthy lunch menu intervention, and a four week trial of the intervention.

Phase One

Six in-depth interviews were conducted with teachers and staff at a school in the northern suburbs of Perth. The school was selected by this author noticing that it was located opposite two fast food outlets – and that there might be an effect from this on children, parents and teachers. The author did not have a prior relationship with the school. The sample included the primary school Principal; the School Registrar; School Canteen Manager; Physical Education Coordinator; Year Five Teacher; and Year Seven Teacher. Following consultation with the school Principal her recommendations informed the selection of teacher participants. The author had not previously met any of the teachers before. As this sample is small and limited to the case study, the results may not be generalised to the whole population however they served to direct our attention to important issues worthy of further research. The decision to utilise 30 minute in-depth interviews was to obtain qualitative information from a "predetermined and limited number of people" (Krueger and Casey 2000, p. 26) and "to yield a more diversified array of responses and afford a more extended basis for designing systematic research on the situation at hand" (Merton and Fiske 1990, p. 26).

The instrument used for the study included a moderator's guide compiled for the in-depth interviews following the objectives of the study and a consent to participate in a research

project form (Appendix A). The goal of the in-depth interviews was to explore information relevant to the primary school teachers' perception of healthy eating in children and childhood obesity and strategies to overcome this problem. Teachers were asked to discuss their own experiences and perceptions of healthy eating in children and childhood obesity, determine nutrition strategies conducted in the school, determine how effective current nutrition methods are, and identify barriers to improved nutrition for students in the school. Following Stringer's (1999) community-based action research model the process of inquiry was linked to aspects of the participant's motivation and behaviour. This participatory approach informed the instrument design.

Procedure

The in-depth interview instrument and moderators guide was developed and piloted for validity and reliability with health promotion professionals at the North Metropolitan Health Service, Population Health Program. The in-depth interviews were tape recorded following consent from the respondents for future analysis (Appendix A). Respondents and the interviewer sat in a private room at the school with the recorder in the middle of the table. An observer sat at the interview table, took notes and made observations to add to the understanding of the session and to check for signs of interviewer bias. The interviews lasted approximately 30–40 minutes. Time was provided at the end of the session for any explanation or discussion of terms used in the taped session, and acted as a debriefing time.

Data Analysis

In-depth interview responses were analysed by organising the data into coding categories, checking the data for common patterns and themes and then describing and interpreting the data. Hawe, Degeling and Hall (1990), recommend a four step process for the analysis of qualitative data involving; organising (transcribing the raw data), shaping the raw data by developing categories, summarizing the data and explaining the data. Lewis (1996) suggests similar stages; transcribing the sessions, analyzing the content of discussion and looking for trends and patterns that reappear within either a single focus group or among various focus groups. Krueger & Casey (2000, p. 109), suggests that content analysis

begins with a comparison of the words used in the answer. Similar approaches are recommended by Basch (1987), Bogdan and Biklen (1992), and Field and Morse (1992).

The four step data analysis process of organising, shaping, summarizing and explaining outlined by Hawe et al. (1990), was applied to the qualitative data from the in-depth interviews.

The four steps conducted in the data analysis were as follows:

1.   Organising the data

A transcript of the in-depth interview sessions was completed. Individual questions were placed in folders. Various answers to the questions were placed into the same folder to look for similar themes. The results of these in-depth interviews linked more closely to the next section, shaping the data.

2.   Shaping the data

Common categories of data were developed for each question. Relevant responses from individual participants were placed in these categories.

3.   Summarising the data

The headings for the common categories were developed. Relevant quotes and themes were gathered. Interpretations were written at the bottom of each folder sheet.

4.   Explaining the data

Explanation of trends and patterns in the data was provided in the discussion of data from each question. Common and uncommon responses among the group were identified and possible explanations addressed.

Phase Two

Developing the 'Lunch Right' Menu Planner

The development of the 'Lunch Right' menu planner formed the second phase and key component of the study and was developed in response to the phase one findings and the literature on childhood nutrition. The aim was to investigate the suitability of the 'Lunch Right' menu planner through a focus group of parents and questionnaires about the initial selection of possible menu items.

'Lunch Right' is a resource to provide parents of school children with a variety of nutritious lunch and snack ideas. The menu planner provides 20 healthy lunches and 20 health snack recipes, which are easy, inexpensive, fun and nutritionally sound. The pages of the menu planner are spliced into two sections so that lunches and snacks can be mixed and matched. It includes a child focused mascot, 'Crunch the Croc', an introduction to parents, references to a large number of different types of breads to use, a table of nutritional and economical values for various foods, ideas for reading food labels and the Australian dietary guidelines. Parents have commented that the 'Lunch Right' menu planner provided them, *"with the needed ideas to ensure they made healthy lunches and snacks for their children"*. The menu planner provides parents with ideas and suggestions so they conveniently have new health food ideas for their children.

Following the initial development and collection of a selection of recipes to be included, a list of recipes for the menu planner was developed and a focus group of seven parents provided their perception of the suitability of each of the lunch and snack recipes (Appendix B). Two questionnaires were administered and included a large variety of possible lunches and snacks, to determine if parents perceived they would make each of the lunch and snack items, and if they recommended the particular recipe be included in the pilot version of the 'Lunch Right' menu planner. The focus group parents were provided with 33 suggested lunches and 25 suggested snacks, of which a final 20 lunches and 20 snacks were selected (Appendix B).

The purpose of focus group interviews and the use of a moderators guide was to obtain qualitative information from parents regarding their perception of school lunch practices (Appendix B).

Parent Focus Group and Questionnaire

The focus group interview was designed to explore parents' perceptions of the recipes in the draft 'Lunch Right' menu planner, and strategies to overcome recipes they thought were not suitable. Parents were asked to discuss their perceptions and experiences of lunch and snack planning and preparation for their child. The focus group instrument used for the study included a moderator's guide compiled for the focus group interview following the objectives of the study.

Participants

Parents were drawn from a convenience sample within the local area. The focus group and questionnaire ran for two hours at a local meeting venue. It was perceived that the seven parents who were selected would be suitable to participate, as they were all mothers of school aged children and prepared school lunches and snacks. Ethics clearance was approved by Edith Cowan University.

Procedure

The focus group interview instrument was developed and piloted for validity and reliability with health promotion professionals at the North Metropolitan Health Service, Population Health Program. The focus group interview was tape-recorded following consent from the respondents for future analysis. Respondents and the interviewer sat in a private room at the local meeting centre with the recorder in the middle of the table. An observer sat at the interview table, took notes and made observations to add to the understanding of the session and to check for signs of interviewer bias.

The focus group lasted for approximately 30–40 minutes. Time was provided at the end of the session for any explanation or discussion of terms used in the taped session, and acted

as a debriefing time. Following the focus group participants were asked to complete two questionnaires, which presented a selection of nutritious lunch and snack ideas. Participants were asked to indicate if they felt the particular lunch or snack should be included in the 'Lunch Right' menu planner, if they would make the menu item themselves and any additional comments they may have.

Phase Three

'Lunch Right' Menu Planner - Pilot Study

Piloting of the 'Lunch Right' menu planner was conducted with eleven families over four weeks. During the pilot parents were asked to record the times they did and did not use the menu planner, if they made any changes to the recipes and if their children made comment about the menu foods.

Participants

Eleven families with pre primary students were selected from the case study school to participate in the pilot of the 'Lunch Right' menu planner. The Principal of the school was introduced to the 'Lunch Right' project and was offered the opportunity of supporting this project with pre primary families from the school (Appendix C). The principal invited families into the pilot study through a letter of introduction, consent form and explanation provided by the researcher and disseminated to them by the school Principal (Appendix C).

The eleven families were asked to complete a consent form to participate in the project, which also sought to find the most suitable time for the researcher to contact them. The families were initially contacted by phone to thank them for their interest in the project and to inform them of the introduction session to explain the project.

Information Session for Phase Three Parents

A letter of invitation was sent to pre-primary parents at the study school to trial a new health lunch menu planner. Eleven parents responded and participated in an introduction session for phase three at the study school, where they were introduced to the study objectives and given details of the pilot procedures (Appendix C). Parents completed a pre test questionnaire which investigated their current lunch preparation for their children (Appendix C). The participants were further informed of the four week trial process, the layout and method of the 'Lunch Right' menu planner, they were provided with a weekly food diary requirement, and confirmation of weekly support phone calls. The *DÉCOR* lunch box company provided sponsorship of new lunch boxes for all participants and the lunch boxes were presented at this time.

At the completion of each of the four weeks, the study parents were contacted by phone or email to discuss and evaluate how well the menu planner was being received by children and whether the menu items were easy and suitable for parents to make. The families were able to keep the 'Lunch Right' menu planner and were asked to return the weekly record sheet and the post test questionnaire (Appendix C). The post test questionnaire was mailed to the families in the last week of the study and included a reply paid envelope for parents to return the documents. Nine record sheets and ten post test questionnaires were returned.

Data Analysis

Pre and post test questionnaires were analysed using SPSS software and explained using descriptive data including frequencies and reported in graphs and tables. The daily food record was compared and demonstrated graphically to indicate popular menu item choices and frequency of 'Lunch Right' menu usage.

The next chapter discusses the findings and outcomes from each phase of the case study and looks critically at the behaviours and perceptions teachers and parents have surrounding food for children.

CHAPTER SIX

FINDINGS

Phase One: In-Depth Interviews with Teachers and School Staff

Phase one was conducted at an Anglican community school located in the northern suburbs of Perth and in its third year of operation. The school has 735 students. Of interest to this study is that the school is located opposite a *McDonalds* fast food outlet.

The objective of the in-depth interviews was to determine teachers' perceptions of children's healthy eating within the school in preparation for the development of the 'Lunch Right' menu planner intervention. In addition questions regarding childhood overweight were included to assess teacher's understanding and perception of children in the school. Analysis of the transcripts of the in-depth interviews revealed that all respondents perceived that there were overweight students in the school, that fast food and family time management play a key role in children's eating behaviours and that a lack of exercise amongst overweight children compounded the problem and lead to psychological and self-esteem issues. For example, *"In soccer the overweight kids get stuck at the goals – they can be goalies but they tend not to be the runners up and down the field" (School Registrar); "With some of the kids they become socially outcast because they don't have the same physique or the physical capabilities of those ones who are similar and faster and play a lot more sport" (School Principal).*

When asked what percentage of children were overweight or obese in the school, perceptions varied. A number of responses were suggested and ranged from 5%, 10%, 15% to 25%. *"Probably in a class, you'd find about 25% of the class would be overweight" (Principal). "We've got a couple of the little ones who are obese, I'd say at least 5% are overweight" (Year 5 Teacher).* The teachers' views indicate that there is no clear understanding or recognition of the number or percentage of students in the school who are overweight or therefore, what constitutes 'overweight'.

Teachers perceived that being overweight affected students in many ways. There was a common theme of overweight students' perceived ability to fully join in and participate in the school environment. This was evident in limited physical activity, low self-esteem, and problems with social acceptance. Teachers' perceptions of physical affects for students who are overweight focused on:

"Especially in physical education and activities where they're actively participating and when they have to get up and do something. Some of the children are very much limited in what they can do or how fast they can compete or how far they can go, or the amount of time that they can participate before they get puffed or run out of energy or just can't do it anymore" (Year 7 Teacher).

"For girls it's gymnastics, most handstands and the cartwheels and of course you get someone that's unable to do it and they tend not to participate so they're outsiders aren't they"? (School Registrar)

"They will withdraw themselves to the back of the physical education class, they just want to get it over and done with as fast as possible and if they can get out of not doing it they will. They probably have a few more notes from parents"; "I see children who are unable to participate fully in activities, especially running activities. I think the more overweight kids are perceived differently" (Physical Education Teacher).

The social and emotional impact reported by the teachers in this study, that being overweight has on students are disturbing, indicating a direct impact on the quality of the children's lives. The findings indicated a lack of development of friendship groups and the recognition of social out casting which thwarts regular child social development. This was a common theme from all in-depth interviews and one issue that teachers felt had such an impact on the children. There is also a clear indication of the 'trend' or 'pattern' of overweight as children who are overweight lend themselves to sedate and isolated activities, which in turn means that they participate in less physical activity and make friends with other 'like' children. For example:

"The kids who tend to be overweight, are not big weekend sport players. So socially they are then kept out because they can't keep up with the other kids with their lunch-time sports. That then impinges" (Principal).

"Out of the 25% who are overweight, you've probably got 10% who actually won't join in those physical games because they see their size as being part of their barrier to it. So therefore socially they suffer because they don't have the same friendship groups. The boys predominately play all of the physical games over lunch and recess times and that's where their friendships and that are formed. With girls it is gymnastics at play time" (Principal).

"The overweight kids tend to head into the library and so they become passive and very isolated because they just don't join in with those activities. Some of the bigger girls tend not to do any physical things but tend to do more of a walk around and talk, without all the running and sporting side of things. It comes down to their whole social relationship and friendship groups who are actually, that's part of the barrier for them" (Principal).

"Emotionally, I'd say some kids are really self-conscious of the extra weight they're carrying. Especially as year 7's a big time for change, you've got lots of changes occurring physically with all of them, and the overweight kids feel that they stand out especially when there's so many other little kids that haven't developed yet" (Year 7 Teacher).

The teachers' responses demonstrate their understanding of the issues faced by overweight children in the school and awareness of the behaviour that overweight children adopt to survive in school; for example, going to the library at lunch time, not participating in sports, social isolation and utilising misbehaviour as a means of gaining attention.

"I know one student I have dealt with hasn't got a great self-image, as he will often play a little bit of the victim and sometimes if anything has been said, he'll directly link it straight back to his weight and his size" (Year 5 Teacher).

Blame on Parents, Lack of Physical Activity and McDonalds

When teachers were asked about causal factors there was a resounding focus of blame on parents, physical inactivity and nutrition habits. In addition, there was a clear indication that the fast food restaurant across the road from the school had a role to play. Teachers had a

clear perception that the school and children within it were feeling the local impact of multinational corporations such as *McDonalds*. Teachers reported that the *McDonalds* restaurant is used before and after school by students and that a number of families encouraged their children to pick up quick easy meals on a regular basis. For example:

"As we have a McDonalds across the road from the school, kids go across the road to McDonalds before school – parents often drop them off there or they go to the petrol station across the road, and get lollies from there to bring to school. Children know what is right, they just don't seem to choose that option" (Year 7 Teacher).

"Lack of physical activity and the types of food they're eating. I know some kids whose parents take them to McDonalds for breakfast on the way here, and often they will go on their way home from school as well" (Year 5 Teacher).

"Some parents bring McDonalds up to the school for their children during the transition from the normal school day to after school activities, so children get a burger from McDonalds as an afternoon snack" (Physical Education Teacher).

Teachers also indicated that parents might need some education or recognition of the dangers of high fat fast food and the danger of regular consumption of this food. Teacher's responses include:

"I think parents is a big issue, as we provide quite a few things at the school – I mean they all do physical education and they're encouraged to do a co-curricular activity after school that is physical. We run sports, games, and all sorts of things. It tends to be those kids that probably need it the most choose something other than that, like the craft activities and sitting down" (Year 5 Teacher).

"As PE teacher taking children away for inter-school carnivals and things I say, take water and healthy snacks, and the parents perceive this as interschool, right! – chips, lollies, muesli bars, drinks that are fizzy, and it is hard to try and change the mind set" (Physical Education Teacher)

"I think it is poor education at home as well. I don't sell chips or chocolate or soft drinks but the kids bring it all from home." (Canteen Manager).

The awareness of both parents working and the limited time available for meal preparation was a strong theme. Teacher's indicated that parents utilise fast food as a suitable food option without considering the negative health consequences for the family. Meanwhile, a number of positive strategies and programs provided in the school to combat obesity and promote health were utilised more by children of a normal weight range. Teacher's responses included:

"I guess we can't dictate what they need to pack in their kids lunch boxes. If you've got parents that haven't got time to prepare a healthy lunch, nor stick to getting their kids eating it and explaining the reasons why they need to be healthy, and they choose to stick some chips in rather then an apple, we can't stop it. To me, it's still putting things in the lunch box, but if the kid comes to school and all their friends have got chips and they've got an apple, then you've got that as well – what's the cool thing to eat for recess or for lunch – it is a battle. The media, magazines, TV shows, influence children as well. It's in their face all the time" (Year 7 Teacher).

"Lifestyle causes these children to be overweight. A lot of our families in the school have two parents working, once the day is finished kids need to be picked up from baby sitters or after-school care or whoever...they have to get home and organise meals and quite often and I'd probably say quite often is more the norm than not, that alternatives are sought. Quick dinners, fast foods perhaps cheap and easy, they're not actually cheap, that's quite a contradiction, but cheap and easy meals. Those quick fast foods are very high in carbohydrates and very high in fats and oils. It just comes down to time and effort" (Principal).

"Lifestyle, quick fast foods rather than vegies. If the children have an option, they ask for fast food. If the parent says, 'what do you want for tea tonight'? The children ask for pizza and Maccas. If parents give in then they have to give concern as to their children's waistlines" (School Registrar).

"Some people see that fast food is the cheaper option for feeding their kids. Studies have been done that actually show that as a myth" (Principal).

Combating Fast Food in the School

As indicated above, teachers were very aware of the impact local fast food outlets have on children's eating habits. The school had developed specific rules regarding attendance at these food outlets during the school day, but were unable to stop students at other times.

"We've made it a school rule that once the kids are dropped off here they're not allowed to go over to McDonalds and they are not allowed to get their lunch from McDonalds, they're not allowed to have parents buy them lunch at McDonalds and drop it off a the school, so that is a health strategy we have put in place. However, we can't dictate what they do before school, where their parents take them for breakfast or once they leave school that it is not their first port of call. In the area we have McDonalds, Chicken Treat, Hungry Jacks, Red Rooster, Kentucky Fried Chicken, Jesters, and Subway. There's fish and chips too, so there's plenty of fast food around" (Year 7 Teacher).

"No doubt, when the older students go down to McDonalds to get their money from EFTPOS, it would be very unlikely that they will get the 97% fat free salad – maybe it is messier to eat" (Principal).

How do schools combat this saturation of fast food in the community? What strategies can a school develop and how do they feel they are coping with the considerable barriers to healthy food choices? Most teachers reported that the school had a nutrition policy and that they were supportive of the school rules and plans to implement it. The school canteen supported 'fruit and veg.' weeks and provided only Star Choice[7] foods from the Western Australian School Canteen Association. On enrolling their child in the school parents were encouraged to send children to school with a healthy packed lunch. The school has also introduced 'fruit break' which is a strategy many pre primary classes have, whereby all children eat a piece of fruit in the morning. In this case the strategy which is usually stopped once children enter year one, is continued for the whole school.

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[7] Star Choice foods are school canteen foods that are lower in fat, sugar and salt than traditional 'canteen' foods. For example they include low fat and low salt pies, hot dogs and sausage rolls. Manufacturers apply to have their products included in the Star Choice food listing for schools.

"We have three food breaks for the day. The first one is called a 'fruit break', second one is recess and the third one is lunch-time. Fruit break, as I've said to the kids,' that unless it has a skin on the outside of it or a seed in the inside, it's not fruit'. Some thought that roll-ups would constitute being fruit and I said no it doesn't. So we encourage them at fruit time to have some nuts or yoghurt or fruit or raw vegetables or things like that. Recess time and lunchtime we don't have a great deal of control over what parents pack away into their food boxes. What we do say is that we would like them to have something that is healthy and nutritious that's substantial and long-lasting. Providing lollies and chips and things like that doesn't satisfy that, but we can't tell them not to do it. As part of the school policy we have a school handbook which outlines expectations for student lunches. We also have meetings at the beginning of the year and we say to the parents that this is the expectation that we have of them at the parent/teacher evenings. The school canteen only supplies 'Starchoice' items. We support fruit and veg. week in the school and we supply a large variety of fruit and vegetables in the canteen" (Principal).

Parents Need Ideas for Healthy Lunches and are Using McDonalds as a 'Baby Sitting' Service

When asked about problems that, the school had implementing the nutrition/healthy eating policy, teachers said that they can only do so much in the school, it is the parents who need further education and influence over lunches and food choices. This is a key finding and supports the development of the 'Lunch Right' menu planner intervention (see below). Teachers reported a feeling of helplessness in ongoing support from the school for healthy lifestyles, with their efforts thwarted by parents. The inclusion of 'fruit time' for the whole school and after school activities which include a variety of sporting events which students are encouraged to attend all contribute to a positive health message. However the food that is provided by parents for children to consume was a concern to teachers. The frequency of food purchases from *McDonalds* by some families and the quick snack type lunches prepared by parents was also deemed likely to instil poor eating habits and cause children to put on weight. The indication that *McDonalds* being utilised as a 'baby sitting' service was a concern in terms of the normalisation of the consumption of fast high fat foods.

"Time is always your biggest factor in implementing a school health policy, and unfortunately health I think is one of those subjects that a lot of parents will leave if they're very pressed for time, they'll say, 'I put something easy in the lunch box this week, I'll leave it" (Year 5 Teacher).

"Parents are also a factor. If the parents aren't educated in what is right then they can't support our messages at school" (Physical Education Teacher).

"Parents. They think that it is fine for the teachers to encourage healthy behaviour, but then think, 'I don't have the time to, therefore it will fall by the wayside" (Year 5 Teacher).

"Some of the parents actually use McDonalds across the road as a picking up point and meeting point for their kids before and after school. If parents get their kids to school early, they drop the kids at McDonalds, and then the kids make their way to school when the school starts. At the end of the day, they might be running late so they say, go over to McDonalds go and get yourself something to eat and they will pick the kids up from there. It's a free baby-sitting service. We can't control it, once they're on school premises then we have a duty of care" (Principal).

"Going back a few years when we were at school, parents used to take a great deal of time and energy with little lunches and fruit and so forth. Now a-days with such a busy lifestyle it's really hard to maintain for some parents, the traditional foods with regards to the fruit, the vegies, and the healthy meals. Peer pressure also influences the school policy, sometimes from other kids, like you might have one child whose parent is diligent but their best friend always has junk food. The child with the healthy lunch will throw it away and share the unhealthy lunch with his friend" (School Registrar).

"The promotional products fast food outlets give out are a concern for me. Kids have all of these key chain things hanging off their bags, and they have to go to McDonalds each week to get the next key chain, it's like a trophy for the kids to show" (Principal).

Following the findings of the teacher's in-depth interviews and the strong perception from teachers that parents may need assistance with provision of healthy lunches for their children, an intervention was developed to assist parents when making children's lunches. A menu planner with a selection of healthy lunch and snack ideas was developed. A large number of healthy lunch and snack recipes were initially though of, and were analysed by a focus group of parents. Phase two describes the developmental and focus group phase of the 'Lunch Right' menu planner.

Phase Two: 'Lunch Right' – Developmental Phase

The development of the intervention included an initial focus group with a group of mothers to determine the suitability of the draft 'Lunch Right' menu planner recipes. A parent focus group and questionnaire was used in this developmental phase of designing and producing the 'Lunch Right' menu planner (piloted in phase three). The parents participating in phase 2 did not participate in phase 3. A separate intervention parent group was formed for phase 3.

The objective of the focus group interview was to determine parents' perceptions of the need for a healthy lunch and snack menu planner to be utilised with children and which menu planner and recipe strategies should be included. The focus group parents indicated that there was a need for healthy lunch and snack options as sometimes it is just too hard to think of what to prepare. However if there was a healthy option, children would enjoy it.

"When kids get home and open the fridge, they want something to eat...if healthy snacks are there; they'll grab those rather than grab the muesli bar" (parent one).
"Many latch-key kids come home to an empty house, with parents still at work, and they look for what they can eat – they will choose a packet of chips if they are there, however if there is something else but just as nice, they will choose that" (parent two).

Parents were asked what age group of children a healthy lunch and snack menu planner would be most beneficial for, and suitable to introduce as an intervention. Most agreed that pre primary would be the most suitable age as this would encourage early intervention with school lunches and snacks.

"The primary parents' will already be at work and will have already started poor lunch and snack ideas – get in early" (parent three).

The focus group participants suggested that in addition to lunch and snack ideas parents may also need assistance with breakfast ideas as some felt children go to school without

breakfast at all. Breakfast menu ideas were not part of this project, however findings indicate that there may be a need in this area.

When asked who in their family prepares school lunches, the majority of families indicated that it was the mother. Other responses were that older children sometimes make their own lunch. The most preferred time of day to pack school lunches was either in the evening, so that the lunches were ready for the next day, or in the morning before school. Reasons for this included; habit, concerns about freshness and palatability.

When asked about the foods that children prefer to have packed in their school lunches, the parents in the focus group all agreed that vegemite is very good, but that they wanted to pack more nutritious lunches. It was of concern however, that honey, jam and peanut butter were reported as the most common sandwich fillings. This is not necessarily suggesting that these foods are 'unhealthy' in and of themselves, however they might indicate a lack of variety of nutrients for children particularly if this was every day and/or is dependent of the other meals they have.

"Vegemite sandwich", (all parents).
"Cheese" (parent two).
"Jam sandwich" (parent four).
"Honey, peanut butter, vegemite, ham, something bland, plain, and fruit" (parent five).
"Nutella and peanut paste" (parent one).
"I give my child a choice, you can have vegemite or peanut paste" (parent three).

There are a number of factors which impact on what a family will pack in school lunches - cost, marketing, what's in the cupboard, child pestering, and what is left over. Parents suggested that the factors that determine the foods that are packed into their child's school lunch included; *"Availability or what day of the week it is or what's in the fridge" (parent one). "If it is shopping day, shopping week - towards end options get a little bit less" (parent three). "If there are leftovers and if I can use them up, like the slice of homemade pizza that can go in the lunchbox the next morning" (parent five). "The kids are influenced in the shopping centre and I buy foods they ask for" (parent six). "Consideration of*

wastage is important. I think, how are we going to eat all the leftovers if I make that"
(parent two).

Families reported that they occasionally use the school canteen for children's lunches and money, time and convenience were identified as the main reasons for using or not using the canteen. In addition to financial issues often influencing this decision, nutritional concerns were also a factor for not using the canteen. *"If we're flying out the door because the alarm didn't go off" (parent six). "If shopping day is near and there isn't much in the house" (parent five). "If you just can't be bothered, there's plenty of that, I think" (parent two). "As a treat for me, if I'm sick of packing lunches" (parent four).*

The 'Lunch Right' Menu Planner

Questions were then directed toward the new intervention and the 'Lunch Right' menu planner. Parents were asked if it would be useful to have nutritional information at the end of each recipe in the menu planner, such as fat content or kilojoule value. The majority of parents felt that fat and sugar content was important to them. In their opinion, keeping things simple was essential. Some parents believed that just having a healthy lunch and snack planner would be enough, and that parents would not read the 'small print'. One focus group participant commented that having some nutritional information may prompt parents to read more labels.

"Yes, definitely. Because then you don't have to go looking for it and it's there, you know it's healthy because it's coming from this little booklet. For me it's in front of their eyes they don't have to think about it" (parent four).
 "I think it would be a good education tool that could flow onto label reading" (parent one).

Parents were asked, in their opinion, how many serves should each recipe in the planner cater for? Wherever possible the recipe will make 1 or 2 serves. Parents were asked about the amount of information to be put at the front of the menu planner and the likelihood that they would read it if they were using the menu planner. The following question was presented; 'The front of the menu planner includes instructions and nutritional information

such as label reading, dietary guidelines, and serving size examples from each food group. Of this information, what do you consider to be most useful'? Parents felt that they had enough information and that they simply wanted to get on with children's lunches and snacks. However, most felt that it was worthwhile having some information for parents who would value the information. They suggested this information go at the back of the menu planner. One parent suggested label reading as an important tool for parents to learn and felt this was more important to include than the dietary guidelines.

"1-2 is enough; you can double them if you need to" (parent six).

"Some of the snacks, where things like slices and pikelets are suggested they are for more than one, so a suggestion of how much makes one portion would be useful" (parent one).

"Whether they're suitable to freeze would be good and saying how to store them may be an idea" (parent four).

"I think the dietary guidelines and serving size are important" (parent four).

"It's worth having this information; I think some people will read it" (parent two).

"If you want to include extra information, you could put it at the back" (parent one).

"I don't think that people would bother to read it, I mean, I think it's valuable, but I just don't think it would be read" (parent six).

Parents were also asked about the design of the up coming intervention pilot study, and if they were a participating family, whether they would be inclined to follow the project. They were specifically asked: 'The 'Lunch Right' project requires participants to follow the menu planner as best they can for four weeks. Do you perceive that if you were in the study you would follow a plan such as the menu planner for a period of four weeks?' Some parents felt that it would be too much for families to be part of a four week trial.

"No, I'd just use it as a guide" (parent one).

"I would use it for variety, something different" (parent three).

"Yes, as it provides ideas for lunches just when you think you can't create another new lunch idea" (parent four).

"Oh yes, I think so, yes" (parent five).

"No, I don't think so, I think if you've got little Johnny who's used to having vegemite sandwiches everyday or peanut butter sandwiches and that's all he wants,

mum is going to have a battle on her hands introducing something new" (parent six).

Parents also suggested that if there is more than one child in the intervention family that they would include the other children as well. They felt that *"You are going to have to let the older kids participate too – they might like it" (parent one).* In addition some of the focus group participants felt they would make the healthy lunch option for their husband as well! Reasons for the inclusion of other family members to the 'Lunch Right' menu planner were practical, as *"if you're going to open a can of pineapple, you've got to use it up otherwise it sits at the back of the fridge and goes off and so you actually waste money" (parent six).*

'Lunch Right' Menu Planner Design Suggestions

Two sizes of the menu planner were presented to the focus group and the parents were asked to consider the sizes of the menu planner. Recommendations for A4 or A5 were offered and there was consensus that the A5 size would be most suitable following an increase in font sizes.

"The smaller one, it is convenient and can sit on the kitchen bench, and it won't take up too much room" (parent six).
"Many grandparents are now looking after grandkids and there's no way they could read it at that size" (parent two).
"I'm looking at, because I have a 6 year old in our house and I find that's a bit small, if it wasn't as busy, you could make the print bigger" (parent four).

As a final question parents were asked as to suggest considerations needed to be given for the recipes selected for the menu planner? Parents felt that sandwiches were essential lunch box items and that the more simple, easy, yet healthy would work well.

"My kids get hungry if they just have salad, so I have to give them something with bread, there has to be some sort of a carbohydrate in there or it just doesn't last them" (parent six).
"It needs to be quick, easy finger food, with no mess, no cutlery, so you can eat it and

get out on the playground" (parent four).

"I also agree yes, sandwiches and the little box of salad, and that can also extend to chopped up fruit as well" (parent one).

"My guys like leftover sort of things, like leftover quiche, left over homemade pizza" (parent three).

"I think you need to think about transportability, I've got a boy and the bag probably gets tipped over 20 times on the way to school and ·ked and then chucked under the bench when he gets to school" (parent two).

"The kids bags are stored in the full sun on the veran..   ·nsideration of heat should be there" (parent five).

"Things that can be prepared and frozen are good, especially for working parents".

"Sometimes you can actually have a great big bake-up and you end up with enough for three weeks, and even if you don't use it every day you know that it's there as a back up" (parent six).

'Lunch Right' - Lunch Suggestions Questionnaire

The focus group parents also completed a 33 item - lunch suggestion survey (Appendix B). For each of the lunch menu items presented to them, they evaluated how easy the item would be to prepare, if they would put the menu item in their child's lunch box and if they believed the menu item would be suitable for the 'Lunch Right' menu planner. The majority of parents were looking for ease of transportability, value for money, ease of preparation, and whether the food would be eaten. The following tables summarise findings.

The criteria for the recipes selected for the draft menu planner were that they needed to be healthy, fun, easy to package and be attractive to children. To be identified as 'healthy' the menu item was low in fat, sugar and salt and that where possible a healthier food option was chosen, for example, light cream cheese rather than butter. In addition wholemeal flour and breads were recommended and a variety of salad, low fat meats and cheese options were presented for parents. Recipes were selected via the internet, various cookbooks, personal experience and healthy food suggestions for children from professional colleagues. Every recipe was selected or modified so it could be presented at its 'most

healthy' and be easy to prepare. Recipes were required to be foods that parents would be familiar with, even if they had not made or used them before.

The following tables present the findings of the questionnaire. Three tables represent; items that were selected for the menu planner, items that were selected with modification and finally, items that were not selected.

Table 5.
Lunch items that were selected for the 'Lunch Right' menu planner(without modification)

MENU ITEM	EASE TO MAKE AND COMMENTS
Hash Brown Omelette	Eighty five percent of parents felt this item was easy or very easy to prepare and that 86% said that they would or might prepare this recipe for their children. Forty three percent felt that it should and 57% felt that maybe it should be included in the menu planner.
Pinwheel Sandwiches	The majority of parents felt this item was easy to prepare and that they would make this item for their child. They felt this item was easy to transport and interesting for children, that it is quick, simple to make and makes good finger food. All parents felt this item should be included in the menu planner.
Cheese Roll Arounds	This recipe is easy to prepare with 85% of parents determining it is very easy or easy. Seventy one percent said they would make this item for their child and that it is easy to make as it is a finger food, is tasty and looks good.
Potato Pikelets	Eighty five percent of parents felt this item was very easy or easy to make and that they would or might make this recipe for their child. The majority of parents felt this item should be included in the menu planner.
Ham and Egg Wrap	All parents felt this item was very easy or easy to prepare and that they would or might prepare this recipe for their child. All parents said this item should be or maybe included in the menu planner. This item is included in the Lunch Right menu planner. It was modified however, following trial of the recipe as the wrap became soggy and hard to eat.
Peanut, Carrot and Sultana Roll	Parents felt this item was very easy or easy to prepare, (100%). Seventy one percent felt they would or might prepare this recipe for their child and 86% said yes or maybe this item should be included in the menu planner. Some parents were concerned about including nuts in a recipe and also considered a roll to be too big for their child.
Beef and Salad Baguette	All parents felt this item would be very easy or easy to prepare and 86% of parents felt they would make this item for their child. Parents felt this recipe was easy, nutritious and that, their 'children would love these'. Seventy one percent of parents said this item should be included in the menu planner.
Silverside, Relish and Salad Bagel	Parents did not have concerns with the preparation of this recipe and felt their children would enjoy this combination. One parent felt bagels may be too hard for young mouths to chew. Eighty five percent of parents said they would make this item for the child and 85% felt this item should be included in the menu planner.

Table 6

Lunch items that were selected for the 'Lunch Right' menu planner with some modification.

MENU ITEM	EASE TO MAKE AND COMMENTS
Pita Bread Roll. Title changed to 'ham pita bread roll	All parents felt this recipe was very easy or easy to prepare and 100% felt they would make this item for their child. Parents felt this item is simple, easy to pack and easy to eat.
Avocado and Chicken Deluxe. Snow pea sprouts have been substituted for alfalfa.	All parents felt this item was very easy or easy to make and 71% felt this item should be included in the menu planner. Parents felt this item was 'yummy and children like sandwiches'.
Veg. Out Sandwich. The title of the recipe has been changed to Crunch's Veg. Out Sandwich.	All parents felt this recipe was very easy or easy to prepare and 71% felt they would prepare this item for their child. The majority of parents (71%) felt this item should be included in the menu planner, and commented that the item is 'yummy and easy to pack and eat'.
Honey Baked Chicken. A modified, easier version has been added, titled 'Crunch's Chicken Triangles'	Twenty eight percent of parents felt this item was not very easy to prepare, however 71% of parents said they would make this item for their children. Parents felt this recipe could be used as a main meal and leftovers sent to school for lunch. Parents said their children would prefer this for dinner rather than lunch, however 86% said it should be included in the menu planner.
Creamy Bacon Roll. Modified to use ham rather than bacon.	All parents felt this item was easy to prepare and 71% of parents felt they would or might make this item for their children. Parents said, 'kids would love it', that it is easy to pack and that they children would enjoy this recipe. Eighty five percent said this item should or maybe included in the menu planner.
Celery and Cheese Filled Bap. Selected, with name title change.	All parents felt this item was very easy or easy to prepare and 100% of parents felt they would or might prepare this recipe for their child. Parents felt this recipe was easy to pack and eat and 100% said this item should be included in the menu planner.
Zucchini and Carrot Slice. Selected with name change.	All parents felt this recipe was very easy or easy to prepare. All parents responded that they would make this recipe for their child and 100% felt this recipe should be included in the menu planner.
Tuna Burger. Modified version selected.	Twenty eight percent of parents felt this recipe was not very easy to prepare and 43% responded that they would not make this recipe for their child. Parents felt this recipe was too messy however, 71% felt this item should be included in the menu planner.
Easy Vegie Slice. Modified version selected.	All parents felt this recipe was very easy or easy to prepare and 71% of parents said they would or might make this recipe for their child as it 'sounds yummy and is good finger food'. The majority of parents recommended this item be included in the menu planner.

The following items were net selected by the focus group parents for the 'Lunch Right' menu planner as they were not considered palatable, convenient or suitable for children's lunches at school.

Table 7
Lunch items not selected for the 'Lunch Right' menu planner

MENU ITEM	EASE TO MAKE AND COMMENTS
Nibbler's Salad	Parents said that this recipe was either very easy or easy to make (100%), and felt that it would be healthy and fun to eat, however some felt that it had to many items and 'bits' to have to package and prepare.
Fruity Cheese Salad	Parents felt that this recipe was either very easy or easy to make (100%), however 43% felt they would not make this recipe and 28% said they might make this recipe for their child. Reasons for this include that the recipe is too healthy and children would not eat it and that it is too fiddly to eat and transport.
Potato and Tuna Salad	Parents said that this recipe would be easy to prepare (57%), with 14% saying it is very easy; however 28% believed this recipe not very easy to prepare. The majority of parents said they would make this recipe for their children with 57% saying it should be included in the menu planner.
Stuffed Potatoes	Parents felt this was easy to make with 71% saying it was very easy or easy. Twenty eight percent felt it was not very easy to make. Only 14% felt this item should be included in the menu planner as it was too messy, difficult to transport and took too much time to prepare. Those who liked this item said that it was filling and their children would enjoy it.
Grilled Cheese Fingers. Moved to snack section of menu planner.	Parents responded that they felt this recipe to be easy or very easy. All parents said they would prepare this item for their children and 86% of parents agreed that this item should be included in the menu planner.
Cheddeckers	Parents felt this item was very easy or easy to prepare, however only 43% felt they would make this item for their child. Parents felt this item was too messy, that possibly there was too many 'bits and pieces' and that the items would get squashed. Only 43% said this item should be included in the menu planner.
Crack-an-Egg-Pies	The majority of parents felt this item was very easy or easy to prepare however 14% felt that it was not very easy to prepare. Seventy one percent said they would make this item for the child; however parents felt this item would not transport well. Seventy one percent felt this item should be used in the menu planner, however 42% felt maybe it should be use or not at all.
Nutty Avocado Spread	Only 14% of parents felt this item was very easy. Twenty eight percent felt this recipe was not very easy and 71% said they would not make this item for the child. Parents felt this recipe was not really a child's food and that their children would not eat it. Only 14% of parents said this item should be included in the menu planner.
Roast Vegetables	The majority of parents felt this recipe was very easy or easy to make however, 86% said they would not make this item for their children's lunches. Parents felt their children would not eat it and that it was too fiddley. The majority of parents felt this item should not be included.
Curried Apple and Nut Sandwich	Parents did not have any trouble with preparation of this recipe; however 43% of parents said they would not make this item for their child. Parents were concerned about the inclusion of nuts and felt this item was not very appealing for children. One hundred percent said this might be suitable for the menu planner.
Potato with Cheese and Chive Filling	This recipe did not pose a problem for parents in preparation with 71% responding that they found it very easy or easy however, 43% felt they would not make this recipe for their children as it is too messy and would not travel well. Some parents felt it was filling and nutritious though and would be fun and easy to eat. Only 28% said that this item should be included in the menu planner.
Bacon and Tuna Balls	A number of parents, (28%) felt this recipe was not very easy to prepare, however 71% felt they would make this item for their children. Parents felt this would be a good recipe to prepare ahead of time and that it would be good cold. Forty three percent of parents said this recipe should be included

	in the menu planner.
Chick Pea Salad	All parents felt this recipe was very easy or easy to prepare. Forty three percent felt they would not make this for their child as they perceived their children do not like chick peas. Only 28% of parents felt this item should be included in the menu planner.
Tuna Slice	Parents did not have a problem with preparation of this recipe and 71% felt they would make this item for their children. The majority (86%), of parents felt this item should be included in the menu planner.
Tuna and Avocado Melts	The majority of parents felt this recipe was very easy or easy to make however, 28% felt that it was not very easy and 57% of parents said they would not make this recipe for their children. Only 14% of parents felt this item should be included in the menu planner.

From the list above the selected recipes are considered below.

Final 'Lunch Right' – Lunch Recipes

Of the 33 trial recipes 17 were selected in their current or in a modified version for the 20 'Lunch Right' recipes. Most changes to recipes were due to parent's comment regarding the transportability, the preparation time, the fiddliness of the food and the preferences children have over food – would they eat it? The three new recipes were very simple sandwich type recipes suggested by the focus group parents and include: 'Give me gherkin' - light cream cheese, gherkin and shredded lettuce; 'Ham and corn combo' – corn kernels, low fat mayonnaise, shaved ham and lettuce in pita; and 'Crunch's veg. out sandwich' – hommus or avocado and vegies of choice in a wrapped bread.

The final version of the 'Lunch Right' menu planner has 15 lunch recipes which do not require any cooking at all, are easily packaged, will last in a lunch box and are simple in their flavour and texture. Five of the lunch recipes require simple cooking and are suitable for parents to prepare on the weekend or the night before. The five cooking recipes are also easy to transport, will last in a lunch box and according to the parent focus group are suitable for young children. One of the trial recipes, the grilled cheese fingers, was moved to the snack section of the menu planner.

Parents considered the snack menu items presented to them and evaluated them in terms of how easy they would be to prepare, if they would put the menu item in their child's lunch box or if they would give the snack to their child after school and if they believed the menu item would be suitable for the 'Lunch Right' menu planner. Once again the majority of parents were looking for ease of transportability, cost, ease of preparation, and whether the food would be eaten.

As well, the same criteria for the recipes selected for the snacks was selected for the lunches and were that they needed to be healthy, fun, easy to package and be attractive to children. The consideration for healthy was that the menu item was low in fat, sugar and salt and that where possible a healthier food option was chosen, for example, skim milk rather than whole fat milk and fruit in muffins rather than sugar.

As with the lunch recipes, most of the recipes were sourced through the internet, various cookbooks, personal experience and healthy food suggestions for children. Every recipe was selected or modified so it could be presented at its most healthy option. The following tables present the findings from the questionnaire. Three tables represent items that were selected for the menu planner, items that were selected by with modification and finally, items that were not selected.

Table 8
Snack items that were selected for the 'Lunch Right' menu planner (without modification).

MENU ITEM	EASE TO MAKE AND COMMENTS
Microwave Popcorn	The majority (85%) of parents felt this recipe was very easy or easy to follow and that 71% said they would or might make this snack for their child. Only 57% suggested this recipe be included in the menu planner.
Fruit Kebabs	The majority of parents felt this recipe was very easy or easy to prepare however, 28% of parents felt that this recipe was not very easy. Most parents said they would make this recipe for children, with 28% commenting that they would not as they felt it was not a practical snack for school. Forty three percent of parents felt this item should be included in the menu planner.
Fruit and Nut Popcorn	All parents responded that this recipe is very easy or easy to prepare and 86% of parents felt they would make this item for their child. Parents were concerned with the inclusion of nuts and only 57% recommended this item for inclusion in the menu planner.
Cheesy Corn Thins	This is a particularly easy recipe with 86% of parents rating it as very easy and 14% rating it as easy. All parents felt they would or might make this

	recipe for the children as it is quick, easy and healthy.
Yoghurt and Nut Break	This recipe is easy to prepare and 100% of parents agreed and 85% responded that they would make this recipe for their child. Parents were concerned about the inclusion of nuts in this recipe. Eighty five percent of parents felt this recipe should be included in the menu planner.
Yoghurt Dip 'N' Fruit	100% of parents felt this recipe is very easy or easy to prepare, that 71% said they would make this recipe for their child and 71% felt it should be included in the menu planner.
Pita Parmesan Crisps	This recipe was also supported 100% for preparation and for inclusion in the menu planner, and 86% of parents felt they would make this recipe for their children.
Corn on the Cob	The majority of parents, 85%, felt this recipe is very easy or easy to prepare and responded that they would prepare this item for their child. All parents felt this recipe should or may be used in the menu planner.
Current and Lemon Pikelets	Parents felt that children generally love pikelets and that they do not require a lot of room in the lunch box. Eighty five percent of parents supported this recipe for the menu planner with 100% responding that the recipe is very easy or easy to prepare and 85% affirming that they would make this recipe for their child.
Chutney Roll Around	All parents felt this recipe is very easy or easy to make and 57% of parents felt they may make this recipe for their child. Fifty seven percent agreed that this recipe should be included in the menu planner.
Date and Apricot Muesli Squares	All parents felt this recipe was very easy or easy to prepare and 85% of parents commented that they would make this recipe for their child. Parents felt this was a great substitute for commercial muesli bars and that is can be made ahead of time. All parents (100%) supported this recipe for the menu planner.
Snack Bix	The majority of parents felt this recipe was very easy or easy to prepare with only 14% responding that they felt is was not very easy. Seventy one percent of parents said they would or may make this recipe for their children and 85% supported its inclusion in the menu planner.
Mexican Siesta	All parents responded that this recipe is very easy or easy to prepare and that they would or may make this recipe for their child. Parents commented that this recipe would be fun to eat for kids and 100% supported it for the menu planner.
Fruit Drops	The majority of parents (71%), felt this recipe is very easy or easy to prepare and 85% of parents responded that they would make this recipe for their child.
Sweet Potato Chips	Eighty five percent of parents felt this recipe was very easy or easy to prepare and 57% felt they would make the recipe for their child. Parents felt this recipe is a great alternative to commercial chips, that they would serve them and 'not say it is sweet potato', and that it would go well with salsa dip.
Savoury Scones	Only 14% of parents did not feel this recipe was easy to prepare and 100% said they would make this recipe for their children. Parents felt the recipe is easy to pack and eat, can be cooked and frozen for ease of use and can be made in a large batch and stored. All parents supported this recipe for the menu planner.
Pretzel Pick-me-up	This recipe is included in the final Lunch Right menu planner as parents felt it was very easy to prepare (85%), and 71% agreeing that they would make it for their child. Parents said this recipe is quick and easy and would appeal to children. One hundred percent supported the recipes inclusion in the menu planner.

Table 9
Snack items that were selected for the 'Lunch Right' menu planner <u>with some modifications.</u>

MENU ITEM	EAST TO MAKE AND COMMENTS
Celery Boats. Selected with name change.	This recipe was supported 100% for ease of preparation, and 100% of parents said they would prepare this item for their child. All parents' felt this item should be included in the menu planner.
Apple Rock Cakes. Selected, with name change.	This recipe was supported by 100% of parents regarding preparation, if they would make the recipe for their child and if it should be included in the menu planner.
Moon Shuttle. Selected, after removing tooth-picks.	The majority of parents (85%), felt this recipe was very easy or easy to prepare and 71% said they would make this recipe for their child. Parents were concerned that toothpicks were used in this recipe however, 71% recommended it for the menu planner.

Table 10
Snack items that were not selected for the 'Lunch Right' menu planner.

MENU ITEM	EASE TO MAKE AND COMMENTS
Banana Nut Boost	This recipe was positively received by parents with 100% saying they would make this recipe for their children and that it should be included in the menu planner. All parents felt this recipe was very easy or easy to prepare.
Quick Banana Rice Custard	This recipe requires cooking time and 14% of parents felt it was not very easy to prepare. In addition 28% of parents said they would not make this recipe for their child. Only 57% of parents felt this recipe would be suitable for the menu planner.
Fruit Chunks with Honey Yoghurt	The majority of parents, 86%, felt this recipe was very easy or easy to prepare, with 71% commenting that they would make this recipe for their child. However, 28% felt they would not make this recipe as it is too fiddly to serve at school. The majority of parents supported this recipe for the menu planner, with 14% not supporting.
Savoury Yoghurt Dip	Parents also felt this recipe was very easy or easy to prepare and 85% of parents said they would make this recipe for their children. Some parents thought this recipe to be a bit 'too fancy' for children, while other parents commented that the recipe is quick, easy and nutritious. Only 28% of parents felt this recipe should be included in the menu planner.
Citrus Splash	All parents felt this recipe was very easy or easy to prepare however, 28% felt they would not make this recipe for their child. Only 57% of parents supported this recipe for the menu planner.

Final 'Lunch Right' - Snack Recipes

Out of the 25 trial snack recipes 18 were selected in their current or in a modified version for the 20 'Lunch Right' snack recipes following the parent questionnaires. Most changes to recipes, as with the lunch recipes, were due to parent comments regarding the transportability, the preparation time, the fiddliness of the food and the preferences children have over food – would they eat it? The two new recipes included were, 'Grilled cheese fingers' which was moved to snacks from the lunch items, and 'Crunch the Croc Celery

Boats' which are very simple celery, peanut butter and sultana boats. They were selected for their nutrition value and ease of preparation.

As with the final version of the lunches in the 'Lunch Right' menu planner the majority of snacks which do not require any cooking at all, are easily packaged, will last in a lunch box and are simple in their flavour and texture. Those recipes that do require cooking can be prepared on the weekend or the night before.

The menu planner includes a list at the end of the book which identifies price per kilo of common commercial children's food. This list is provided for parents to demonstrate to them the extreme cost of 'snack' food. For example; Arnott's Tiny Teddy Dippers cost $3.89 which equates to $26.67 a kilo. Parents often baulk at the cost of fruit, but rarely realise the real cost of convenience food.

Phase Three: 'Lunch Right' Four Week Intervention

Eleven families participated in the intervention study. Families were recruited through a letter of invitation presented to pre-primary parents at the case study school. Participants were introduced to the study in a workshop session conducted at the school and were provided with the 'Lunch Right' menu planner. Parents were asked to follow the menu planner as often as they could for a four week period and record the foods they used from the menu planner in the daily food record sheet. During this time parents were contacted on a weekly basis by phone to discuss any aspects of the program, provide feedback, and suggest changes and ideas.

Participants were encouraged to discuss and go through the menu planner with their child/children and to involve their pre primary child as much as possible. Parents were also encouraged to try new foods suggested in the menu planner if they had not presented the food to their child before. At the conclusion of the introductory workshop session the eleven parents were asked to complete a pre-test questionnaire.

Pre and Post-Implementation Questionnaire

The pre-test questionnaire was designed to evaluate parents' current lunch and snack preparation for their child at the time of entry to the study. Simple frequencies were completed using SPSS software. Demographic data indicated that the majority of mothers were aged between 30 – 39 years (63.6%), with 18.2% aged between 20 – 29 years, 9.1% aged between 40 – 49 years with one respondent not providing a response. Only one of the parents worked outside of the home and that was on a casual basis. All of the parents participating in the 'Lunch Right' project had a child in pre primary.

Information on how many times per week their child took a home-packed lunch to school was gathered. The majority of parents (90.1%) reported that their child took a home packed lunch to school 5 times per week, with only one respondent (9.1%) reporting their child took a home packed lunch 3–4 times per week (Table 12). Eighty two per cent of parents responded that their children ordered their lunch less than one time per week. Two of the 11 parents did not complete this question.

Table 11

Times per week for home packed lunch

		Frequency	Percent
Valid	5 times	10	90.9
	3-4 times	1	9.1
	Total	11	100.0

Table 12

Times per week order lunch

		Frequency	Percent
Valid	never	9	81.8
	missing value	2	18.2
	Total	11	100.0

When asked who in the family currently packs the school lunch; mother or step mother was the most frequent result, (90.1%). One respondent indicated that the brother or sister packed the school lunches (9.1%), (Table 14).

Table 13

Who packs the school lunch?

		Frequency	Percent
Valid	mother/stepm other	10	90.9
	brother/sister	1	9.1
	Total	11	100.0

To determine if the same lunch is packed for all children in the family parents were asked if they had other children at school and if so, do they prepare separate lunches for the children. Results indicate that 45.5% of parents said they do pack separate lunches for other children, 36.4% responded that they don't have other children to pack for and two participants did not respond (Table 15).

Table 14

Is the same school lunch packed for all children?

		Frequency	Percent
Valid	no, separate	5	45.5
	no, don't for others	4	36.4
	missing value	2	18.2
	Total	11	100.0

From a list of 26 foods, parents were asked to indicate which foods they regularly include in their child's lunch box. The most common foods named or chosen included; fresh fruit, a sandwich or roll, muesli bars, water, home made cakes, biscuits or muffins, and pre-packaged dip and crackers (e.g. *Le Snack*). There were a number of parents reporting that they included; sweet biscuits (36.4%), and savoury biscuits (45.5%). Approximately half of the parents responded that they provided yoghurt for lunch (54.5%), with 45.5% indicating they provided salad and cheese (Figure 7).
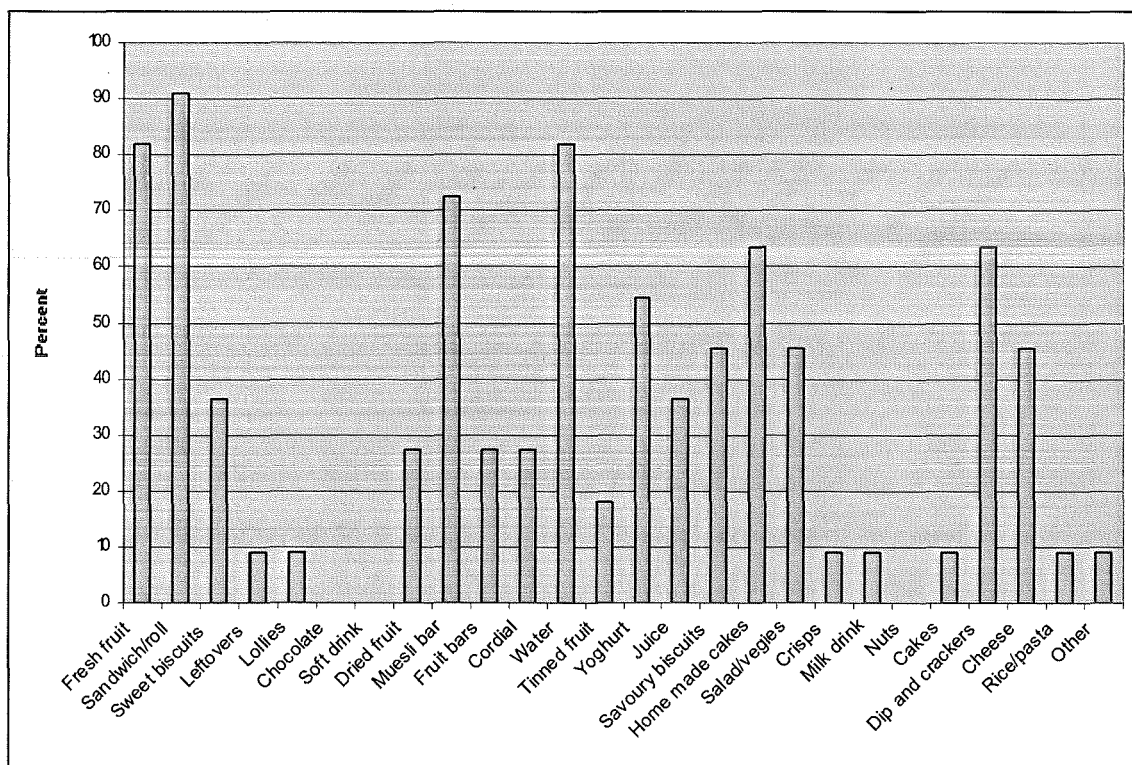
Figure 7. Foods regularly packed in school lunch box

Sandwiches and rolls are the most common lunch item for children, and parents were asked what fillings they included in their child's sandwiches. The most common filling was deli meat such as ham, chicken or beef (72.7%), followed by Vegemite, Promite or Marmite (63.6%). Most parents reported they used butter or margarine (63.6%), with the next most popular spread being peanut butter (54.5%). No parent used avocado, hommus, relish or chutney in their children's sandwiches (Figure 8)[8].

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[8] Inclusion and exclusion is being reported on a factual basis. No judgement is implied.
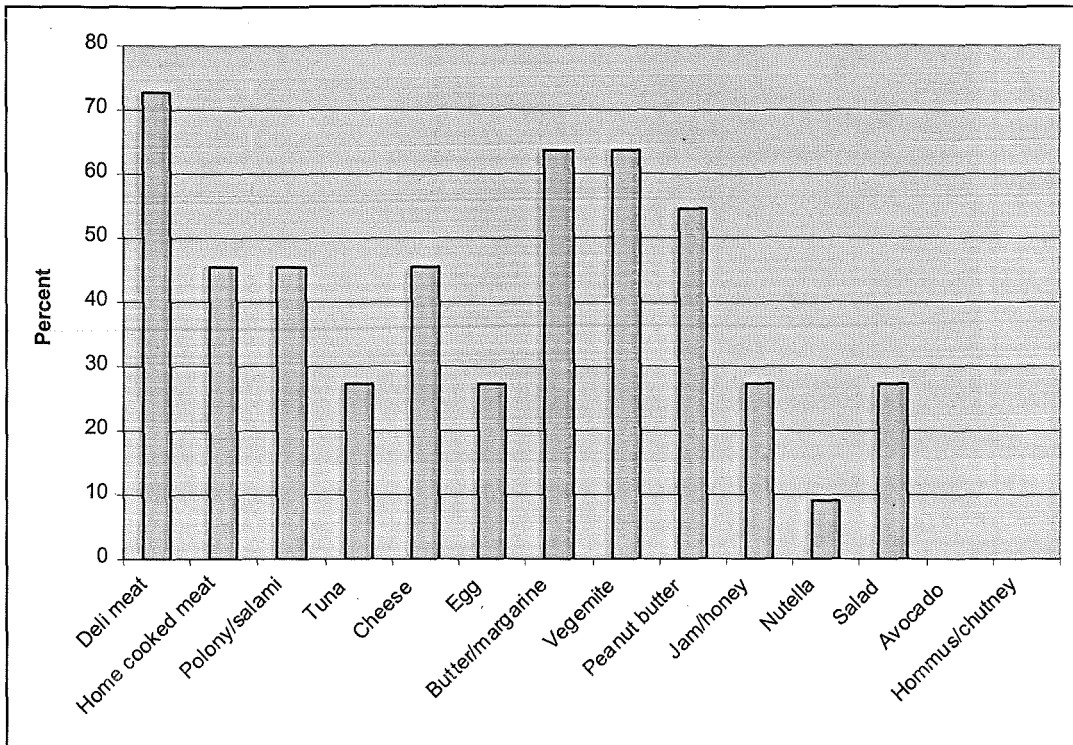
Figure 8. Fillings for sandwiches and rolls

Many factors influence the decisions parents make when preparing a school lunch. In addition to marketing; child requests, common trends and ease of preparation are regular influences. What is in the fridge is often a major factor, as is budget, the weather, and time available to prepare. The majority of parents (81.8%) agreed that 'what is in the fridge' played an important role in lunch preparation.

Interestingly only 18.2% of parents reported that budget or cost played an important role in lunch preparation decisions, however 63.6% considered nutrition a factor. A child's preference for food choices overwhelmingly influence parents (90.9%). Children's food preference is reported to be a greater factor than child nutrition (Figure 9).
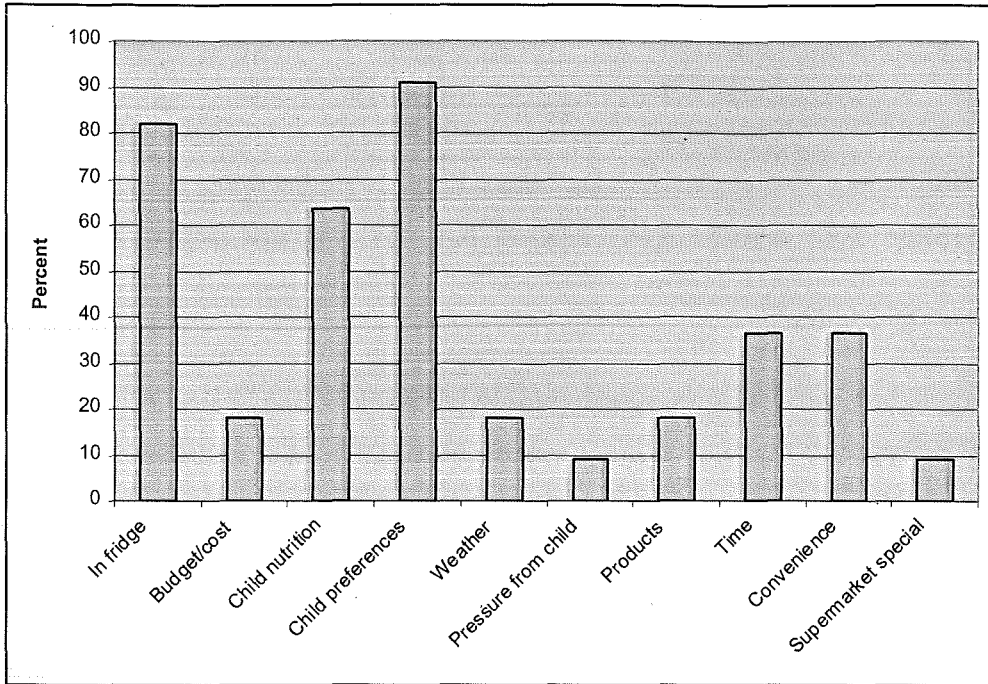
Figure 9. Factors that influence school lunches

When parents were asked where they get their ideas for school lunch recipes, the significant response was from children's requests (90.9%). Other sources were from friends (54.5%), their own parents (54.5%) and the supermarket (36.4%) (Figure 10).
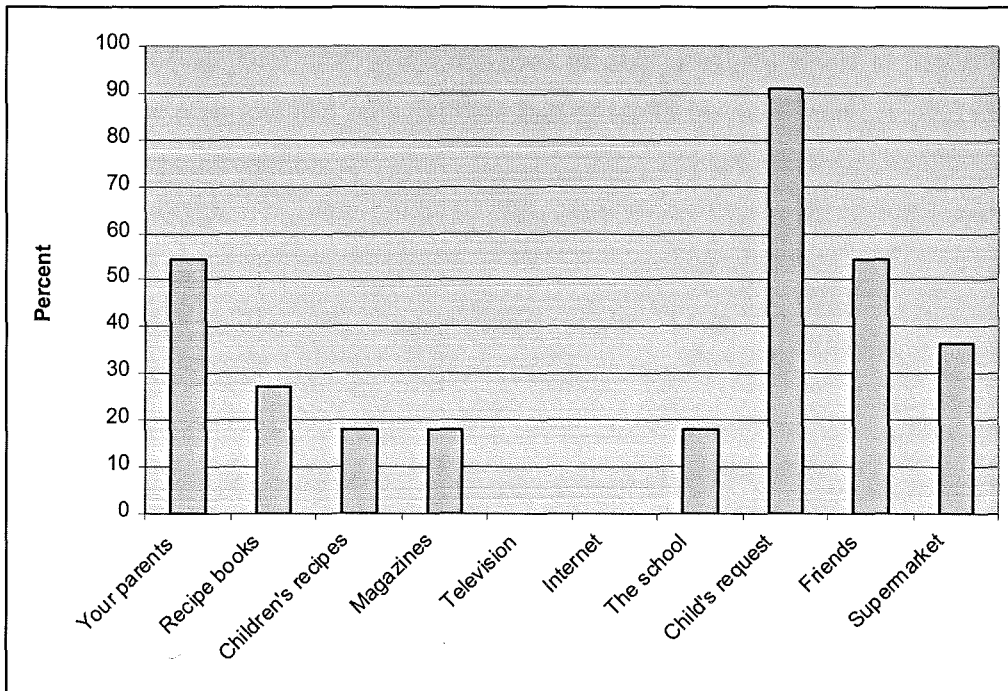
Figure 10. Parent's ideas for school lunches

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Post Intervention Questionnaire

Following the four week trial the post-test questionnaire was designed to evaluate parents' response to the intervention of the 'Lunch Right' menu planner, gather information about how each recipe was received and observe what changes took place following the introduction of the menu planner.

Ten out of a total of eleven post-test questionnaires were returned and simple frequencies were completed using SPSS software. During the 'Lunch Right' trial period fifty percent of parents indicated they packed lunches for other children and they used the menu planner for these lunches. This indicates that parents find convenience in packing similar lunches for children and that the 'Lunch Right' menu planner if being used is an option parents may take.

From a list of 26 foods, parents were asked to indicate which foods they regularly included in their child's lunch box and this was compared to the pre intervention questionnaire. The most common foods named or chosen following the intervention included; fresh fruit, a sandwich or roll, muesli bars, water, yoghurt, home made cakes and cheese (Figure 11). This was a change on the pre intervention test as biscuits or muffins, and pre-packaged dip and crackers (e.g. *Le Snack*) were included in most frequent foods at that time, however parents in the post-test had reduced their use of sweet biscuits from (36.4%) in the pre-test to (10%) post intervention.
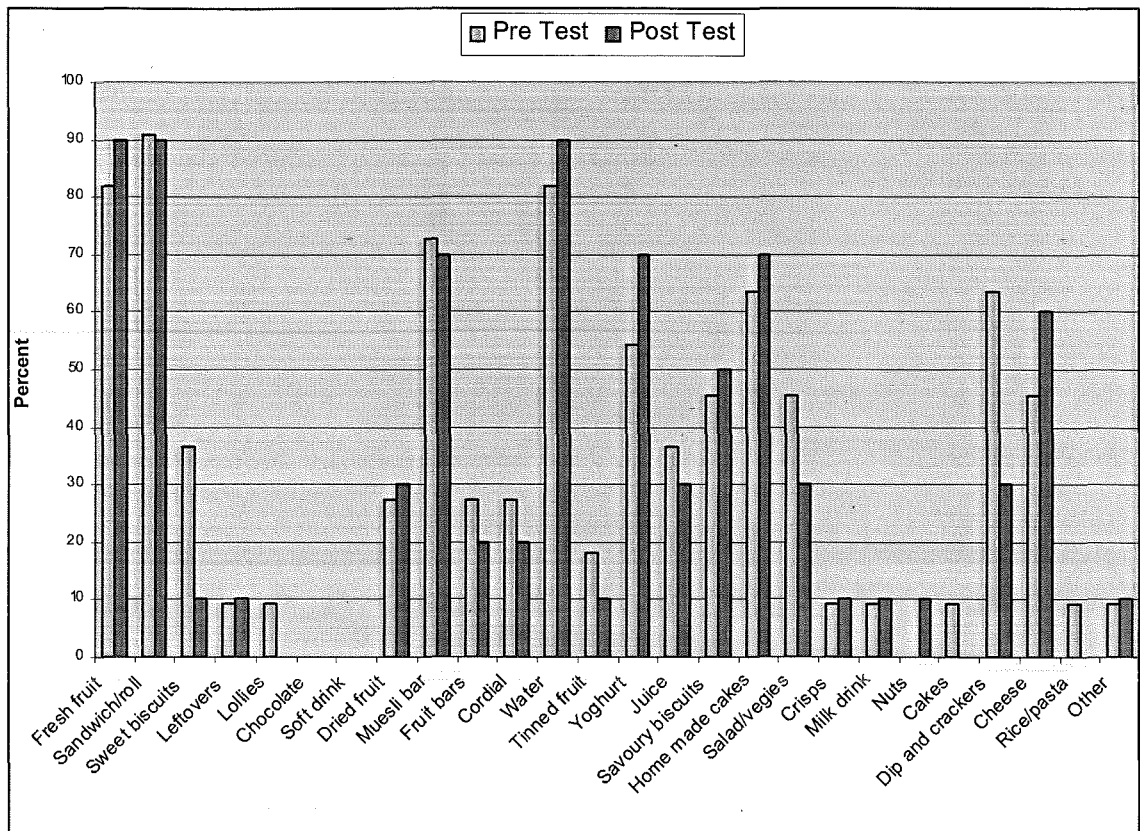
Figure 11. Pre and post test comparison of foods regularly included in lunch box

The post-test indicated dramatic changes in the fillings of the sandwiches and rolls parents provided for their children during the four week intervention. The most significant changes between the pre and post-test is the greater inclusion of cheese. Comparisons showed a change from (45.5%) pre and (80%) post-test. And similar changes were seen with the use of eggs, (27.3%) pre and (40%) post; margarine/butter, (63.6%) pre and only (50%) post. There were also reductions in the use of peanut butter, (54.5%) pre test to only (40%) post-test and honey from (27.3%) to (20%) post. There was a difference in the number of parents reporting to have included salad in their children's sandwiches and rolls from only (27.3%) of parents originally including salad to (40%) of parents providing salad in sandwiches. The more healthy option of relish was found to be included in the post-test with parents originally not reporting that they used relish at all, to (40%) of parents having provided relish for their children in the post-test (Figure 12).
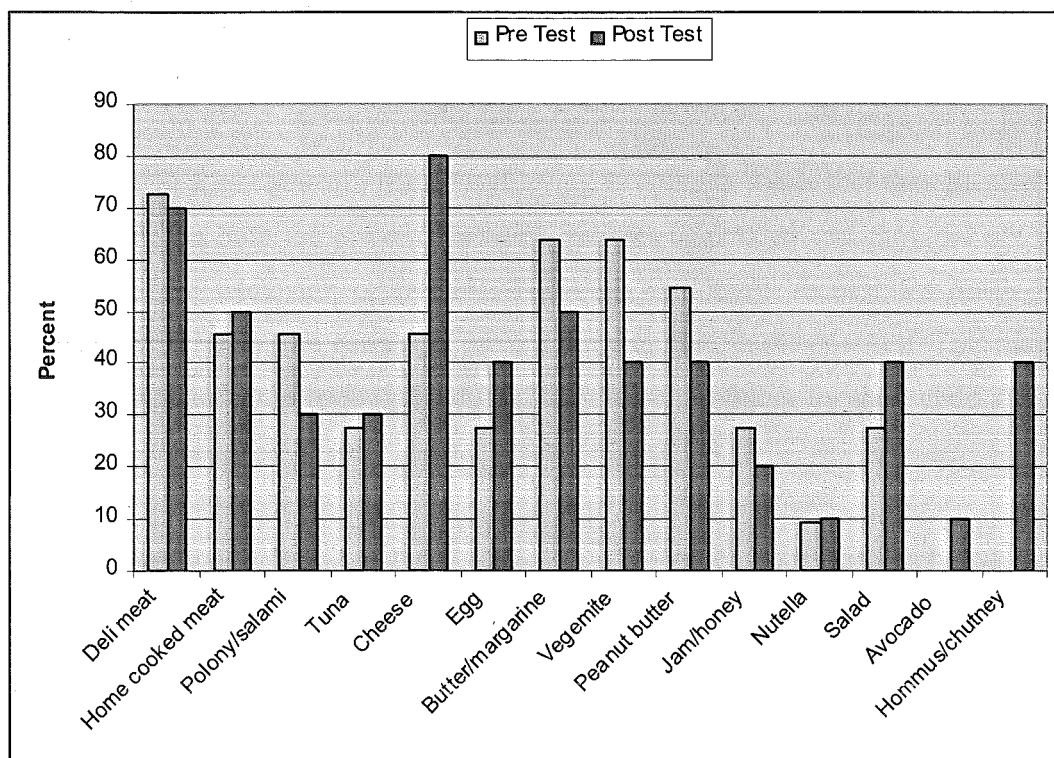
Figure 12. Pre and post test comparison of fillings provided in lunches

When parents were asked to describe a typical lunch that they prepared for their child during the intervention there were significant differences between the pre and post-test. Prior to the intervention parents indicated that they made honey, vegemite and peanut butter sandwiches, added fruit bars, muesli bars, fruit pops and jelly fruit. Results indicated following the 'Lunch Right' menu planner intervention parents provided; home made banana mini muffins, cheese and bacon puffs, fresh fruit, meat and salad or pinwheel sandwiches; mini yoghurt, silverside and salad rolls, pikelets, salad sandwiches, frozen yoghurt, pita breads and fruit roll arounds.

There was a clear indication that parents were providing a wider variety and healthier choices of foods. The post-test also found that parents were recognising nutrition as a factor. Results moved from 63.6% who indicated nutrition as a factor for what they packed in school lunches to 80% following the intervention.

When parents were asked where they get their ideas for school lunches over the intervention period (100%) reported that they had taken ideas from the 'Lunch Right' menu

planner. In comparison to the pre test parents moved away from including items that they had themselves as a child or ideas from their parents (54.5%) to only (20%) of ideas coming from this source. This may indicate that parents are being educated through the use of the 'Lunch Right' menu planner and trying new lunch foods that they themselves were not offered. On both the pre and post-test, parents responded that they did not get lunch ideas from the television or internet. However, children's request for lunch food was reported by 90.9% of the parents in the pre test and 70% in the post-test. This may indicate that parents were more aware of the food they were providing for their child and that they had a guide to provide healthy ideas for them (Figure 13).

Specific questions relating to the 'Lunch Right' menu planner were included in the post-test. All parents perceived the menu planner to be of a suitable size, 80% felt the menu planner had enough menu choices, with (20%) indicating that they would prefer additional recipes that could be made in bulk on the weekend and freeze so the food items were ready on hand during the week.
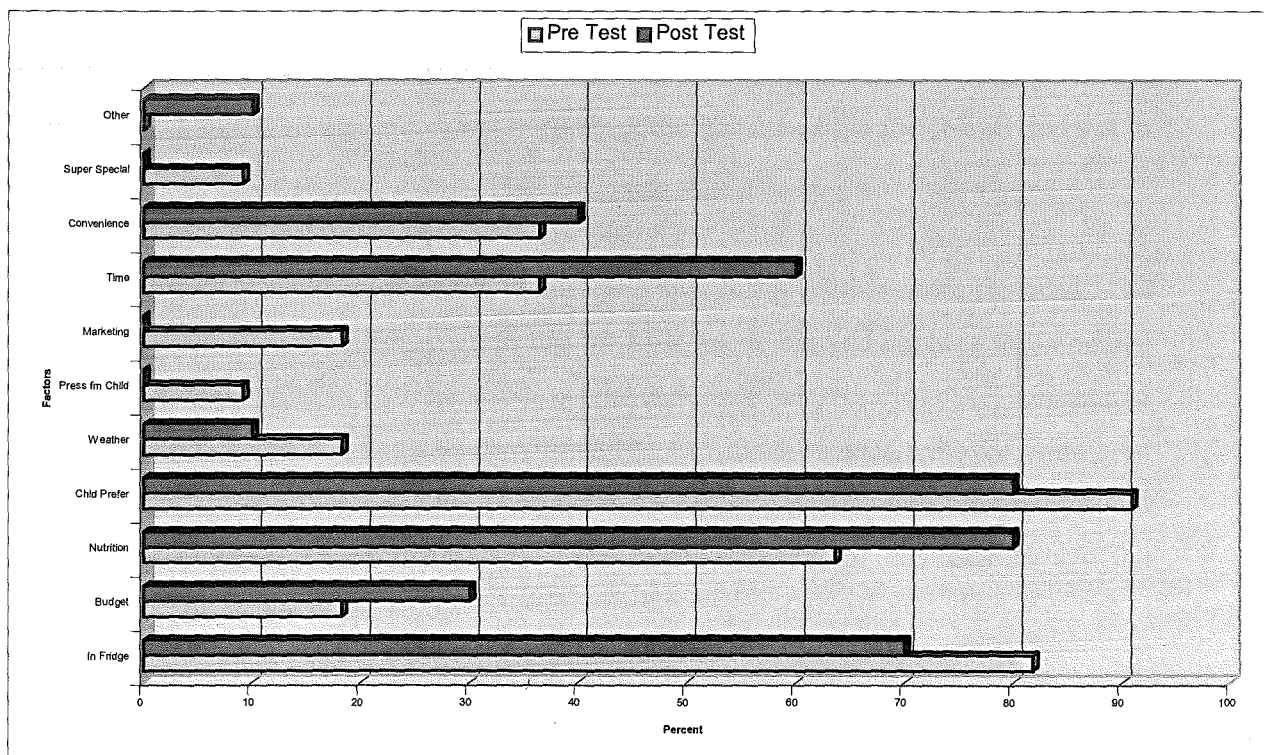
Figure 13. Pre and post test comparison of factors that influence lunches

Ninety percent of parents felt that the photographs included in the menu planner were beneficial and commented that they used the photos with their children to select snack and lunch items together. Ninety percent of parents also felt the nutrition information provided at the back of the menu planner was valuable while all parents felt that the menu planner was easy to use.

The three most popular 'Lunch Right' lunch recipes were the pinwheel sandwiches, ham pita bread roll, and pizza italiano, and the three most popular snack recipes included, popcorn, cheesy corn thins and current and lemon pikelets. Parents were asked if there were any lunch recipes that should be removed from the menu planner and all felt the items included should all stay.

When parents were asked if any of the snack recipes should be replaced parents indicated that Crunch the Croc celery boats, chutney roll arounds and snack bix should be replaced by snack items that can be prepared in advance and frozen for easy access. Parents indicated that they would like additional menu items which are 'quick and easy' and that could be prepared in advance. For example, recipes that could be made on the weekend, and frozen and stored so that individual portions could be taken from the freezer and put in to the lunch box on the day.

Following this suggestion three snack recipes and two lunch recipes were replaced. The snack recipes removed included; yoghurt dip 'n' fruit, snack bix and chutney roll arounds. These recipes were replaced with freezable snacks including; pecan carrot cake, banana and oat muffins and cheese and vegetable muffins. The two lunch recipes removed were ham bread roll and Crunch the croc roll. The two replacement lunches were tuna burger and honey baked chicken. These changes meet the indicated needs of the families and the nutritional requirements of the study.

Interview Data

Each of the 11 parents were contacted for a telephone interview on a weekly basis for three weeks. The telephone calls lasted for approximately 5–10 minutes. Parents were invited to describe any of the 'Lunch Right' menu items they had made during the week, whether

their child enjoyed the new lunch or snack foods and any additional information regarding their child's food record.

Parents reported that the easier the menu item to prepare the more frequently that item was chosen. All parents indicated that time is a key factor for how much thought they give to preparing their child's lunch. Most parents reported that they were considerably time poor and this was particularly true for parents with younger children in the house. In addition, parents felt that they would rather pack foods their children liked, regardless of the nutritional value, if they knew it would get eaten.

All parents reported that they found the menu planner to be easy to use and particularly helpful in their lunch and snack ideas. Many parents were quite excited about their own achievements regarding food preparation for their child and were very pleased when their child enjoyed foods not previously introduced. One parent reported that she could not wait until the following week to try further new recipes. One particular food that many parents had not tried before with their children was wholemeal bread. Based on parent recall all children responded positively to the new bread.

Vegetable and salad consumption was of particular concern for a number of mothers as their child would not eat anything 'green'. One parent reported that her child would not eat any vegetables at all, however would eat fruit. This parent was able to introduce wholemeal bread, chicken and avocado into school lunches with very positive results. Many parents tried tuna and low fat deli meats for the first time with their children and reported that the children were asking for more. In addition, parents were finding that they would add to the 'Lunch Right' recipes to suit their families needs and this proved to be rewarding for the mothers who saw their family eating healthy meals they had prepared. Popcorn was reported by most of the parents to be a favourite and they were pleased not only that their children were eating it, but that they could see considerable savings as compared to their regular snacks which were many times more expensive.

Parents reported that they were quite surprised by their children's responses to the new foods and ideas presented to them. Many parents believed their child would not eat the parmesan crisps, chutney or tuna and were pleasantly surprised when the food was eaten

and enjoyed. The joy parents reported during this project was significant and during the telephone conversations this was evident:

"My kids had never had pita bread before, but love it and ask for it each day. I made the lemon and currant pikelets for the first time and they were demolished" (parent seven).
"My child is loving the menu planner, she picks what she would like from the pictures and loves the pizza italiano and lavash bread, she wanted it again the next day" (parent eight).
"I don't like tuna so I have never given it to my kids. However, after the menu planner ideas my kids love tuna. I wish my mother had introduced it to me at a young age as it is so healthy" (parent nine).

Some parents followed the menu planner every day; but many did not have the time or identified need to use the planner every day. For both groups of parents, the planner has provided a variety of new ideas and new foods to introduce to their children. All parents reported that they would use the menu planner following the intervention. One parent reported she, "Found the menu planner easier than she thought to use and very handy for local children who come to the house for snacks after school". This parent said, "The local children were over after school and I served home cooked popcorn rather than cheese dippers or microwave popcorn with salt and butter. I saved money and the children loved it as we were all involved".

Daily Food Record

Parents involved in the study were asked to complete a daily food record diary to indicate the 'Lunch Right' foods they chose and to record when other foods were sent to school. Foods not from the menu planner were recorded as an X. Of the eleven families two families did not return their daily food record sheets.

Results indicated that all families provided foods from the menu planner at least three days a week over each of the four weeks. The most common snack foods were the cheesy corn thins, currant and lemon pikelets and popcorn. The most common lunches were the pinwheel sandwiches, ham pita bread roll and pizza italiano. All families utilised the menu planner for their children's lunches. It was interesting to note that the days in the middle of

the week were the most popular for the 'Lunch Right' recipes. In addition, Friday rated poorly each week for each of the lunches and snacks and for all of the families (Figure 14 and 15).
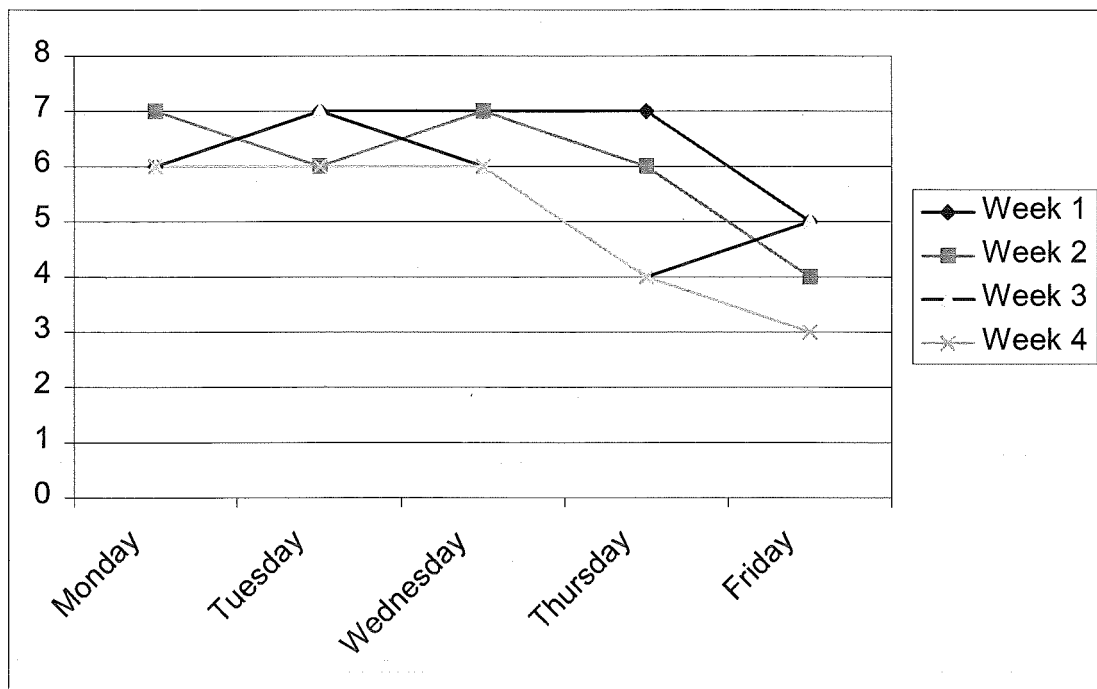
Figure 14. Number of times use of snacks – weeks 1 to 4
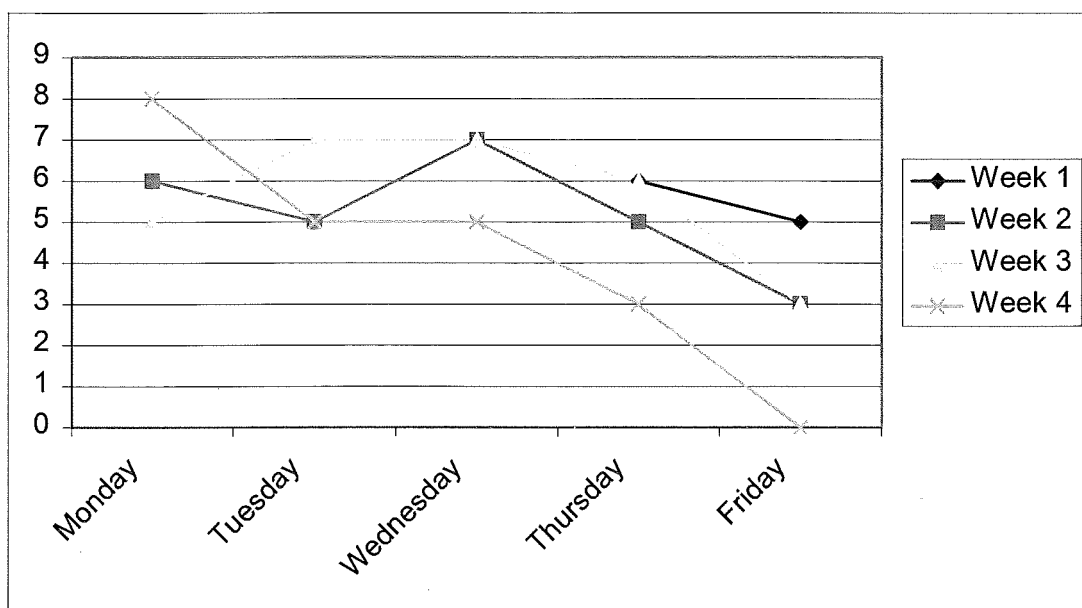
Figure 15. Number of times use of lunches – weeks 1 to 4

The comparison of lunches over the four week period indicates that on every day the majority of the families were using the 'Lunch Right' menu planner. This may indicate the resources suitability and usefulness of the menu planner for assisting parents in the lunch choices for their children. A concern with this case study, as with any research is sustainability. A true test of the intervention would be over time at one month, six months and one year.

The next chapter critically analyses the findings of the case study. A key finding from each of the three phases is selected and an analysis is undertaken in relation to the theme of healthy eating in children conceptualised in a holistic way, encompassing global, policy and curriculum perspectives. Discussion thereby seeks to draw together insights from preceding chapters and or sub-sections of them. In so doing it emphasises the need for an integrated approach to understanding multiple perspectives on health eating in children.

CHAPTER SEVEN

DISCUSSION

Teachers Blame Parents

In phase one of the case study investigation teachers singled out parents as major contributors to the trends of children being overweight or obese and a widespread lack of healthy eating. As reported in chapter one, the literature and media also direct blame at parents, highlighting the influence or control that they have over children's food availability and choices (Gard, 2004; Shanahan, 2002). Other chapters in this portfolio have, however, demonstrated that to attribute blame for food choices and eating habits in a simplistic manner is clearly flawed. The Australian National Nutrition Survey (McLennan and Podger, 1997, see chapter one) reported that children are eating more snack and fast food and from this it can be assumed that it may be due to influence from parents and/or a multitude of other factors that hold precedence over the food choices children make. The choices that people make and furthermore, are in a position to make, regarding food are determined on many levels and influenced by many factors. The constructs of healthy eating in children, globalisation, health policy and school ethos, curriculum and environment are all inextricably linked and manifest in child and parent behaviour and decisions relating to food.

Childhood overweight and obesity is climbing at an alarming rate in Australia and globally (Swinburn, Eggar and Raza, 1999) and much of the discourse surrounding this issue is about who is to blame. Parents are being singled out, as perpetrators of this 'crime', yet to what extent are parents to blame, and for what exactly? Furthermore, the question of 'what is healthy eating in children' was presented and problematised. All of the school teachers interviewed in phase one felt that parents are to blame for lack of healthy eating in children – *"I know some kids, whose parents take them to McDonalds for breakfast on the way here, and often they will go on the way home from school as well" (Year 5 teacher)* and *"I think it is poor education at home as well. We don't sell chips or chocolate or soft drinks but the kids bring it all from home" (canteen manager).* Yet underpinning the finding is an expectation that parents know what healthy eating is and that there is a common, agreed

understanding of what it is. As explained in chapter one, healthy eating is a complex issue and one that many people may never fully understand unless they study and critically engage with the contents of a nutrition course. Public advice and information is provided with the National Health and Medical Research Council guidelines (NHMRC, 2003) and the Australian Guide to Health Eating (2003), both of which teachers may be familiar with, yet parents may never gain access to or even know that the publications exist.

Changing Lives and Lifestyles

The literature suggests that parents may have become complacent in their 'duty' of ensuring 'healthy' meals are consumed by their family and this is implicit and/or explicit in teachers' varying attributions of blame. Yet it could be suggested that the change in family eating patterns reflects and accommodates societal and cultural changes. As indicated in the case study, families and parents are living in different conditions and with different daily demands upon them to those in years past. One teacher reported:

> *Going back a few years when we were at school, parents used to take a great deal of time and energy with little lunches and fruit and so forth. Now a-days with such a busy lifestyle it's really hard to maintain for some parents, the traditional foods with regards to the fruit, the vegies, and the healthy meals. Peer pressure also influences the school policy, sometimes from other kids, like you might have one child whose parent is diligent but their best friend always has junk food. The child with the healthy lunch will throw it away and share the unhealthy lunch with his friend.*

(School registrar)

The choices that people make and are able to make need to be acknowledged as being set in and influenced by very different contexts. In many families, both parents work, and therefore may not supervise or even prepare meals for children, and teachers in the case study were quick to point this out for the parents of children at their school. Many families do not sit down to an evening meal, and often each family member is responsible for their own food, with parental supervision of foods eaten and portion sizes thereby lost or at least uncontrolled (Lin, Guthrie, Frazao, 1998; Lin, Guthrie and Frazao, 1999). Parents may be

criticised for having embraced the fast food culture and in doing so have instilled the acceptability and normality of this behaviour in their children. However cultural phenomena cannot be attributed to parents alone. Any consideration of parental choices, behaviours and influence in relation to children's eating needs to acknowledge the pressured lives many parents are living. These are lives in which changes in eating/meal patterns have been accompanied and or precipitated by unprecedented expansion of the 'fast food' industry. Fast food outlets are everywhere and to a large extent, government policy has overlooked and failed to curb the expansion. The number of fast food outlets, their opening hours and locations are all potentially avenues for policy intervention directed at control. Yet in Western Australia and even globally there are no barriers to this expansion and no policy control.

When considering policy in relation to the finding that teacher's in the case study blamed parents for children's eating behaviour, the question should be asked as to why there is no legislation or no control over the explosion of fast food restaurants and 'junk' foods available in our shopping centres and many school canteens. One teacher in the case study reported the availability of fast food was *"everywhere"* – *"In the local area we have McDonalds, Chicken Treat, Hungry Jacks, Red Rooster, Kentucky Fried Chicken, Jesters, and Subway. There's fish and chips too, so there's plenty of fast food around" (Year 7 teacher).* Surely if there are genuine concerns for people to combat the globalisation of fast and junk food, then those who develop policy around food must take more proactive steps to intervene and control the growth in outlets, opening hours and advertising.

Knowledge and Understanding About Food and Health

Parents in the case study reported that they obtain information about food and children's health from the media, through advertising, and particularly through children's requests for food. The information that parents receive through these mediums may not always be the best for children's health. Fast food advertising continually thwarts any positive influence parents have over children's food choices and much of the advertising for fast food portrays food in a positive light, missing out a lot of arguably important (from a health perspective) nutritional information. Advertising provides partial and selective information with selection aimed at maximising appeal and sales. For example, the *McDonalds* 'fruit

smoothie' is advertised as 'the new *real fruit* smoothie' along with happy, attractive and healthy people in the adverts, yet contains a very high proportion of sugar. Furthermore fast food messages operate on a number of levels. The appeal portrayed is not only of health benefits, but also low cost and quick meals, thus encouraging consumption of the food to meet a number of lifestyle considerations. Consumption of unhealthy food has presidency in many family's lives as it is perceived as costing less than the expensive 'health' food alternative. Parents may be somewhat to blame for not looking more closely in to this, however the food industry has worked hard to keep the low cost image of fast food and rarely considered what is best nutritionally. Knowledge and understanding can be improved through education and comparison of cost per kilo of food items. Thus blaming parents is not the solution, involving them in education is–and this could be done at the school level. But, as mentioned there are many factors that have to be considered.

Marketing and advertising on a global level is fierce and is also targeted directly at children, with the clear aim of by-passing any restraint or control that parents may exercise over choices and eating patterns. Television advertising and food marketing has a dramatic and extremely calculated effect on children. The food and beverage industry views children as a major market force and as a result target multimillion-dollar campaigns toward them seeking to establish products as an integral part of global youth culture. Parents have little power against this strategic marketing, particularly as fast food companies have increasingly become part of the fabric of children's lives. A clearer example could not be given than that of the case study school – located opposite *McDonalds* and *Chicken Treat* fast food restaurants. The will-power parents need to dissuade/prevent their children from consuming food from these places is tremendous. As the advertisements say, it is convenient, quick, low cost and kids will love it.

Food products now have clear nutrition panels and labels, arguably designed to guide parents as consumers making choices. The identified 'fat free', 'virtually fat free', 'reduced fat', 'low fat', 'low carb', 'low sugar', and 'low GI' foods are seemingly available to guide us towards more healthy choices. Yet there is a worrying inconsistency in the information provided and labels accorded to food stuffs. It is information, but also, very obviously clever marketing.

To blame parents for children's consumption of 'unhealthy' food also overlooks that other people are providers of food and food choices in children's lives. School canteens play a role in the food that children eat each day as do local shops/outlets, sport and recreation centres, cinemas and clubs. Are parents to blame for children regularly selecting food that may be high in fat, sugar, or salt? Can they be held accountable for the food choices that their children make? The issues discussed in chapter three are clearly pertinent here, and most notably the lack of regulation around food served in school canteens in Western Australia. Shouldn't parents be able to expect that the food offered at school will meet with relevant standards for health? As discussed in chapter three, many school canteens would like to serve healthier food to children, but believe that healthy food will be more difficult to prepare, and furthermore, rejected by children as customers. Thus the cycle of convenience and fast food being presented to children continues. The whole school community plays a part in the cycle.

The Case for Education for Parents and Children

From the teachers' perspective the 'education' that children receive about food within the classroom, and the understandings that teachers are aiming to develop about the importance of nutritious healthy food, is it not supported or modelled outside of the classroom. Yet as highlighted in chapter four, there is a need for recognition of the diverse nature of learning and curriculum. Undoubtedly, parents will continue to be at a loss if they are not involved in educational initiatives and positioned to address consistency with school and home messages. Thus, there is some onus on teachers and schools to include parents in initiatives that are directed towards childhood nutrition. The Principal in the case study commented, *"parents are also a factor. If the parents aren't educated in what is right then they can't support our messages at school" (Principal).* The case study demonstrated parent's need for and the prospective benefits arising from education about healthy eating and foods. Parents clearly have diverse understandings surrounding this issue and intervention is needed to support both families and teachers in their endeavours to encourage healthier eating amongst children.

Parent's understandings and actions surrounding food need to be considered in relation to the influences surrounding them – societal issues, global issues, availability of food, labelling, education and lifestyle pressure all play a role in what children are eating.

Nutrition is Not Parents' First Consideration

In phase two of the case study a focus group of parents was asked to select and critique a range of healthy lunch and snack recipes, which were to be included in the 'Lunch Right' menu planner. A key finding from this phase was that even though all of the suggested sample recipes were designed to match with nutritional recommendations regarding healthy lunches and snacks, there were a number of menu items that parents did not want included in the final version of the 'Lunch Right' resource. In addition throughout the focus group testing nutrition did not present itself as a major issue for parents when considering school lunches for their children. Social, cultural and economic factors need to be acknowledged as having a role to play in reactions to and 'rejections' of some of the proposals. The discussion below again aims to highlight the complexities of food choices and preferences.

None of the parents in phase two mentioned the need for low fat or reduced fat foods for their children, which may indicate a completely healthy attitude to food and nutrition and may indicate that children's weight was not an issue for this group. However, as children's weight is so prominent an issue in the media it might be expected that parents would discuss children's weight when considering food choices for children. The lack of focus on this may be that the phase two parents did not have a weight issue with any of their children, or similar to the comments made by teachers in key finding one, parents are not focusing on this issue. Yet parents did comment that the use of the 'Lunch Right' menu planner would be beneficial as, *"You know the food you are serving is healthy because it is coming from this little booklet" (parent four)*. Key determinants in parental decisions were practical considerations - whether children would eat the lunches, if they would be palatable at lunch time, transportable and easy to prepare – *"I think you need to think about transportability, I've got a boy and the bag probably gets tipped over 20 times on the way to school and then kicked under the bench when he gets to school" (parent two)*.

"Availability of food, or what day of the week it is, or what's in the fridge" (parent one), play a more influential role in children's lunches than health considerations. It is clear that 'what is in the fridge' in the last 10 – 20 years has changed as the availability of food, the role of the media, advertising and television have influenced food choices, and lives and lifestyles have become more intensified (Women and the economy, 2003). Convenience, 'quick and easy' lunches have developed to the point whereby they are a food industry in and of itself. There are more pre-packaged foods/meals on shopping centre shelves than at any other time (Spurlock, 2004) and families are utilising these ready to eat/quick to cook products. The suggestions made by phase two parents reflected this, as parents were keen for foods that were simple, quick and easy to prepare.

The case study indicated that nutrition is a secondary consideration – if one at all – for parents. For example, parents commented that they determine the food they provide for their children on whether or not they are *"flying out the door" (parent six)*, or using the school canteen *"as a treat for me, if I'm sick of packing lunches" (parent four)*. The trends described are clearly not unique to Western Australia. Parents across the western world are pressured to choose and inclined to choose convenience foods for school lunches. Not only are these foods/products an integral part of Western food culture, they are specifically targeted at children by multinational companies. Another reason for food choices given by the phase two parents, was whether or not their children would eat the food provided. As mentioned the 'power' children have over their own food choices and their parents' purchasing practices, starts at a very early age. The global influence of the food industry on children has been highlighted in chapter two, and shown through one advertising executive explaining, "It isn't enough just to advertise on television...you've got to reach kids through the day in school, as they're shopping in the mall...or at the movies. You've got to become part of the fabric of their lives" (Consumers Union Education Service, 1990, p. 5). The decisions the phase two parents made when selecting the 'Lunch Right' menu items have clearly been influenced by global food advertising, convenience and 'acceptance', whether the food would be considered 'cool' enough by children to eat in front of peers. One of the phase two parents commented: *"The kids are influenced in the shopping centre and I buy foods they ask for" (parent six)*. There are therefore many more pressures on parents for what to put in lunch boxes than just nutritional considerations.

Selection of 'Lunch Right' Foods

When the parents assessed the list and selection of suggested 'Lunch Right' menu items the lunch and snack ideas, they considered how easy they were to prepare, whether they would make the lunch or snack for their child and whether it should be included in the 'Lunch Right' resource. Reasons for menu items not being selected by parents reaffirmed the marginality of nutrition as a consideration. Of greater concern to parents in the case study was whether they would have too many 'bits' to have to package and prepare, be 'fiddly for children', too difficult to prepare, too messy or likely to get squashed. Other concerns were that children would not eat the foods, or the recipe was too 'fancy' for children or that it was 'too healthy'. For example parents did not include the 'fruity cheese salad' as one of the menu items as it was 'too healthy and too fiddly to eat'; as well parents did not include the 'nibbler's salad' as it had 'too many bits'. All of these reasons are rational and particular to current family lives where time is a factor, and possibly where nutrition requirements for children are not fully understood. Yet they also indicate the mindset of modern families and the achievement of the 'fast food' industry. The thought of peeling an orange or eating food that was not 'easy' and full of processed flavours is now unthinkable for many and clearly evident in the case study data.

The relative of understanding of nutrition not only reflects the information parents receive through advertising and marketing of foods, but also the information provided by the media. Parents in phase two were open in acknowledging confusion about what is 'right' and 'wrong or 'healthy' and 'unhealthy' surrounding food for children. As highlighted in chapter three, the information disseminated about healthy eating for children is now so diverse that food labelling and advertising policies arguably need to be extended or tightened to assist families with their food choices.

In recognition of the need for education within families, Australia's National Obesity Taskforce has developed plans for health for all Australians and focuses specifically on 'young people and families', 'supportive environments' and 'prevention'. However, what is evident from the responses to the 'Lunch Right' menu planner is that any educational messages need to engage as much with issues of transportability and ease of preparation as childhood nutrition.

Parents clearly need positive and practical information around health eating for children. The next finding highlights both the need and the prospective advances that can be achieved through educational initiatives. The response by phase three parents to the 'Lunch Right' resources was overwhelmingly positive.

Parents Responded Well to Education and the 'Lunch Right' Intervention

Throughout this portfolio parents have been identified as responding to, and being influenced by food changes in western culture, and as somewhat at a loss as to how to 'combat' the global fast food culture and ensure children receive healthy nutritious foods. Yet the 'Lunch Right' intervention demonstrated that parents can provide healthy nutritious foods for their children if given suitable information, resources and support. Guidance and encouragement to assist parents with healthy food choices for children proved very effective. Parents in the 'Lunch Right' intervention were surprised at how well their children responded to the introduction of new foods and that children reported that they enjoyed the healthier alternative, *"My child is loving the menu planner, and she picks what she would like from the pictures" (parent eight)*. It may be that parents have been so caught up in global fast food advertising and campaigning that their food preparation skills have been modified and/or 'lost'. The 'Lunch Right' menu planner enabled parents to establish simple cooking skills again and to reconsider exactly what they were providing in their children's lunch boxes. The achievements parents made through participation in the 'Lunch Right' intervention phase is the focus of the discussion that follows.

Modelling of healthy food and eating behaviour is a key health learning determinant for children. From the case study it was evident that the modelling occurring via the provision of packed lunches and snacks can be regarded as a concern from a health perspective. Parents in the intervention group reported that they packed muesli bars, cakes, biscuits, muffins and pre-packaged dips and crackers - all high fat convenience foods. Arguably it is multinationals and the media doing the modelling. When considering what foods would be included in the lunch box parents reported they followed their child's request for food, common trends and ease of preparation. These inferences are consistent with the literature where parents are reporting they need as 'stress free' a time as possible around food, so will often serve non nutritious food just to 'keep the peace' (Cohen, 2000).

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The Australian National Nutrition Survey 1995 found that 33% of energy for 2–7 year olds was derived from snack items, such as cakes, pastries, chips and sweet drinks, as opposed to basic core foods, such as bread and cereals, dairy products, fruits and vegetables (McLennan and Podger, 1997). One of the parents in phase three commented during the 'Lunch Right' intervention that her child would not eat any vegetables at all, but would eat fruit. For parents wanting to introduce and include vegetables in children's diets the barriers to overcome may well appear insurmountable. However, following the 'Lunch Right' intervention the parent mentioned was able to introduce wholemeal bread, chicken and avocado into her child's school lunches with very positive results. One of the key strengths of the 'Lunch Right' menu planner is that it was able to show parents that they *can* prepare nutritious food that their children will eat and enjoy. This was a notable change in thinking for many of the parents and one that was of relief to them. For example, two of the parents commented, *"My kids had never had pita bread before, but love it and ask for it each day. I made the lemon and current pikelets for the first time and they were demolished"! (parent seven)* and *"I don't like tuna so I have never given it to my kids. However, after the menu planner ideas my kids love tuna. I wish my mother had introduced it to me at a young age as it is so healthy" (parent nine)*. It is clear that food habits introduced at an early age will often follow through into adulthood. It is also clear that education is needed to assist families to realise healthy food preparation is possible at meal times. In relation to this, it is important to highlight that the 'Lunch Right' resource was introduced with support and the 'intervention' study conducted in a manner that encouraged the development of a learning community.

With such a lot of attention being focused on childhood overweight and obesity in the literature and through the media it is a wonder there are not more interventions to assist parents with this difficult topic and situation. As the findings of the 'Lunch Right' intervention indicate, parents are willing to embrace resources that will assist them to provide healthy lunches for their children. One parent commented that they would like in addition to 'Lunch Right', a 'Breakfast Right' and 'Dinner Right' for their family!

Not surprisingly education for healthy eating has been identified as a need by parents in this study and by others (Swinburn and Egger, 2002). This does not mean that the families in the study had a 'bad' diet only that they were interested in further nutrition and food menu ideas. Interventions to help families change their dietary or physical activity habits need to be community based and easily accessible. Interventions such as 'Lunch Right' that are behaviourally orientated rather than aimed at fact transmission, and that promote parental self-awareness, are preferred by parents (Hart, Herriot, Bishop and Truby, 2003). Campbell and Crawford (2001) advocated the empowerment of parents to tackle children's nutrition issues as an important target for future education programs. In the phase three intervention parents were very clearly empowered to make new choices for and with their children. The 'Lunch Right' intervention enabled parents to 'use' food again and to be creative themselves, for example one parent commented: *"I found the menu planner easier than I thought I would, and very handy for children who come over for snacks after school. I made popcorn, rather than cheese dippers that I previously would have served. The children loved it as they were involved in making the popcorn too" (parent 10)*. All parents made use of the planner and were able to find nutritious foods their children enjoyed—and even loved.

The perception surrounding ease of preparation of fruit and vegetables is also particularly relevant as many parents also have negative views surrounding this. Many parents do not know what to do with healthier foods however, in Cohen's (2000) study, parents commented that: "Things look so good in the store, so firm and green, but I never know what to do when I get home". The access to simple and clear menu planners particularly for serving nutritious food to children may assist parents in this issue. Cohen's (2000) study identified that parents consider fruit and vegetables to be expensive, seasonal and therefore not readily available, not 'packaged' and therefore convenient to eat and not able to be stored for long periods of time.

Education within schools and the community can work to overcome these perceptions and assist parents with their food preparation skills. More importantly, education surrounding the perception that pre-packaged and fast foods are cheaper, simpler to prepare and more likely to be eaten needs to be challenged and new understandings nurtured and promoted.

CHAPTER EIGHT

CONCLUSION

This portfolio has revealed and critically engaged with the array of discourses relating to 'healthy eating' for children and varied conceptualisations of what constitutes 'health eating' for children in western culture. Literature and research addressing the ways in which particular conceptualisations are reaffirmed, or in contrast, may be challenged, has been reported. The picture developed through this portfolio is that trends in dietary intake amongst children and western families, have changed markedly and that this has been due to a multitude of factors. It has highlighted the role that globalisation, changes in adult and youth cultures, lifestyles, and food marketing play in shaping perceptions and understandings about healthy eating. The dramatic changes in the number of meals eaten away from home, the increase in consumption of soft drinks, pre-packaged foods and fast foods, have presented families with an array of new issues to consider in relation to food preparation and meal times.

The direction to take in these extremely consumer and consumption focused times is undoubtedly a subject of controversy. Food advertising is shaping western cultures understandings of food, healthy eating, and contradicting nutritional guidelines, and is aggressively targeted towards children as consumers and future brand loyalists. To combat the rapid dissemination of messages from food advertisers, government policy intervention seems essential. An example of such intervention is the legislative ban on cigarette advertising, and while such a ban is not being suggested here, a form of regulation along similar lines may deliver results. Western Australian policy surrounding the sale, availability and marketing of 'fast food' falls short of consumer's needs from a health perspective. Television advertising constraints are arguably inadequate, as they do not include the much needed 'black out' of high fat, high sugar and high salt food product advertising during children's viewing times. The United Kingdom has demonstrated some innovative strategies by banning 'junk food' advertising during children's television viewing times and in government action as a response to Jamie Oliver's, 'Jamie's School Dinners' campaign - an illustration of what can be achieved in and through the power of the media. Through the television program the celebrity chef has successfully pressured the

Blair Government into spending millions of pounds to try to curb the amount of 'junk food' available in British schools (Wilson, 2005).

Western Australia also lacks policies regarding the type of food that may be served to children in school canteens. Meanwhile, the prevalence and careful placement of fast food outlets in shopping centres, on many street corners in local communities, continues unchecked, as do promotional fast food days in schools – for example 'Cheeseburger Days'. Policies that have attempted to educate and inform consumers include the requirement for all packaged foods to have labels including ingredient lists and nutrition panels. This is a positive strategy but, food manufacturers have cleverly combated this by labelling foods as, 'low fat', 'fat free', 'no added sugar', 'low joule', 'diet' and 'lite' to entice consumers to purchase these brands which may still be extremely high in carbohydrates, fat and kilojoules.

In the absence of action by government, we may well look to schools and parents to 'show the way' and educate children about healthy food choices. Schools have attempted to develop and provide nutritional education within the curriculum and in the case of Western Australia have comprehensive learning outcomes. Yet, what happens when children leave the learning environment of the classroom and walk to the school canteen, check their lunch box for food or that of their peers? What consumption patterns and preferences are legitimated, reaffirmed or deemed unusual/unacceptable at these times – and on journeys to and from school? The unwritten curriculum' in schools may well indicate that food that matches with nutritional recommendations is neither realistic nor socially acceptable. Relatively few school canteens appear to be leading the way with nutritious food provision for children. High fat, high sugar and high salt foods including soft drinks are instead likely to be available to many children.

Not for profit associations such as the Western Australian School Canteen Association[9] work with schools to encourage them to provide and promote healthier food options for children, but school canteens are not obliged to do this and parents are seemingly 'out of

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[9] For further information www.waschoolcanteens.org.au

the loop' of many educational initiatives. Certainly, there is no guarantee that parents share the knowledge or views being promoted via the formal curriculum.

With all of the messages surrounding food and the widespread availability of fast and convenient food it is little wonder that children's' eating and health is a matter of political and public concern, locally, nationally and internationally.

Insights from the Case Study

The case study presented in this portfolio enabled the exploration of healthy eating and food choices amongst children from teacher and parent perspectives. There was overwhelmingly agreement amongst teachers that there were overweight children in their school, this was perceived by the teachers as having a negative impact on those children's lives. Teachers also need to be aware of dangers of messages about overweight, body image and eating disorders considering the impact this also has on children. Teachers blamed the lack of parental concern and supervision over food and the proximity of fast food outlets rather than the school curriculum for children's situations. They felt that the school was supporting children's nutritional behaviour, as they had a strong nutritional policy, thorough nutrition education for students and a healthy canteen policy. Teachers viewed parents as the main culprits for children's consumption of 'junk/fast food'. Parents in the case study at least to some extent, acknowledged their role in the trend and confirmed that convenience, ease of preparation, transportability of lunches to school and confirmation that children will actually eat the foods provided were their key considerations in providing lunches and snacks. It was not until the 'Lunch Right' intervention in phase three that parents realised that with a little guidance they could provide healthy nutritious lunches and snacks that children enjoyed. The educational intervention demonstrated that 'fast' can be 'healthy' and furthermore, appealing to children.

It is clear that with specific interventions, policy and strategies designed to embrace the complexity of the issue of healthy eating for children, positive results can be achieved. A multitude of strategies is undoubtedly required and perhaps the most important thing is that they are consistent and interlinked. Strategies that combine and include the promotion of healthy eating amongst children within and from outside of schools, improved school

canteen policy, involving parents in school health policies, utilising the health promoting schools framework, working with and targeting multinational corporations, involving policy makers, and that thereby develop multilevel interventions are what is needed – challenging as the prospect may be. Such strategies will have the capacity to foster the development of a local network of community members linked to a learning community that reflects shared interest in and concerns for children's health and nutrition. Figure 16 provides a model of the multi-perspective conceptualisation of healthy eating for children, highlighting the linkages and overlap in the issues shaping understanding and behaviours. A key recommendation arising from the portfolio study is that future healthy eating and nutrition programs for children and families adopt a holistic, integrated model and approach in planning and program development work. This includes utilising the ideals of the health promoting schools framework and including parents and the broader community in healthy eating strategies and the prevention of overweight and obesity for children.

In addition to a health promoting schools approach a health promoting 'cities' approach is also needed and requires further public and political discussion and investigation. It is not enough to ask schools to take responsibility for the complex nature of food and nutrition particularly with the global context of fast food and prevalence of high fat, high sugar and high salt food available in our shops. Health agencies, tertiary institutions, government agencies, local government, not-for-profit organisations, community groups and the media need also need to take a holistic approach to healthy eating for children and the community. Consideration needs to be given to what the future will hold if health is not put higher on political agendas and addressed from a preventative view point rather than tertiary.

Curriculum

- Informal & unwritten curriculum
- Duty of care in schools
- School/home connections & education
- Children's eating patterns
- Barrie~   ·hy eating
- T~   ~ of healthy
                 ·on and

Healthy Eating

Globalisation

- Globalisation of food
- Globalisation of food cultures
- Commercial interests and marketing
- Advertising
- Health food campaigns
- Kids as consumers
- Schools as global targets

Policy

- Labelling of foods
- Legislation around advertising
- Advertising in schools
- School canteen menus
- Childhood nutrition policies
- Holistic health promoting interventions

Figure 16. Multi-perspective conceptualisation of healthy eating for children

This diagram of connectedness can also be applied to and illustrated via the case study presented in this portfolio. The key components of globalisation, policy and curriculum can be targeted to local communities with local needs. As explained in the case study a number of key elements were combined to ensure teachers, parents and children were informed, educated and involved in the 'Lunch Right' intervention (Figure 17).
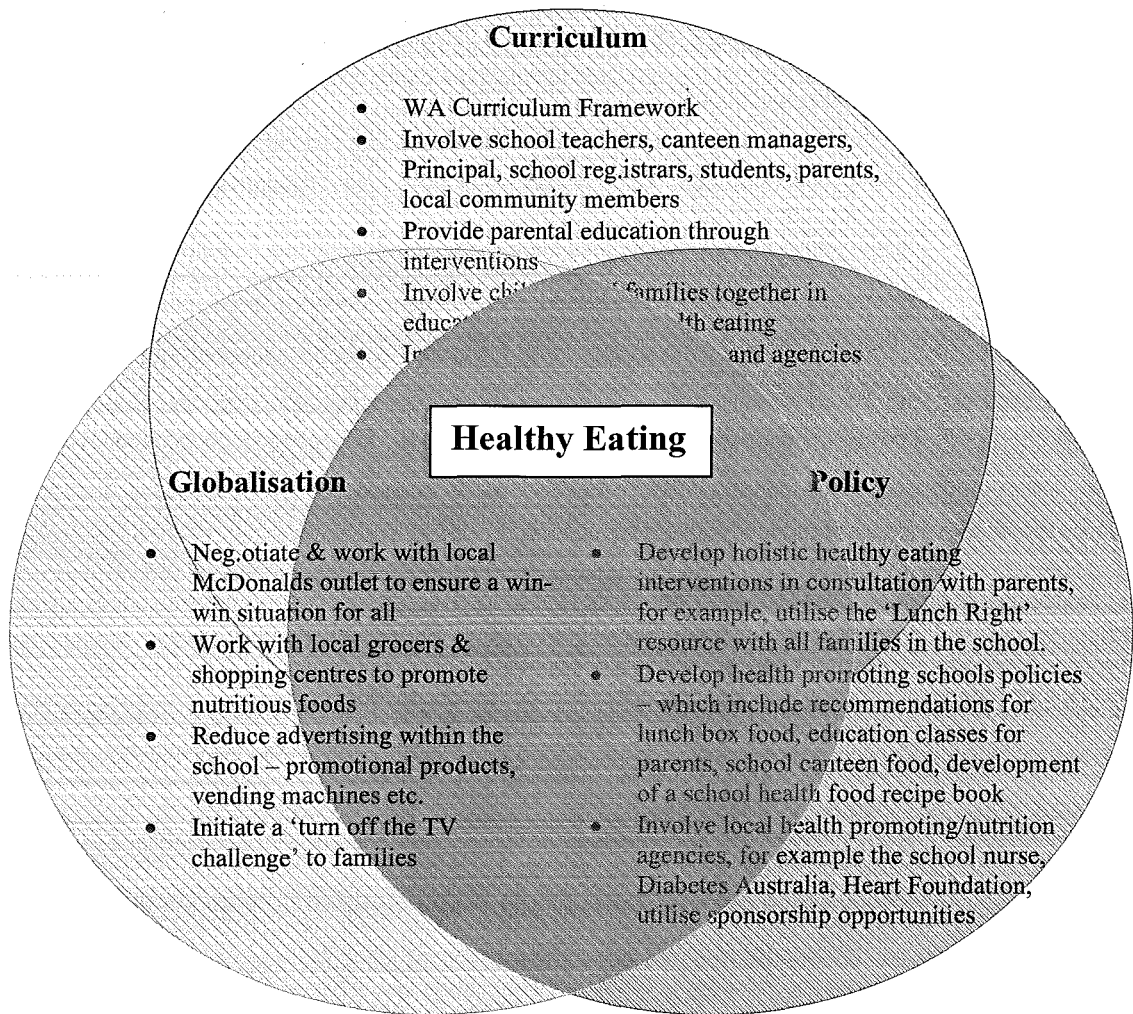
Figure 17. Multi-perspective conceptualisation for the case study school and community

Utilising the diagram partnerships can be developed for the local area to address local needs. Specific agencies and individuals relevant to the case study may include:

- The case study school Principal;
- Other local school Principal's;
- Teachers;
- Parents;
- Students;

- Department of health – Population Health Program;
- Department of Education and Training;
- Department of Community Development;
- Mental health agencies;
- Local government;
- McDonalds;
- Other fast food outlets;
- Canteen manager; and
- Local shopping centres.

Locally coordinated and controlled partnerships will serve to identify issues specific to the community and involve local people in suggesting and actioning local solutions. In the case of the case study school, strategies that may be developed with direction from the local partnership group may include:

- Involvement of parents in school health education;
- School nurses conducting information sessions on healthy eating for children;
- The local council holding a local physical activity fun day;
- McDonalds only offering promotional items for 'health choice' foods;
- The local shopping centre offering cheaper fruit and vegetables on certain days;
- The local shopping centre inviting students and parent in to the store to compare prices of manufactured and natural foods;
- The canteen manager only offering '5 star' star choice foods;
- The Department of Education and Training and the Department of Community Development sponsoring healthy food education and days for the school; and
- Local schools developing school health policies for the local area.

This portfolio has demonstrated the contemporary relevance of healthy eating for children – and specifically, provision of healthy lunches, as a focus for research and collective action within and beyond schools. As a final exercise to this portfolio a glance at 'google' Australia (www.google.com.au) with the search of school lunches, shows a list of

companies, agencies and organisations providing information and ideas of what parents should be putting in their children's lunch box. For example; 'Back to school lunches' (BHG, 2005), '91 school lunches that help you think outside the box' (Victorian Government, 2005); and 'A quick lesson in school lunches' (Woolworths, 2005). This in itself is positive as it indicates the demand, need and importance of nutritional information for children's food consumption. It also indicates that the notion of nutritional food for children is one that is marketable and many of the website suggestions are from food manufacturers and corporations. It will be interesting to monitor how far 'junk food' advertising will need to modify itself to continue to become 'health food' advertising in the future. This portfolio has discussed and problematised healthy eating for children, highlighting that it is a complex issue and needs to be addressed, considered and conceptualised from a multitude of perspectives. It has demonstrated that a strategic layered approach to promotion and provision in nutritionally sound foods for children is necessary and required.

On a personal and professional note I would like to recognise that there is a need for professional development and research policy to be developed and this should be conducted locally with local communities and schools involved. Funding should be directed towards education in health promotion areas to highlight the importance of healthy eating for children and suitable holistic resources developed. The 'Lunch Right' intervention presented in this portfolio is important but this study suggests that if developed in isolation, the results arising from such intervention would be limited. Interventions need to be developed in an education learning context and need to be implemented locally but included globally.

Concluding Statement: Personal and Professional Advancement

Working on this portfolio for over three years I have seen considerable changes and strategic developments surrounding healthy eating for children particularly from the multinational fast food corporations. Many now have healthier food choices on their menu and are promoting health in their advertising campaigns. An interesting next step to this portfolio would be to investigate and study the demand their healthier food options are having and if consumers are purchasing a salad rather than a 'Big Mac'. Having said this, it

is highly commendable that multinational fast food corporations are making these changes, but I wonder if it was out of product expansion and good will or recognising the impact high fat, high salt and high sugar foods were having on the community through the food people were consuming in their restaurants – this is worthy of future investigation.

I have also seen a change in myself over the course of this portfolio, through the professional learning my level and ability to conceptualise ideas and proposals has improved. The 'Lunch Right' resource has been awarded Healthway funding and the Physical Education and Activity to Promote Children's Health committee (PEACH) has developed a sub committee addressing healthy eating for parents and children specifically to look at the future of the 'Lunch Right' resource following a presentation I gave to this professional body. In addition, Meerilinga, a not for profit organisation that promotes family wellbeing has initiated a working group to develop workshops and learning activities for families regarding healthy lunch box food for children and has incorporated the 'Lunch Right' resource as part of the education program. Without the opportunity to undertake this portfolio these results would not have been seen.

Professionally, as a result of the location in which I conducted the research for this portfolio and professional networks developed during its time, I have recently moved to a new workplace following an invitation from a company called Creating Communities. My new position is Research and Strategy Development Manager and involves working with property developers and local communities to ensure new land developments consider the health and wellbeing needs of communities before communities move into new areas – therefore building sustainable and liveable neighbourhoods.

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Appendix A: Letter to School Principal

Department of Health   **Population Health Program**

north metropolitan
health service

30 September 2003

RE: CHILDHOOD OBESITY STUDY

Dear Ms

I am the Population Health Zone Coordinator for the Upper Zone of the North Metropolitan Health Service, and am currently completing a Doctor of Education at Edith Cowan University. As part of my study and I am investigating the impact childhood obesity has on education and the school environment. I would like to invite your school to be part of this research by providing six teacher's perceptions of childhood obesity.

If this were suitable to you, I would like to conduct a ten question interview with six members of your staff, including yourself. I propose to conduct three interviews with two staff members at each interview. For example;

Interview 1: The school Principal and school Registrar
Interview 2: Year 5 and Year 7 teacher.
Interview 3: School canteen manager and physical activity coordinator.

The questions to be asked are intended to act as a schools perception of obesity, and to record awareness of measures taken to prevent this health issue. With your consent this perception may be compiled for publication, at no time however, will the schools name or staff member's names be recorded. You are welcome to utilise this research at its completion for your own use should you choose to do so.

I have received ethics approval from Edith Cowan University, Faculty of Community Services, Education and Social Sciences. Please contact me on ▮▮▮▮▮▮▮ or Email: erica.logan@health.wa.gov.au if you would like to discuss this further. In addition, you may contact Dr Andrew Taggart, an independent contact at Edith Cowan University on 9370 6806.

Yours sincerely

Erica Logan
Population Health Zone Coordinator

Appendix A: Moderators Guide – Healthy Eating in Children Study

IN DEPTH INTERVIEW

Thank you for your time today. As part of my study into childhood obesity I am talking to people in the school about their personal understanding of childhood obesity and what ideas they have about it. I will ask you some questions about the school, your perceptions about student nutrition and fast food consumption. It will take about 15 minutes.

So I can recall your ideas and comments I will record our discussion. This is only for myself and no one else will listen to the tape.

The interview is confidential, you will not be identified or have your name published. The purpose is to find out what you think and know about childhood obesity issues.

1. How many students attend your school?

2. Would you perceive any students in the school to be overweight or obese and what percentage would you estimate that number to be?

3. Would you consider this affects students in any way?

4. In your opinion what factors cause these children to be overweight or obese?

5. Are you aware of any fast food outlets in the district?

6. Does the school have a nutrition policy or consider nutrition needs of students?

7. Are you familiar with the health promoting schools framework? If yes, can you give examples of how this is implemented in the school?

8. What measures are taken in the school curriculum to prevent or address the issue of obesity?

9. What problems if any does the school have implementing the health policy?

10. Has a fast food outlet ever approached the school to work in partnership or to offer special deals or vouchers to the school? If so what was the outcome.

CHILDHOOD OBESITY - CASE STUDY

I _____ have read the information provided with this consent form and any questions I have asked have been answered to my satisfaction.

I agree to participate in the activities associated with this research and understand that I can withdraw consent at any time.

I agree that the research data gathered in this study will be tape-recorded and may be published providing I am not identified in any way.

THANK YOU FOR YOUR PARTICIPATION IN THIS STUDY

Signed: _____

Date: _____

Lunch Right! Project

Linda

You're invited to participate in a special focus group to help select the most suitable recipes to be used in the Lunch Right! Menu Planner

When: Friday, 23rd January 2004

Time: 9.00am – 11.00am

Where: Joondalup Population Health

Morning Tea will be provided

Looking forward to seeing you there. To RSVP, please call Erica on ███████ by Wednesday 14th January

MODERATORS GUIDE

'LUNCH RIGHT' MENU PLANNER - FOCUS GROUP INTERVIEW

Thank you for your time today. As part of my study into childhood obesity and lunch nutrition patterns of children, I am talking to parents about their personal experience with preparation of school lunches and ideas regarding the introduction of a new healthy menu planner for school lunches and snacks. I will ask you some questions about your perceptions about student nutrition and school lunches and snacks. It will take about 15 minutes.

So I can recall your ideas and comments I will record our discussion. This is only for myself and no one else will listen to the tape.

The interview is confidential, you will not be identified or have your name published. The purpose is to find out what you think and know about school lunches, snacks and lunch menu planning.

Focus Group Questions

1. Can you tell me who in your family prepares school lunches?
2. Thinking of yourself, at what time do you prefer to pack your child's school lunch?
3. What foods do your children prefer to have packed in their school lunches?
4. What factors for you, determine the foods that are packed into your child's school lunch.
5. What determines whether your child will order their lunch at the school canteen?
6. How often would your child/children buy their lunch?

I would now like to discuss the 'Lunch Right' menu planner.

7. Would it be of value to you as a parent to have nutritional information at the end of each recipe in the menu planner? e.g. fat content, kilojoule value. Why?
8. Each recipe in the menu planner states the number of serves that it makes. Wherever possible the recipe will make 1 or 2 serves. In your opinion, how many serves should the recipe in the planner cater for?
9. The 'Lunch Right' project requires participants to follow the planner for 4 weeks. Do you perceive that you would follow a plan such as the menu planner for a period of 4 weeks? Why/why not.
10. The 'Lunch Right' project is directed at primary school children. Consider this situation: you have a child (or children) in primary school and a child in high school and you are participating in the 'Lunch Right' project. How do you perceive this situation to work? Would you make the same lunch for all the

11. The front of the menu planner includes instructions and nutritional information such as label reading, dietary guidelines, and serving size examples from each food group. Of this information, what do you consider to be most useful?

Nibbler's Salad
Serves 1

½ small stick celery
1 small carrot
25g low-fat cheese
4 small cherry tomatoes
3 canned apricot halves (in natural juice), drained
1 slice canned pineapple (in natural juice), drained and halved
4 strawberries
1 slice wholemeal bread
½ teaspoon polyunsaturated margarine

Cut celery, carrot and cheese into sticks. Arrange in lunchbox with cherry tomatoes, apricots, pineapple and strawberries.
Spread bread with margarine. Wrap separately to keep fresh.

1.   **In your opinion, how easy to prepare do you consider this recipe to be?**

   ☐ Very easy   ☐ Easy   ☐ Not very easy ☐ Too hard

2.   **Would you make this recipe for your children's lunch?**

   ☐ Yes   ☐ No   ☐ Maybe

Why?_____

3.   **In your opinion should this recipe be included in the Lunch Right menu planner?**

   ☐ Yes   ☐ No   ☐ Maybe

Comments/other suggestions _____

Other Lunch Recipes That Were Suggested Include:

Fruity Cheese Salad
Grilled Cheese Fingers
Cheese Roll Arounds
Pita Bread Roll
Nutty Avocado Spread
Veg. Out Sandwich

Beef and Salad Baguette
Silverside, Relish and Salad Bagel
Bacon & Tuna Balls
Zucchini & Carrot Slice
Tuna & Avocado Melts
Cold Kebabs

Potato and Tuna Salad
Hash Brown Omelette
Potato Pikelets
Cheddeckers
Avocado and Chicken Deluxe
Honey Baked Chicken

Curried Apple & Nut Sandwich
Potato with Cheese and Chive Filling
Chick Pea Salad
Tuna Burger
Easy Vegie Slice
Vitality Banana Sandwich

Stuffed Potatoes
Pinwheel Sandwiches
Ham and egg wrap
Crack-an-Egg Pies
Roast Vegetables
Peanut, Carrot and Sultana Roll
Celery and Cheese Filled Bap

Tuna Lettuce Cups
Tuna Slice
Tangy Chickpea Dip

'Lunch Right' Project   Snack Recipes
                           FOCUS GROUP

Microwave Popcorn
Serves 1-2
2 tablespoons popping corn
¼ teaspoon oil
¼ teaspoon lemon pepper (optional)

Put corn, oil and pepper in medium microwave-safe bowl; stir together. Cover bowl with
plastic wrap. Pierce a couple of holes in the plastic.
Cook popcorn on high for 2-3 minutes, until the popping sounds stop. Take bowl out of the
microwave and stand for 1 minute before eating the popcorn. Allow to cool completely
before packing into a lunchbox.

1. **In your opinion, how easy to prepare do you consider this recipe to be?**

☐ Very easy   ☐ Easy   ☐ Not very easy ☐ Too hard

Would you make this recipe as a snack for your child?

☐ Yes   ☐ No   ☐ Maybe

Why?_____

In your opinion should this recipe be included in the Lunch Right menu planner?

☐ Yes   ☐ No   ☐ Maybe

Comments/suggestions_____

Other Snack Recipes That Were Suggested Include:

Fruit Kebabs	Fruit and Nut Popcorn	Cheesey Corn Thins
Yoghurt & Nut Break	Yoghurt Dip 'N' Fruit	Banana Nut Boost
Quick banana rice custard	Fruit Chunks with Honey Yoghurt	Celery Boats
Pita Parmesan Crisps	Corn on the Cob	Currant & Lemon Pikelets
Chutney Roll-around	Date & Apricot Muesli Squares	Snack Bix
Mexican Siesta	Savoury Yoghurt Dip	Apple Rock Cakes
Fruit Drops	Sweet Potato Chips	Moon Shuttle
Savoury Scones	Pretzel Pick-me-up	Citrus Splash

Appendix C: Lunch Right Letter to School Principal

Department of
Health

Population Health Program

*north metropolitan
health service*

6 February 2004

RE: LUNCH RIGHT FOR THE EARLY YEARS

Dear

One of the key results, following the completion of the 'childhood obesity' case study with teachers in your school, indicated that parents might benefit from suggestions and assistance with menu planning for healthy school lunches.

Since this finding, two focus groups have been completed, one with parents who are packing school lunches, and one with Community Nurses. The focus groups sought to determine if this is an identified need within these two groups, and if assistance were to be given with nutritious lunch menu planning, at what age would this intervention be best suited. Results confirmed that menu planning assistance is a priority and that the most suitable age to assist parents would be in pre-primary.

To develop a nutritious menu planner for lunches a series of tests needs to be carried out to ensure the menu planner is convenient, cost effective, and suitable to pre-primary parents.

Your school is invited to participate in a pilot study to test the 'Lunch Right' menu planner and we are seeking 10 parents of pre-primary school children to participate.

The 'Lunch Right' menu planner includes twenty nutritious school lunch options, as well as healthy snacks. The duration of this pilot project will be four weeks in which participating parents will be asked to follow the menu planner as much as possible. Parents who join the study will be provided with the menu planner, a free Décor lunch box with drink bottle, and a daily record sheet. Parents will be asked to complete a short pre and post questionnaire, this will be sent back to us through a reply paid envelope. Parents will be supported during the pilot by weekly contact, either by phone or email.

Following the comments and suggestions from parents the 'Lunch Right' menu planner will be modified to meet their needs and then produced for all parents as a resource for nutritious lunch planning.

Your schools involvement in this process is greatly appreciated. Please contact me on: ▮▮▮▮▮▮ for further information.

With warm regards

Erica Logan
Coordinator of Health Promotion

LUNCH RIGHT MENU PLANNER

The 'Lunch Right' menu planner includes twenty nutritious school lunch options, as well as healthy snacks.

The duration of this pilot project will be four weeks in which participating parents will be asked to follow the menu planner as much as possible.

Parents who join the study will be provided with the menu planner, a free Décor lunch box with drink bottle, and a daily record sheet.

Parents will be asked to complete a short pre and post questionnaire, this will be sent back to us through a reply paid envelope.

Parents will be supported during the pilot by weekly contact, either by phone or email.

Following the comments and suggestions from parents the 'Lunch Right' menu planner will be modified to meet their needs and then produced for all parents as a resource for nutritious lunch planning.

Participant Responsibilities

- Receive the 'Lunch Right' menu planner;
- Complete the pre-questionnaire;
- Follow as often as suitably possible the menu planner for four weeks – until the end of term 1;
- Fill out the daily record to list the lunch and snack eaten by child;
- Complete the final questionnaire to determine opinion of the menu planner; and
- Send the daily record sheet and the questionnaire back in the reply paid envelope.

Parents are invited to keep the 'Lunch Right' menu planner and the free lunch box and drink bottle.

Department of
Health

north metropolitan
health service

Population Health Program

Crunch the Croc

LUNCH RIGHT FOR THE EARLY YEARS

FREE MENU PLANNER FOR SCHOOL LUNCHES AND SNACKS

FREE DÉCOR LUNCH BOX AND DRINK BOTTLE

A new lunch menu planner has been developed for parents of children in pre-primary. The menu planner provides healthy, cost effective and quick suggestions for lunches and snacks for your child. At this stage it is in draft form and we are keen to find out what parents think about this menu planner and if it is of use for them. Following suggestions from parents we will then produce this planner for parents in this area.

The 'Lunch Right' menu planner includes twenty nutritious school lunch options, as well as healthy snacks. Testing of the planner will be for four weeks in which participating parents will be asked to follow the menu planner as much as possible. Parents who join the study will be provided with the menu planner, a free Décor lunch box with drink bottle, and a daily record sheet. Parents will be asked to complete a short pre and post questionnaire, this will be sent back to us through a reply paid envelope. Parents will be supported during the pilot by weekly contact, either by phone or email.

We would like to invite you to be part of the testing of the menu planner. You will be provided with the planner and a free lunch box and over a four-week period we will ask you to record the times you use the planner. At the end we will ask you to complete a questionnaire to let us know if you found the planner valuable and easy to use.

A short meeting will be held at 'name of school' in the Technology & Enterprise (T & E) room on Wednesday the 10th of March at 8:15am. At this time we will provide you with the 'Lunch Right' menu planner, the lunch box, and the materials of this project. The start of the project will be on Monday the 15th of March.

Your involvement in this process is greatly appreciated. Please contact Erica Logan on: ████████ for further information.

With warm regards

Erica Logan
Coordinator of Health Promotion

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LUNCH RIGHT REGISTRATION FORM

Yes, I would like to be a part of the Lunch Right project.

I agree to complete the pre and post questionnaire and the food record. I recognize that I will be able to keep the Lunch Right menu planner and the Décor lunch box and drink bottle.

I am happy to attend the information meeting to receive my planner and lunch box on Wednesday the 10th of March, 8:15am at 'name of school', Technology & Enterprise room (near café).

Name:_____

Address:_____

Phone:_____

Email:_____

We will contact you once a week to see how the menu planner is working for you. Would a phone call or email be most convenient?
(Please circle)

Phone   or   Email

What would be the most suitable time to contact you?
(Please circle)

Morning   Middle of the Day   Afternoon   Evening

Specific Time:_____

Thank you

Please return this page in the replied paid envelope

LUNCH RIGHT PROJECT
Pre-Test Survey

Throughout the questionnaire, we refer to a 'packed school lunch'. We have defined a 'packed school lunch' as *"all foods taken from the home to school to be consumed throughout the course of the school day"*

1. **How many times per week does your child take a home-packed lunch to school?**
(Please circle one number only)

5 times/week	3-4 times/week	2-3 times/week	1-2 times/week	< 1 time/week
1	2	3	4	5

2. **How many times per week does your child order his/her lunch?**
(Please circle one number only)

5 times/week	4 times/week	3 times/week	2 times/week	1 time/week	<1 time/week
1	2	3	4	5	6

3. **Who in the family packs your child's school lunch most of the time?**
(Please circle one number only)

a	mother/stepmother	1
b	father/stepfather	2
c	brother/sister	3
d	grandparent	4
e	other	5

Please specify

4. **If you have other children at school, is the same lunch packed for all of them?**
(Please circle one number only)

Yes	1
No, separate lunches	2
No, don't pack for others	3

5. **Which of the following foods are regularly included in your child's packed lunch, either for recess or lunch time.**
(Please circle as many as apply)

a	fresh fruit	1	n	yoghurt	1
b	sandwich/roll	1	o	juice	1
c	sweet biscuits	1	p	savoury biscuits	1
d	leftovers	1	q	home-made cakes/ biscuits/muffins	1
e	lollies	1	r	salad/raw veg.	1
f	chocolate	1	s	packets of potato crisps/Twisties etc	1
g	soft drink	1	t	milk drinks	1
h	dried fruit	1	u	nuts	1
i	muesli bars	1	v	commercially made cakes	1
j	fruit bars (ie Rollups)	1	w	pre-packaged dip & crackers (ie Le Snack)	1
k	cordial	1	x	cheese	1
l	water	1	y	rice/pasta/noodles	1
m	tinned fruit	1	z	other	1

6. **If sandwiches or rolls are provided for your child's packed lunch, what sort of fillings would usually be in them?** *(Please circle as many as apply)*

a	deli meat (ham, chicken, beef)	1
b	cold meat – chicken, beef, etc. (home-cooked)	1
c	polony/salami/sausage	1
d	tuna	1
e	cheese	1
f	egg	1
g	margarine/butter	1
h	vegemite/marmite/promite	1
i	peanut butter	1
j	honey/jam	1
k	nutella	1
l	salad	1
m	avocado	1
n	hommus/relish/chutney	1
o	other	1

7. **Please describe a typical home-packed school lunch that is provided for your child?**

_____

_____

_____

_____

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8.   **Which of the following factors influence what is packed into your child's school lunch box?** *(Please circle the three most important to you)*

a	what's in the fridge	1
b	budget/cost	1
c	child nutrition	1
d	child's preference	1
e	the weather	1
f	pressure from child	1
g	products that are marketed for children	1
h	time available when packing the lunch	1
i	convenience	1
j	what's on special at the supermarket	1
k	other	1

9.   **Where do you get your ideas for school lunches?**
      (Please circle as many as apply)

a	your parents/what you had as a child	1
b	general recipe books	1
c	recipe books specifically for children's food	1
d	magazines	1
e	TV	1
f	the internet	1
g	from the school	1
h	child's requests	1
i	other parents/friends	1
j	the supermarket	1
k	other	1

Your Demographics – we would like to know a little bit about you.

10.   Which category best represents your age?

20 – 29 years	30 – 39 years	40 – 49 years	> 50 years
1	2	3	4

11.   Do you work outside the home?

Yes	1
No	2

If yes, go to next question.

11a. Do you work:

Full time	Part time	Casual
1	2	3

Thank you for taking the time to complete this questionnaire.

Your participation in this project is appreciated.

LUNCH RIGHT PROJECT
Post-Test Survey

> Throughout the questionnaire, we refer to a 'packed school lunch'. We have defined a 'packed school lunch' as *"all foods taken from the home to school to be consumed throughout the course of the school day"*

1. In the last 4 weeks, how many times per week did your child take a home packed lunch to school?

    (Please circle one number only)

5 times/week	3-4 times/week	2-3 times/week	1-2 times/week	<1 time/week
1	2	3	4	5

2. **In the last 4 weeks, how many times per week did your child order his/her lunch?**
    (Please circle one number only)

5 times/week	4 times/week	3 times/week	2 times/week	1 time/week	<1 time/week
1	2	3	4	5	6

3. **In the last 4 weeks, who in the family packed your child's school lunch most of the time?**
    (Please circle one number only)

a	mother/stepmother	1
b	father/stepfather	2
c	brother/sister	3
d	grandparent	4
e	other	5

4. **During the last 4 weeks while participating in the Lunch Right project, did you pack school lunches for any other children besides your pre-primary school child?**
(Please circle one number only)

Yes	1
No	2

4a. **When packing school-lunches for your other children in the last 4 weeks, did you use the Lunch Right menu planner for their lunches as well?**
(Please circle one number only)

Comments
_____

Yes	1
No, packed different lunches	2

5. Which of the following foods are regularly included in your child's packed lunch, either for recess or lunch time.
(Please circle as many as apply)

a	fresh fruit	1	n	yoghurt	1
b	sandwich/roll	1	o	juice	1
c	sweet biscuits	1	p	savoury biscuits	1
d	leftovers	1	q	home-made cakes/ biscuits/muffins	1
e	lollies	1	r	salad/raw veg.	1
f	chocolate	1	s	packets of potato crisps/Twisties etc	1
g	soft drink	1	t	milk drinks	1
h	dried fruit	1	u	nuts	1
i	muesli bars	1	v	commercially made cakes	1
j	fruit bars (ie Rollups)	1	w	pre-packaged dip & crackers (ie Le Snack)	1
k	cordial	1	x	cheese	1
l	water	1	y	rice/pasta/noodles	1
m	tinned fruit	1	z	other	1

6. **During the past 4 weeks, if sandwiches or rolls were provided for your child's packed lunch, what sort of fillings would usually have been in them?**
(Please circle as many as apply)

a	meat (ham, chicken, beef) (processed)	1
b	cold meat – chicken, beef, etc. (home-cooked)	1
c	polony/salami/sausage	1
d	tuna	1
e	cheese	1
f	egg	1
g	margarine/butter	1
h	vegemite/marmite/promite	1
i	peanut butter	1
j	honey/jam	1
k	nutella	1
l	salad	1
m	avocado	1
n	hommus/relish/chutney	1
o	other	1

7. **Please describe a typical home-packed school lunch that was provided for you Child in the last 4 weeks?**

_____

_____

_____

8. **Which of the following factors influence what is packed into your child's school lunch box?** *(Please circle the three most important to you)*

a	what's in the fridge	1
b	budget/cost	1
c	child nutrition	1
d	child's preference	1
e	the weather	1
f	pressure from child	1
g	products that are marketed for children	1
h	time available when packing the lunch	1
i	convenience	1
j	what's on special at the supermarket	1
k	other	1

9. **Over the last 4 weeks, where have you got your ideas for school lunches?**
   (Please circle as many as apply)

a	your parents/what you had as a child	1
b	general recipe books	1
c	recipe books specifically for children's food	1
d	magazines	1
e	TV	1
f	the internet	1
g	from the school	1
h	child's requests	1
i	other parents/friends	1
j	the supermarket	1
k	Lunch Right Menu Planner	1
l	other	1

The following questions specifically relate to the 'Lunch Right' Menu Planner.

10. **Was the menu planner of a suitable size?**

Yes	1
No	2
Unsure	3

11. **In your opinion, were there enough menu choices?**

Yes	1
No	2
Unsure	3

12. **Were the photos of each recipe of benefit to you?**

Yes	1
No	2
Unsure	3

13. **Was the information at the front and back of the menu planner of value to you?**

Yes	1
No	2
Unsure	3

14. **Which were your child's three favourite lunches from the Lunch Right menu planner?** *(Please circle only the three items that apply)*

a	Crunch the Croc Roll
b	Pinwheel Sandwiches
c	Beef & Salad Baguette
d	Under the Sea
e	Hash Brown Omelette
f	Ham & Egg Surprise
g	Give me Gherkin
h	Ham & Corn Combo
i	Avocado Chicken Deluxe
j	Potato Pikelets
k	Ham Pita Bread Roll
l	Creamy Ham Roll
m	Crunch's Veg. Out Sandwich
n	Peanut Carrot & Sultana Roll
o	Pizza Italiano
p	Cheese Roll Arounds
q	Crunch's Chicken Triangles
r	Silverside Relish & Salad Sandwich
s	Pumpkin Pizazz
t	Easy Peasy Vegy Quiche

15. **Which were your child's three favourite snacks from the Lunch Right menu planner?** *(Please circle only the three items that apply)*

a	Crunch the Croc Celery Boats
b	Microwave Popcorn
c	Yoghurt Dip 'N' Fruit
d	Cheesey Corn Thins
e	Current & Lemon Pikelets
f	Corn on the Cob
g	Mexican Siesta
h	Grilled Cheese Fingers
i	Chutney Roll Around
j	Apple Croc Cakes
k	Moon Shuttle
l	Yoghurt & Nut Break
m	Seasonal Fruit Salad
n	Snack Bix
o	Pretzel Pick-me-up
p	Fruit Drops
q	Savoury Scones
r	Date & Apricot Muesli Squares
s	Sweet Potato Chips
t	Pita Parmesan Crisps

16. **Are there any lunch recipes in the Lunch Right Menu planner that, in your opinion should be removed?**

No, they're all fine	1
Yes	2
Unsure	3

16a. If yes, please indicate the lunch items you would not recommend in the Lunch Right Menu Planner.

(Please circle as many items that apply)

a	Crunch the Croc Roll
b	Pinwheel Sandwiches
c	Beef & Salad Baguette
d	Under the Sea
e	Hash Brown Omelette
f	Ham & Egg Surprise
g	Give me Gherkin
h	Ham & Corn Combo
i	Avocado Chicken Deluxe
j	Potato Pikelets
k	Ham Pita Bread Roll
l	Creamy Ham Roll
m	Crunch's Veg. Out Sandwich
n	Peanut Carrot & Sultana Roll
o	Pizza Italiano
p	Cheese Roll Arounds
q	Crunch's Chicken Triangles
r	Silverside Relish & Salad Sandwich
s	Pumpkin Pizazz
t	Easy Peasy Vegy Quiche

Further Comments

_____
_____
_____
_____
_____

17. Are there any snack recipes in the Lunch Right Menu planner that, in your opinion should be removed?

No, they're all fine	1
Yes	2
Unsure	3

Comments

17a. If yes, please indicate the snack items you would not recommend in the Lunch Right Menu Planner.

(Please circle as many items that apply)

a	Crunch the Croc Celery Boats
b	Microwave Popcorn
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Further Comments

_____

_____

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18. **Did you find the menu planner easy to use?**

Yes	1
No	2

19. **What changes, if any would you recommend to the planner? Please list.**

_____

_____

_____

_____

_____

Your Demographics – we would like to know a little bit about you.

20. **Which category best represents your age?**

20 – 29 years	30 – 39 years	40 – 49 years	> 50 years
1	2	3	4

21. **Do you work outside the home?**

Yes	1
No	2

If yes, go to next question.

21a. Do you work:

Full time	Part time	Casual
1	2	3

Thank you for taking the time to complete this questionnaire.

Your participation in this project is appreciated.

Lunch Right Daily Record Sheet

During your participation in the Lunch Right project, for each day please record the snack or lunch recipe that you have used. On days that you don't follow the menu planner, please indicated this with an X. *See example.*

Example

	Mon	Tues	Wed	Thurs	Fri
Snack	Corn Cob	Fruit Drops	Pita Crisps	X	X
Lunch	Ham & Egg Surprise	Crunch Croc Roll	Under the Sea	X	Mexican Siesta

Week 1

	Monday	Tuesday	Wednesday	Thursday	Friday
Snack					
Lunch					

Week 2

	Monday	Tuesday	Wednesday	Thursday	Friday
Snack					
Lunch					

Week 3

	Monday	Tuesday	Wednesday	Thursday	Friday
Snack					
Lunch					

Week 4

	Monday	Tuesday	Wednesday	Thursday	Friday
Snack					
Lunch					

Back to school lunch ideas

Our fast and easy lunch-box ideas will satisfy any food-fussy school kid. You might even get them to help with the preparation!

It's that time of year again. Uniforms, bags, books, pencil cases and school lunches.

If your children don't eat well in the middle of the day, their energy levels drop, affecting their ability to concentrate and learn. A lunch that's fast to prepare, as well as nutritious and something they'll eat, is a daily challenge. Check out our yummy ideas and recipe links below and encourage your kids to do a lot of the prep themselves!

Here's why lunch is so important

▸ A good lunchbox contains at least two serves of bread or cereal, one dairy, one meat (or an alternative meat product) and at least two fruit and/or vegies.

▸ Remember, breads and cereals are an important food group and provide energy for the day. Get your kids used to wholegrain or wholemeal breads and rolls, or even pita bread. Scones, pikelets, raisin bread and fruit buns all come in wholemeal varieties – perfect for recess.

▸ Fruit and vegetables provide vitamins A, C and some B groups and are essential for good health and warding off colds and flus. When it comes to fruit, give your kids some variety to keep it interesting, and don't forget to include some vegies in their lunchbox. Favourite raw crunchy vegetables - cucumber, capsicum, carrot and celery - can be served with a healthy dip.

▸ Milk and milk products are needed for growing bones and are an excellent source of protein. Freeze milk or yoghurt overnight, pop it in the lunchbox, and it will be ready for lunchtime.

▸ Meat and meat alternatives provide protein, iron and zinc – essential for growth and brain development. Cold meats, leftover roasts, rissoles and tinned tuna or salmon are all good choices. For the littlies who scrunch up their noses at meat, try peanut paste, baked beans or egg.

▸ Use polyunsaturated or monounsaturated margarine spreads on bread and remember nuts, fish and cooking oils also provide valuable oils in the diet.

▸ Keep food cool by placing frozen water bottles and fruit juice or a freezer brick next to the food items that should stay cool. Alternatively, pack lunches in an insulated cooler bag.

Appendix D:

Everyone | **Teenagers** **Young adults** **Adults** **Families** **Older adults**

Home > Healthy Eating > Food and nutrients > 91 school lunches that help you think outside the box

Healthy Eating

Dietary advice

■ **Food and nutrients**

Nutrition and illness

What is a healthy weight

Body image

Weight management

Food safety

Healthy recipes

Nutrition quizzes

Active Living

Active Communities

FAQ

Tip Sheets

In your language

91 school lunches that help you think outside the box

If you need to brighten up the kids' lunch boxes with something that's both nutritious and tasty, inspiration is now a lot easier.

There are 91 yummy and inexpensive recipes on the site to provide some inspiration!
Here are a few:

- Bean submarine
- Vegetable slice
- Rice paper rolls
- Ham and zucchini muffins
- Tuna and olive bread
- Orange date loaf
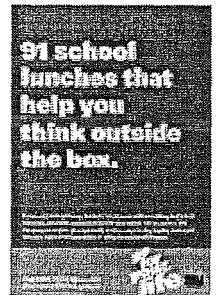
For more ideas search the recipes under 'lunch boxes.'

Further information is linked below:

- Healthy lunch boxes for children
- Healthy eating for kids
- Eating tips for children (5) - primary school

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Victoria
The Place To Be

The Fresh Food People'
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utrition

A Quick Lesson in School Lunches

WHETHER THEY BRING it from home or buy it at the school canteen, children need a healthy lunch that provides energy and nutrients for growth and physical activity. Those who skip lunch have lower levels of concentration in the classroom during the afternoon. The ideal school lunch contains sandwiches, rolls or pita bread with a healthy filling, plus fruit.

Water is usually available at school or you can pack a bottle of frozen water. Fruit juice is suitable also. During growth spurts, children are hungry and may need a larger lunch. The best idea is for them to have more sandwiches and fruit. They can also add dried fruit, nuts (not suitable for younger children), milk, cheese or yoghurt.
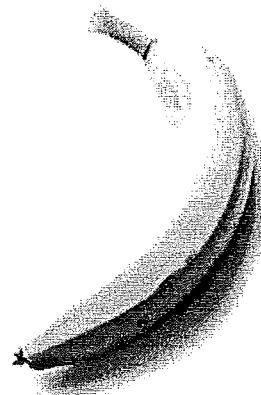
Return to Index
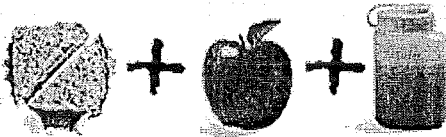
AN A+ FOR VARIETY

SO THAT LUNCHES don't get boring, vary the bread - wholemeal, multigrain, rye, white, kibbled, fibre-enriched loaves - or any other bread is suitable.

Don't forget to include different types of rolls sometimes, or use pita, lavash or flat breads rolled around fillings. You can also use two different types of bread - for example one slice of white, one slice of wholemeal.

In winter, a thermos flask of soup is warming. Again, add some bread and a piece of fruit to make it more substantial.

Vary fruits, using whatever is in season. Apples, oranges, mandarins, bananas, passionfruit and pears travel well. You can also make fruit more interesting by including a small plastic container of any fruits in season.

Return to Index

EXTRAS GET AN E-

IT'S NOT APPROPRIATE to include cakes, pastries, biscuits, sweets, chocolates or fatty snack foods such as crisps in school lunches. Most of these foods don't provide essential nutrients and some can cause dental decay. It's also tempting for children to eat those extras in preference to more nutritious foods.

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With 25 to 30% of Australian school children