Grant schemes as enablers of local action: the example of the Nutrition Fund

A thesis submitted in fulfilment of the requirements for the degree of Master of Public Health

Kirsty Craig

Wellington School of Medicine, University of Otago
2010
Abstract

Poor nutrition and unhealthy weight are major contributors to disease burden in New Zealand. As part of wider government action to address these issues, District Health Boards were funded to administer Nutrition Fund grants to schools and early childhood education services. This thesis examines the implementation of the Nutrition Fund between January 2007 and June 2009 in order to understand the processes that were used, whether government direction was followed, and what benefits projects delivered.

The data sources for the research were largely qualitative. Thematic analysis of interview material with staff from three District Health Boards, and nine schools and early childhood education services provided the main focus for the thesis. In addition, key Ministry of Health and District Health Board documents were examined, and a descriptive statistical analysis was completed using national grant data. The findings of the research show that the Nutrition Fund was implemented within the guidelines provided by central government, and was able to deliver a variety of successful projects in schools and early childhood education services. This was possible due to the development of an effective, multi-layered co-ordination network that was constructed using both formal and informal mechanisms. In this network, District Health Board staff mediated between central government and local communities to construct Nutrition Fund projects that met local needs as well as government requirements.

The research is located within the literatures on health promotion, policy implementation, and evaluation. It contributes to understandings of the processes involved in policy implementation, and illustrates the potential for central government to catalyse local level action through grant schemes. The research supports health promotion in education settings. Further resource investment and curriculum development is recommended in order to maximise this potential.
Acknowledgements

This research would not have been possible without the support I received from a wide range of people. I wish to thank my supervisors Geoff Fougere and George Thomson for the invaluable direction and advice they provided throughout this research. Thanks also to the staff in schools and early childhood education services who shared their experiences in this research. I am particularly grateful to the District Health Board staff who, despite facing uncertainty with their roles, gave so willingly of their time. To friends and colleagues from the HEHA team at the Ministry of Health, your advice and encouragement over the past two years was much appreciated. Finally, to Jacinta, without your unwavering support the combination of study and work would not have been possible.

Disclaimer
The views presented in this thesis are my own and do not necessarily represent the views of the Ministry of Health.
# Table of Contents

Abstract .......................................................................................................................... ii
Acknowledgements ......................................................................................................... iii
Table of Contents ............................................................................................................ iv
List of Tables ................................................................................................................... viii
List of Figures .................................................................................................................. ix
List of Abbreviations ....................................................................................................... x

Chapter One: Introduction and Background ............................................................... 11
  1.1 Introduction ........................................................................................................... 11
  1.2 Background to the Nutrition Fund ....................................................................... 11
    1.2.1 Government action to address obesity ....................................................... 11
  1.2.2 The Nutrition Fund ....................................................................................... 14
  1.3 Aims ...................................................................................................................... 16
  1.4 Thesis structure ................................................................................................. 16
  1.5 Conclusion .......................................................................................................... 16

Chapter 2: Literature Review ....................................................................................... 18
  2.1 Introduction .......................................................................................................... 18
  2.2 The importance of improving nutrition ............................................................... 18
  2.3 The need to target interventions at children and young people ......................... 20
  2.4 Health Promotion ............................................................................................... 21
    2.4.1 Definitions .................................................................................................. 21
    2.4.2 Different Health Promotion Approaches to Improving Nutrition .............. 22
    2.4.3 Summary .................................................................................................... 32
  2.5 Policy Implementation ......................................................................................... 32
    2.5.1 Policy Implementation Models ................................................................. 32
    2.5.2 Actor Network Theory ............................................................................. 34
    2.5.3 Complexity Theory .................................................................................. 35
    2.5.4 Policy Networks ...................................................................................... 36
    2.5.5 Summary .................................................................................................. 36
  2.6 Evaluation ............................................................................................................ 38
    2.6.1 Health Promotion Evaluation ...................................................................... 38
    2.6.2 Traditional Experimental Approaches to Evaluation .................................. 40
    2.6.3 Alternative Approaches ............................................................................. 41
    2.6.4 Summary .................................................................................................. 43
  2.7 Mission On Evaluation ....................................................................................... 44
  2.8 Conclusion .......................................................................................................... 45

Chapter Three: Methodology and Methods ................................................................. 46
  3.1 Introduction .......................................................................................................... 46
  3.2 Methodology ........................................................................................................ 47
  3.3 Description of data sources and methods ............................................................ 48
    3.3.1 Semi-Structure Interviews ......................................................................... 48
Chapter Four: Implementation in DHBs

4.1 Introduction

4.2 Nutrition Fund Management in DHBs

4.3 What worked well

4.4 What did not work well

4.5 Guidance from Central Government

Chapter Five: The End User Experience

5.1 Introduction

5.2 Projects implemented

5.3 Nutrition Fund process

5.4 Challenges during implementation of the nutrition fund project

5.5 Organisational characteristics
List of Tables

Table 1.1 National criteria for the Nutrition Fund .................................................. 15
Table 3.1 Characteristics of participating DHBs .................................................... 50
Table 3.2 Description of schools and ECE services interviewed .......................... 52
Table 4.1 National criteria for the Nutrition Fund .................................................. 56
Table 4.2 Requirements from funding agreements related to the Nutrition Fund ....... 57
Table 4.3 Consistency of DHB application form and information pack with Ministry of Health guidance ........................................................................ 59
Table 4.4 Methods used to advertise Nutrition Fund rounds ................................. 63
Table 4.5 ECE services and schools by DHB ......................................................... 69
Table 4.6 Education subgroup membership across DHBs .................................... 72
Table 5.1 Nutrition Fund projects implemented by participating schools and ECE services ...................................................................................... 82
Table 5.2 Summary of Nutrition Fund projects aims ............................................ 83
Table 5.3 Main method of receiving Nutrition Fund information ......................... 88
Table 5.4 Organisational characteristics of participating schools and ECE services ...................................................................................... 92
Table 5.5 Benefits associated with Nutrition Fund projects ............................... 95
Table 5.6 Reliance on Nutrition Fund grant ......................................................... 104
Table 6.1 Breakdown of project types funded ..................................................... 111
List of Figures

Figure 1.1 Timeline of key initiatives and policy developments (2003 – 2009) ........ 12
Figure 6.1 Number of grants awarded and average grant value by DHB .................. 107
Figure 6.2 Number of settings funded and average funding received by DHB ........... 107
Figure 6.3 Size of DHB versus average grant value ............................................ 108
Figure 6.4 Number of grants awarded to schools and ECE services by DHB ........... 109
Figure 6.5 Proportion of grants awarded to schools by school decile rating .......... 110
Figure 6.6 Proportion of grants including funding for food preparation equipment .............................................................. 111
Figure 6.7 Proportion of grants including funding for capital items (excluding food preparation equipment) .................................................. 112
Figure 6.8 Proportion of grants including funding for edible gardens .................. 113
Figure 6.9 Proportion of grants including funding for recipe books or other resources .............................................................. 113
Figure 6.10 Proportion of grants including funding for staff professional development .............................................................. 114
Figure 6.11 Proportion of grants including funding for ‘other’ projects ................ 115
Figure 6.12 Number of individual schools and ECE services funded by DHB ........ 116
Figure 6.13 Total number of individual settings receiving one or more grants by DHB .............................................................. 116
Figure 6.14 Percentage of eligible settings that received one or more grants by DHB .............................................................. 117
Figure 6.15 Percentage of eligible schools and ECE services that received one or more grants by DHB .............................................................. 118
Figure 6.16 Percentage of settings in the DHB that were funded versus percentage of total national settings located within the DHB .................. 119
Figure 6.17 Percentage of schools receiving one or more grants by decile rating .... 120
# List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHB</td>
<td>District Health Board</td>
</tr>
<tr>
<td>DC</td>
<td>District Co-ordinator</td>
</tr>
<tr>
<td>ECE</td>
<td>Early Childhood Education</td>
</tr>
<tr>
<td>FBCS</td>
<td>Food and Beverage Classification System</td>
</tr>
<tr>
<td>HEHA</td>
<td>Healthy Eating – Healthy Action</td>
</tr>
<tr>
<td>HPS</td>
<td>Health Promoting Schools</td>
</tr>
<tr>
<td>FIS</td>
<td>Fruit in Schools</td>
</tr>
<tr>
<td>PHU</td>
<td>Public Health Unit</td>
</tr>
<tr>
<td>SPARC</td>
<td>Sport and Recreation New Zealand</td>
</tr>
<tr>
<td>SSS</td>
<td>School Support Services</td>
</tr>
</tbody>
</table>
Chapter One: Introduction and Background

1.1 Introduction

Obesity and poor nutrition are major contributors to ill health (Bell & Swinburn, 2004; Ministry of Health, 2003a; Must & Strauss, 1999). The prevalence of childhood obesity in New Zealand is consistent with international trends which have seen rates double over the past two decades (Ministry of Health, 2003b). Improving child nutrition is important both for the benefits of having a healthy weight throughout childhood and for the establishment of long-term health eating behaviours (Campbell & Crawford, 2001). The Nutrition Fund formed one part of a larger government investment in improving the nutrition of children and young people in New Zealand. My interest in the Nutrition Fund as a potential research topic came from my experience within the Healthy Eating – Healthy Action team at the Ministry of Health. As part of my role I had the opportunity to observe the uptake of the Nutrition Fund across District Health Boards (DHBs) and the enthusiasm of schools and early childhood education (ECE) services who carried out projects. I was also interested in the cross-sectoral nature of the HEHA Strategy and in how action is achieved in a decentralised health system.

1.2 Background to the Nutrition Fund

1.2.1 Government action to address obesity

In New Zealand the negative health impacts of obesity received little focus until being highlighted in health policy documents during the 1990s (see for example, Public Health Commission, 1995). This focus was reflected in the New Zealand Health Strategy, which included improving nutrition, increasing physical activity, and reducing obesity as three of its thirteen population health objectives (Minister of Health, 2000). These three objectives formed the core of the Healthy Eating – Healthy Action, Oranga Kai – Oranga Pumau (HEHA) Strategy (Ministry of Health, 2003a), and accompanying Implementation Plan (Ministry of Health, 2004). However, there was little additional government action to address these objectives until funding was committed for implementation of the Cancer Control Strategy in 2005 (Ministry of Health, 2008a).
The first funding allocation for the Cancer Control Strategy was for increased investment in nutrition and physical activity initiatives as part of the primary prevention of cancer. This included the Fruit in Schools programme, DHB initiatives, a public awareness campaign, and research on nutrition and physical activity (Ministry of Health, 2008a). Further funding for HEHA implementation was secured in subsequent years, and investment in nutrition and physical activity initiatives by the Ministry of Health peaked at more than $50 million in the 2008/09 financial year (Ministry of Health, 2008a). Selected key dates and events relating to government action to improve children’s and young people’s nutrition over the period from 2003 to June 2009 are shown in Figure 1.1 below. The initiatives and policies listed are discussed throughout this introduction.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>Healthy Eating – Healthy Action (HEHA) Strategy launched</td>
</tr>
<tr>
<td>2004</td>
<td>HEHA Implementation Plan launched</td>
</tr>
<tr>
<td>2005</td>
<td>Tripartite agreement between Sport and Recreation New Zealand (SPARC), Ministry of Health, and Ministry of Education signed Cancer Control Strategy launched Fruit in Schools initiative phase 1 roll out</td>
</tr>
<tr>
<td>2006</td>
<td>Mission On launched First HEHA funding agreements signed with DHBs</td>
</tr>
<tr>
<td>2007</td>
<td>HEHA Project Managers in place in DHBs Education subgroup established in each DHB Ministry of Education Guidelines for Healthy, Confident Kids launched First Nutrition Fund rounds held by DHBs National Administration Guideline 5, clause (iii) announced Food and Beverage Classification System (FBCS) launched Support programme for implementation of FBCS begins</td>
</tr>
<tr>
<td>2008</td>
<td>District Co-ordinator in place in DHBs Further Nutrition Fund rounds held by DHBs National Administration Guideline 5, clause (iii) takes effect New National-led government elected</td>
</tr>
<tr>
<td>2009</td>
<td>Reversal of National Administration Guideline 5, clause (iii) Reduction in HEHA funding to DHBs Disestablishment of District Co-ordinator positions</td>
</tr>
</tbody>
</table>

**Figure 1.1** Timeline of key initiatives and policy developments (2003 – 2009)

One of the first new initiatives developed that contributed to HEHA implementation was Fruit in Schools (FIS). The aim of FIS was to increase children’s consumption of fruit and facilitate adoption of healthier lifestyles. The initiative was rolled out in phases beginning in 2005 with decile 1 schools. Schools each worked towards addressing the key areas of nutrition, physical activity, sun protection and smoke free, and received a piece of fruit each day for every student (Ministry of Health, 2010). In
keeping with the range of issues addressed, FIS involved multiple agencies. At central government level these were Sport and Recreation New Zealand (SPARC), the Ministry of Health, and the Ministry of Education. These three agencies formalised their relationship in 2004 with the signing of the Tripartite agreement entitled “Partnerships in Action” (Boyd, Dingle, Campbell, King, & Corter, 2007).

Building on this cross-sector collaboration, the Mission On campaign was launched in September 2006 as the vehicle for improving children and young people’s nutrition and increasing their levels of physical activity. This campaign included 10 initiatives aimed at children and young people, and was a partnership between SPARC, the Ministry of Health, the Ministry of Education and the Ministry of Youth Development (SPARC, 2007). The oversight for this campaign was provided by a Joint Officials Group, which was comprised of representatives of the four agencies (Ministry of Health, 2007a).

One of the ten Mission On initiatives was focused on improving nutrition within the school and early childhood education (ECE) environments. This initiative was led by the Ministry of Health, where a team dedicated to HEHA implementation was established in 2006. A key aspect of the Ministry of Health’s input into Mission On was the development of the Food and Beverage Classification System (FBCS) to provide a tool to assist schools and ECE services to choose healthier food and beverage options (Ministry of Health, 2007b). This system was developed to support implementation of the Ministry of Education’s Food and Nutrition Guidelines for Healthy, Confident Kids (Ministry of Education, 2007). The FBCS categorised items as appropriate for consumption either every day, sometimes or occasionally based on sets of nutrient criteria (SPARC, 2007). The FBCS was launched along with supporting resources in 2007. It was followed by a change to the National Administration Guideline 5. National Administration Guidelines are direct instructions from the Ministry of Education to Boards of Trustees that they must comply with in running their school. From July 2008 a third clause was added to National Administration Guideline 5 that required school Boards of Trustees to promote healthy food to all students. If food was sold or provided by the school, they were required to make only healthy options available (SPARC, 2007). A further part of the initiative to improve school and ECE service nutrition environments was the
implementation of the Nutrition Fund. All 21 District Health Boards (DHBs) were funded from 2007 to administer a pool of funding. This provided grants to schools and ECE services for projects to improve their nutrition environments (Ministry of Health, 2008a). It is the implementation of the Nutrition Fund that forms the subject of this thesis.

1.2.2 The Nutrition Fund

The Nutrition Fund developed following an agreement between the Green Party and the Government after the 2005 election. The $3 million dollar fund was available from February 2007 and was administered by DHBs (Maharey & Kedgley, 2006). Funding was allocated to DHBs on the basis of the number of schools and ECE services in their region. The purpose of the fund was to support projects that would assist schools and ECE service to improve their nutrition environments (Maharey & Kedgley, 2006).

From 2007 DHBs were required by the Ministry of Health to employ a HEHA Project Manager within their Planning and Funding division and establish a HEHA governance structure in their district. This governance structure included a HEHA steering group and an education subgroup. The steering group had oversight of planning and decision making for all HEHA activity and planning in the district, while the education subgroup focused on management of the Nutrition Fund, on behalf of the DHB. They also co-ordinated the nutrition and physical activity support provided to schools and ECE services by member agencies (Ministry of Health, 2007c). Education subgroups were made up of representatives from health, education and physical activity agencies who were involved in service delivery to schools and ECE services. These groups each developed local decision making processes and criteria, within the overarching national criteria provided by the Ministry of Health shown in Table 1.1, below. Applications were invited from schools and ECE services, and were assessed against these criteria (Ministry of Health, 2007d).
Table 1.1 National criteria for the Nutrition Fund

<table>
<thead>
<tr>
<th>Overarching Criteria for Nutrition Fund</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) prioritise high needs schools and ECEs</td>
</tr>
<tr>
<td>b) encourage applications from clusters of schools and /or ECE services</td>
</tr>
<tr>
<td>c) projects should take a whole school/ECE community approach</td>
</tr>
<tr>
<td>d) projects should lead to sustainable change</td>
</tr>
<tr>
<td>e) encourage innovative activity</td>
</tr>
<tr>
<td>f) encourage and support student-led activity where possible</td>
</tr>
<tr>
<td>g) projects must be consistent with Ministry of Health food and nutrition guidelines, the Food and Beverage Classification System and the Ministry of Education’s Food and Nutrition for Healthy, Confident Kids guidelines</td>
</tr>
<tr>
<td>h) DHBs must follow a clearly documented and transparent selection process</td>
</tr>
</tbody>
</table>

In recognition of the large workload associated with management of the Nutrition Fund, funding was increased in late 2007 to enable DHBs to employ a full time District Co-ordinator in each DHB to work alongside the DHB HEHA Project Manager. The District Co-ordinator (DC) position was established to manage the DHB Nutrition Fund and support effective implementation of the Food and Beverage Classification System (Ministry of Health, 2008b). As with the HEHA project manager role, the DC position was located in the DHB Planning and Funding division.

Following a change of government in November 2008, the funding allocated to DHBs to implement HEHA for the 2009/10 financial year was reduced, including disestablishment of DHB DC roles. In addition, in February 2009 the Minister of Education announced that the National Administration Guideline, requiring Boards of Trustees to provide only healthy food options in schools, was to be removed (Newton, 2009). This move drew criticism across New Zealand, from health researchers and practitioners (see Gorton, Eyles, Ni Murchu, & Bullen, 2009; Sharpe, 2009; Utter, Scragg, Percival, & Beaglehole, 2009). This thesis does not cover the changes that have occurred since July 2009 but focuses instead on the implementation of the Nutrition Fund up until 30 June 2009.


1.3 Aims

The aim of this thesis is to examine investigate whether the Nutrition Fund, as a centrally devised health initiative, was able to catalyse the development of projects at the local level in schools and ECE services. The objectives identified to achieve this aim were:

- to examine the degree to which implementation of the Nutrition Fund occurred in accordance with government guidance; and
- to investigate how schools and ECE services developed and implemented projects, and what benefits these produced.

The overall purpose of the research is to better understand how central government goals are put into action at local levels.

1.4 Thesis structure

This thesis is organised into seven chapters. Chapter one sets out the aims of the research and provides background information on the Nutrition Fund and related government initiatives. In chapter two the key literatures relating to this research are discussed in order to provide the context for this research. Chapter three describes the methods employed and the rationale for their use. The next three chapters detail the results of the research. Chapter four focuses on the experience of DHB staff involved in implementing the Nutrition Fund, while chapter five focuses on school and ECE service project leaders. The last of the results chapters, chapter six, presents analysis of data on the number and type of grants awarded nationally. The key themes and findings from this research are discussed in chapter seven, which brings the thesis to a conclusion by making recommendations for policy and future research.

1.5 Conclusion

Improving nutrition and reducing obesity are important health goals and were the focus of much government activity during the years that are examined in this thesis. The Nutrition Fund was a key part of efforts to address children and young people’s nutrition under the HEHA Strategy and the Mission-On campaign. This initiative was delivered at regional level DHBs working in collaboration with the education and
physical activity sectors. This thesis examines how the Nutrition Fund was implemented in order to understand how central government intentions can be translated into local level action. Chapter two will locate this research within the literatures on health promotion, policy implementation, and evaluation.
Chapter Two: Literature Review

2.1 Introduction

This chapter summarises the results of a review of the literatures on child nutrition health promotion, policy implementation and evaluation. The purpose of the review is to locate the development of the Nutrition Fund as a health promotion intervention, highlight key issues surrounding the implementation of policy interventions, and examine approaches for health promotion and policy evaluation. Key terms were used to search selected databases (OVID/Medline, PsycINFO and Science Direct), library catalogues, and using Google Scholar. These search terms included obesity, overweight, health promotion, health education, child, children, adolescent, school, early childhood, education, garden(s), gardening, nutrition, diet, grants, policy implementation, evaluation, networks, cross-government collaboration, and community collaboration. Relevant citations identified throughout the literature review process were also followed up. The chapter begins by discussing the importance of improving nutrition, before outlining why children and young people should be targeted for intervention. The next section presents health promotion approaches to intervening. Research on policy implementation is then discussed before examining approaches for evaluating health promotion programmes.

2.2 The importance of improving nutrition

Obesity and poor nutrition are significant health concerns in New Zealand and many other countries. The prevalence of child obesity has increased greatly over the past two decades with estimated rates more than doubling in the United States, United Kingdom and Australia (Ebbling, Pawlak, & Ludwig, 2002; Bell & Swinburn, 2004). New Zealand data indicate that there was no change to child obesity prevalence between 2002 and 2007. However, the prevalence of adult obesity continued to increase over the same period, albeit at a slower rate (Ministry of Health, 2008b). In addition, disparities between ethnic groups for all ages remain large, and there is a higher burden of poor nutrition and obesity within lower socioeconomic groups (Ministry of Health, 2004).
Fruit and vegetable consumption has been identified as a key nutrition-related risk factor contributing to disease burden (Ministry of Health, 2003c). Children and adults need to eat at least two servings of fruit and three servings of vegetables everyday (Ministry of Health, 2003b). Findings from the latest National Children’s Nutrition Survey in 2002 showed that only two out of five children ate the recommended servings of fruit per day and only three out of five ate the recommended servings of vegetables (Ministry of Health, 2004). Poor nutrition is a major contributing factor to obesity and has a high cost to individuals, communities and the country as a whole, as a result of obesity related diseases, and psychosocial impacts (Ministry of Health, 2003b). Improving nutrition and reducing obesity made up two of the thirteen population health objectives within the New Zealand Health Strategy (Ministry of Health, 2000, p7). They were also key goals in the Healthy Eating – Healthy Action: Oranga Kai – Oranga Pumau (HEHA) Strategy (Ministry of Health, 2004).

Obesity is associated with the development of type 2 diabetes. Accordingly there has been a rapid increase in the prevalence of type 2 diabetes over the past two decades, including in children where it was previously not common (Bell & Swinburn, 2004). Mortality rates show a correlation with Body Mass Index (BMI) and increase sharply for those with a BMI greater than 30 (Bell & Swinburn, 2004). The costs of obesity related illness are difficult to fully estimate. According to calculations by the World Health Organisation, between 2 and 7% of a country’s total health spending relates to obesity (World Health Organization, 2000). Based on a total public health service spend of $12 billion per annum (Ministry of Health, 2008c) this equates to between $240 million and $840 million in New Zealand each year. Added to these costs are the significant social costs associated with morbidity and mortality of nutrition-related disease, and wider economic impacts. High body mass index alone is estimated to have caused 3514, or 11%, of all deaths in 1997 (Ministry of Health, 2003c). At the same time the potential to reduce this burden is great, with small changes in the mean population Body Mass Index and fruit and vegetable intake calculated as having the potential to significantly reduce avoidable disease and mortality in future years, if interventions are implemented now (Ministry of Health, 2003c).
2.3 The need to target interventions at children and young people

There are several reasons why children and young people are an important target group for interventions to improve nutrition and prevent obesity. Firstly, research findings commonly demonstrate that obesity in childhood and adolescence is associated with increased risk of obesity in adulthood (Must & Strauss, 1999), with the strongest relationship being between adolescent weight and adult weight (Dietz & Gortmaker, 2001). A review of research findings by Must and Strauss (1999) indicated that between 25% and 50% of children who are obese remain obese into adulthood. This depends on the age at which the child becomes obese, how far into adolescence they remain obese, and the level of obesity. A further study conducted within one US state found that 50% of children obese at 6 years of age and older went on to become obese adults. However, obesity in very young children under 3 years of age was not linked to increased risk of adult obesity unless they had obese parents (Whitaker, Wright, Pepe, Seidel, & Dietz, 1997). This is consistent with other research findings which do not show a strong relationship between obesity in early childhood and adult obesity (Dietz & Gortmaker, 2001). However, the prevention of obesity by targeting children and young people remains important given the greater difficulty of treating and managing obesity in later life (Carter & Swinburn, 2004; Dehghan, Akhtar-Danesh, & Merchant, 2005).

A second reason is the impact on health due to childhood obesity. Must and Strauss (1999) reviewed the immediate and long term effects of obesity in childhood and adolescence. The immediate impacts experienced by obese children affect many systems of the body including the orthopaedic, neurological, pulmonary, cardiac, gastroenterological, and endocrine systems (Must & Strauss, 1999). In addition to these physical effects, many children and adolescents who are obese also experience negative social impacts related to the negative stereotype of overweight that is dominant in Western societies (Must & Strauss, 1999). In the longer term, aside from the increased risk of adult obesity, childhood obesity has been linked with increased risk of developing heart disease and colon cancer separate from adult weight (Must & Strauss, 1999).
Thirdly, when healthy habits are developed as a child, this can lead to healthy habits as an adult. Research suggests that children learn behaviours related to eating early in life (Campbell & Crawford, 2001). Furthermore, the eating behaviours and food preferences developed by children and young people have been shown to remain consistent into adulthood. Intervening to improve nutrition and eating behaviours in childhood can therefore prevent later illness, as well as improving health in childhood (Kelder, Perry, Klepp, & Lyttle, 1994; Campbell & Crawford, 2001; French & Stables, 2003).

Finally, nutrition is important for academic achievement. The link between nutritional intake and cognitive development and performance has been well documented, both in relation to specific nutrient deficiencies, and in relation to insufficient food intake generally (Alaimo, Olson & Frongillo, 2001; Tarras, 2005; Fu, Cheng, Tu & Pan, 2007). Research also indicates that this relationship is two directional, with low achievement in education associated with development of unhealthy behaviours (St Ledger & Nutbeam, 2000; O’Connor-Fleming & Parker, 2001).

2.4 Health Promotion

2.4.1 Definitions

According to the Ottawa Charter for Health Promotion, health promotion is “the process of enabling people to increase control over, and to improve, their health” (World Health Organization, 1986, p. 1). This charter is based on a broad definition of health which recognises that health is a resource for living, rather than just an outcome of how people live (World Health Organization, 1986). Health promotion involves advocacy and other measures to influence the wide range of factors that affect health. Health promotion also has a focus on reducing the differences in resources that lead to differences in health status. This recognises that access to resources is key to enabling people to have control over their health. There is also recognition that achieving health requires input across many sectors, as the factors that determine health are often outside the control of the health sector (World Health Organization, 1986). The action required to improve health following a health promotion approach can be broken down into five key areas. These are building healthy public policy, creating supportive environments, strengthening community
action, developing personal skills and reorientating health services (World Health Organization, 1986). For Nutbeam (1986, in Poland, Green & Rootman, 2000, p. 7) health promotion is, “the process of enabling individuals and communities to increase control over the determinants of health and thereby control their health”. This definition makes the focus on communities and the link between control of health determinants and experience of health stronger (Poland, Green & Rootman, 2000). In each case, the emphasis on health promotion as a capacity building process is important as this distinguishes health promotion from other forms of health intervention.

2.4.2 Different Health Promotion Approaches to Improving Nutrition

2.4.2.1 Health education

The goal of health education is to improve people’s knowledge of good health practices in order to change behaviour (Glanz, Rimmer, & Viswanth, 2008). There are numerous examples in the literature of school-based nutrition education programmes. One such example is the “Gimme 5 fruit and vegetables for fun and health” intervention delivered to fourth and fifth grade students in 16 schools in Georgia, US. This intervention drew upon social learning theory/social cognitive theory to influence the availability of fruit and vegetables and increase knowledge and skills in relation to fruit and vegetable preparation (Davis, Baranowski, Resnicow et al., 2000). The outcome evaluation showed increased fruit and vegetable consumption in intervention schools. While this intervention and others have been shown to be effective in the short term, much of the research on health education programmes implemented in school settings indicates that these show limited success in creating lasting behaviour change (Davis et al., 2000). Baranowski et al (2000) suggest that this is due to issues with implementation of the initiatives, and emphasise the need for thorough process evaluation to address this. While there may be issues with implementation, there is also evidence within the literature that suggests that it is the health education approach taken that is limiting the success of those programmes and that what is needed instead is a far more comprehensive approach that recognises the role of the environment (Deschesnes, Martin, & Hill, 2003; Swinburn, Egger, & Raza, 1999).
2.4.2.2 Ecological approach

Ecological approaches provide a way of balancing a recognition of the agency held by each individual person, with the recognition of the impact of unequal resources and experience of the physical, social and political environments in which that person lives (Minkler, 1999). Several key factors determine the type of food people eat, including environment, social and cultural factors, food security, food pricing, food marketing, and type of setting (Ministry of Health, 2006). Ecological approaches provide a framework to examine the complex interplay between these factors and to identify where and how best to intervene (Story, Kaphingst, Robinson-O’Brien & Glanz, 2008). For Story and colleagues (2008) there are multiple influences on eating behaviour which occur within and across the different levels of the personal, the social environment, the physical environment and the macro environment. Improving nutrition requires action across all of these levels.

The ecological perspective emphasises the interactions between the different factors at each level, and also the role of each person’s behaviour in shaping their environment, while at the same time also being shaped by the environment (US National Institutes of Health, 2005). This reciprocal determinism is one of five central concepts within Albert Bandura’s Social Cognitive Theory (SCT), an interpersonal level theory commonly used as a basis for the development of health promotion interventions (Nutbeam & Harris, 2004). This theory recognises the role of environment as well as the need to develop knowledge and skills as part of increasing people’s capacity to change and belief that they can change (self-efficacy). This focus aligns strongly with the Ottawa Charter principle of enabling people and the action area of creating supportive environments (Poland, Green & Rootman, 2000).

An ecological approach is supported by many researchers working in the field of childhood obesity prevention. Swinburn and colleagues (1999) describe the environment children in many countries are growing up in today as ‘obesogenic’, due to large number of influencing factors that promote obesity. They developed the ANGELO framework (analysis grid for environments linked to obesity) which groups these factors under the environmental type (physical, economic, political and social) and provides a means of analysing where the highest priorities for intervention are to
be found (Swinburn et al., 1999). The focus for the application of this framework is on creating environments that support healthful eating behaviours and increased physical activity. It is consistent with the Ottawa Charter’s emphasis on creating supportive environments as a key area of health promotion action (Swinburn et al., 1999).

A review of environmental interventions to increase fruit and vegetable intake in school-aged children found that multi-component interventions, which included education and home activities as well as environmental changes, were effective in increasing fruit and vegetable intake. Interventions that sought environmental change alone were found to have a positive effect on food choices while at school (French & Stables, 2003). However, no further follow up of participants was undertaken to assess whether these changes were maintained beyond the completion of the intervention period. The discussion of the environmental changes was largely limited to the school canteen or food service and there was no mention of school nutrition policies.

2.4.2.3 Settings approach

A settings based approach is consistent with the movement towards ecological models of health promotion, given the attention to context that the approach requires (Poland, Green & Rootman, 2000). Settings have been defined as, “major social structures that provide channels and mechanisms of influence for reaching defined populations” (Mullen et al., 1995, in Green, Poland & Rootman, 2000, p. 12). A settings based approach to health promotion reduces the duplication of effort that can occur in the delivery of health promotion initiatives that focus on just one issue (Ministry of Health, 1997). Educational settings can provide an ideal place for delivery of health promotion as almost all children and young people can be accessed, particular health issues can be covered multiple times, and information and activities can be tailored for delivery to different age groups. Programmes delivered though educational settings are also more economical than whole population approaches (O’Connor-Fleming & Parker, 2001). Other key advantages of using educational settings include the amount of time children spend there, and the range of activities undertaken in education settings that provide opportunities for promoting health (Parcel, Kelder & Basen-Engquist, 2000). In addition, Ozer (2007) argues that social influence can aid
the effectiveness of school interventions because the activities undertaken as part of the intervention are done with peers, and children are more likely to change their behaviour if their peers do.

However, there are also disadvantages in taking a settings based approach. Several factors determine the type of food people eat including environment, social and cultural factors, food security, and food pricing (Ministry of Health, 2006). A settings based approach only addresses the factors that occur within that setting. For example, while knowledge and skill are important individual level factors, in terms of the things that are within individual control, cost is commonly stated as a barrier to healthy eating (Ministry of Health, 2006). So while an intervention in an education setting may increase the participants’ knowledge of nutrition, where there are low cost pies sold at the local dairy these will likely remain a common food choice, due to their availability and price. The home environment and family practices also potentially contain many more factors that affect children’s food intakes (Dietz & Gortmaker, 2001). It is also important to consider who is left out of the setting being used. As discussed by Poland, Green and Rootman (2000), some members of society, for example young people who do not attend school, are not reachable through settings commonly targeted by health promotion efforts. There can also be disadvantages associated with the nature of the setting itself. For instance, schools have to balance a host of competing priorities when considering the time and resources available to deliver programmes (Poland, Green & Rootman, 2000).

While many studies have been published that provide support for school-based interventions (see Story, 1999; Dietz & Gortmaker, 2001; Doak, Visscher, Renders & Seidell, 2006; Sharma, 2006; Peterson & Fox, 2007), there is very little published research on early childhood interventions. However, evaluation of an early childhood intervention to prevent youth offending and increase educational achievement showed that early intervention was associated with long term benefits (Reynolds, Temple, Robertson & Mann, 2001).

Booth and Samdal (1997) argue that a key condition for effective health programmes in education settings is collaboration between health and education agencies at the central government level. They argue that agreement should be sought at ministerial
level and that this should flow down through central government agencies to schools. They also emphasise the need for the health sector to be mindful of the demands schools are already working under. This is supported by New Zealand research, which identified that having limited resources and an already very full curriculum were two of the main barriers to nutrition health promotion in primary schools (Walton, Waiti, Signal & Thomson, 2010).

2.4.2.4 Health Promoting Schools

Health Promoting Schools (HPS) is an example of a specific settings based health promotion approach. The development of HPS aligned with the progression in health promotion generally. Internationally there has been a shift from promoting health through education alone to also teaching children the skills they need for a healthy lifestyle (Stewart-Brown, 2006), and making relevant organisational changes within the school (Laurence, Peterken & Burns, 2007). The Ottawa Charter’s focus on environment as well as the development of personal skills provided the foundation for the development of HPS by the World Health Organization during the 1990s (Stewart-Brown, 2006). The conceptual framework for HPS in New Zealand centres on the Treaty of Waitangi together with the Ottawa Charter (Edwards, Ward & Heald, 2009). The standard World Health Organization model for HPS shows curriculum teaching and learning, school organisation and ethos, and community links and partnerships as three overlapping domains (Edwards, Ward & Heald, 2009). In New Zealand schools involved in HPS receive personal support from HPS co-ordinators located in Public Health Units (PHUs).

Evaluations of the effectiveness of the HPS approach for improving health have been limited to date. While the evaluations that have been completed support this approach as an effective way of delivering health promotion in school settings (Woolfe & Stockley, 2005; Stewart-Brown, 2006; Laurence, Peterken & Burns, 2007), a detailed understanding of the conditions required for implementation is lacking (St Ledger & Nutbeam, 2000; Deschesnes, Martin & Hill, 2003). One such evaluation relates to the “Fresh Kids” programme delivered in four Australian primary schools. The goal of the programme was to promote healthy eating. The intervention components were developed using the key domains of the standard HPS approach described above and the programme was well integrated across school activities from curriculum to
physical environment (Laurence, Peterken & Burns, 2007). A two year follow up of children at participating schools found that fruit and water consumption was increased significantly, together with a reduction in consumption of sugary drinks (Laurence, Peterken & Burns, 2007).

Integration of health promotion programmes across other activities is very important, as education settings are very busy places and schools are charged with delivering a large curriculum. The importance of creating sustainable initiatives has been commented on in research in the UK that examined a range of different nutrition interventions in schools (Woolfe & Stockley, 2005). For schools to maintain the activity introduced in the interventions long term, the interventions need to fit well within the curriculum and school activities, and require little additional resource (Woolfe & Stockley, 2005). A whole-school approach has a focus on sustainable change within the school, built on policy and environmental change across the school, as opposed to interventions that are delivered to specific classes with time limited resource to do this (Laurence, Peterken & Burns, 2007). In discussing the success of the “Fresh Kids” programme, Laurence and colleagues (2007) also stress the importance of organisational change within the participating schools, where fruit and water consumption was promoted within class time, and teachers provided role models in adhering to nutrition policies. These things strengthened the uptake of the more formal nutrition information delivered in class (Laurence, Peterken & Burns, 2007).

The organisational characteristics of the setting have a large bearing on the ability of the setting to successfully make changes as part of health promotion initiatives. Implementation of a Health Promoting Schools approach requires the engagement of all teachers and staff and will achieve varying degrees of success depending on how secure and supported in their roles individual staff feel (St Ledger & Nutbeam, 2000). Parcel and colleagues (2000) recommend a staged model for implementing change in schools that focuses first on gaining commitment at school board and management level. The school then makes policy changes in stage two before making changes to how school staff carry out their roles in the third stage. Once these three stages are complete, the school is able to begin stage four and implement the initiative. In order for successful organisational change, commitment must be sought, both from those
who will deliver the intervention (teachers), and those who will receive the intervention (students) (Parcel et al., 2000). Using the HPS approach, this is commonly achieved using a school health committee which includes students, teachers and wider school community (Edwards, Ward & Heald, 2009).

Another key aspect of the HPS approach is the emphasis on enabling students. Research into the perceptions of school students involved in nutrition health promotion initiatives indicates that young people prefer to deliver health education themselves, and receive it from their peers rather than adults (Hamdan, Story, French et al., 2005). This is supported by the effect of student involvement in decision making regarding food provision, observed in UK research on school nutrition action groups (SNAGs) (Passmore & Harris, 2005). The focus of this study was on whether engagement in decision making had any effect on behaviour generally, rather than seeking to improve nutrition specifically. While not completely peer led, the SNAGs set up as part of the intervention provided a mechanism for student representatives from each year level of the school to be involved in decision making regarding food provision, with the oversight of school management and a teacher. All students in the school were surveyed to gather information on the changes that were wanted. The SNAG agreed the changes to be made and a process for them to be implemented. Passmore and Harris (2005) compared food choices at baseline and 2 year follow up for students aged 11 to 16 years old, between schools with SNAGs and control schools without. They found that there were greater changes in student food choices in the intervention schools with a significant increase in sales of meals (Passmore & Harris, 2005).

A further demonstration of the potential of peer-led health promotion is given in the evaluation of the “Healthy Buddies” pilot programme in Canada (Stock et al., 2007). The programme was designed for use with 5 to 13 year old students, equivalent to New Zealand primary school age. Older students were given healthy eating lessons from a teacher and then delivered these using games and presentations to the younger student they were paired with each week throughout a school year (Stock et al., 2007). Physical measures, including BMI, and qualitative measures of knowledge and attitudes were compared prior to the intervention and immediately after. These showed that compared to students at the control school who received no intervention,
those who received the peer-led intervention had lower increases in BMI and greater increases in knowledge of healthy eating (Stock et al., 2007).

A development significant to the discussion of the initiative in this research is the use of grant schemes as part of HPS service delivery. Within New Zealand HPS grants are offered in Taranaki and Canterbury (A. Rutene, personal communication, 14 May 2009). There is a lack of published research on the use of grant schemes health promotion. One example that does exist is given by the evaluation of the School Health Incentive Program (SHIP) which operates in New South Wales, Australia (Cass, Price, & Rimes, 2005). The SHIP grant scheme is run by a partnership between health and education agencies and is open to schools only, who can apply for up to $1,000. Those successful in gaining a grant also receive support from local health promotion service staff to implement the project. Projects can address any health issue identified as a priority by the school but must be based on a Health Promoting Schools approach (Cass, Price, & Rimes, 2005). Evaluation based on semi-structured interviews with schools found that participation in the scheme was rated very positively and schools stated that they had met the majority of the goals they had set out in their application (Cass, Price, & Rimes, 2005). The evaluation also showed that the scheme was successful in engaging schools in health promotion, with the grant providing the incentive for schools to begin to make changes to their organisation and environment (Cass, Price, & Rimes, 2005). The partnership between health and education was also identified as a success factor of the scheme, as this ensured that the expectations and approach of the health services involved aligned with the capacity within schools and the language they used (Cass, Price, & Rimes, 2005).

2.4.2.5 Fruit in Schools

The New Zealand Fruit in Schools (FIS) initiative discussed in the introduction to this thesis has two components, one of which overlaps with HPS. In addition to receiving a free piece of fruit every day, participating schools take a whole school approach as is done with HPS to addressing four priority health areas. These areas are healthy eating, physical activity, sunsmart, and smokefree. By the end of 2009 FIS was available in all decile 1 and 2 primary and intermediate schools (Ministry of Health, 2008c). Decile rating is calculated on the basis of the socioeconomic status of communities that students come from. A rating of decile 1 means that a school is in
the 10 percent of schools that have the greatest proportion of students from lower socioeconomic areas. At the other end of the scale, decile 10 schools have fewest students from low socioeconomic areas (Ministry of Education, 2010). Evaluation of FIS is currently underway. The first report was completed in 2007 and this focused on process and impact evaluation (Boyd et al., 2007). Key findings from this initial evaluation phase included small but significant increases in knowledge and behaviour towards healthy eating and physical activity, as well as increased knowledge related to sunsmart and smokefree (Boyd et al., 2007). Nearly all schools had addressed aspects of school organisation, including policy development or review, related to at least one of the four priority health areas. Curriculum changes had also been made by many. Overall, the evaluation showed that much change had been achieved over the two year period examined (Boyd et al., 2007). A further report that continues this evaluation is due for release.

2.4.2.6 National Heart Foundation Healthy Heart Awards

Another example of a programme aimed at schools in New Zealand is the National Heart Foundation’s Healthy Heart Award for Schools. This was formerly known as the School Food Programme, and is a long-standing initiative. The Heart Foundation also provides a Healthy Heart Award for Early Childhood Education. The structure of the schools programme is based on four key strands. These are policy and school development, health choices, curriculum-linked nutrition education, and professional development (National Heart Foundation, 2010). There are several synergies between this structure and the HPS approach. For example, the policy and school development strand involves the whole school and developing a nutrition policy. This then feeds into the healthy choices and curriculum strands, which focus on the school environment and the ways it can reinforce the health curriculum. Similarly to HPS, schools registered in the Healthy Heart Award receive resources and face to face support from a health promoter to support them through the process of improving their nutrition environment (National Heart Foundation, 2010).

2.4.2.7 Gardening initiatives in education settings

Increasingly, gardening is being included within programmes to prevent obesity and improve nutrition. In their review of gardening-based child nutrition interventions, Robinson-O’Brien and colleagues (2009) discuss the growing popularity of this form
of intervention. Their review included 11 initiatives that were delivered to children aged 5-15 years in the United States. All but three of the interventions were delivered in association with the children’s school, either as part of the curriculum or as an after school programme. They found support for the use of garden-based interventions to increase fruit and vegetable intake, but stress the need for further peer reviewed research on the effectiveness of this kind of initiative (Robinson-O’Brien, Story & Heim, 2009). Other research on the use of gardens in schools has shown that they can be an effective way to increase children’s knowledge regarding vegetables, as well as their preferences for consuming them (Morris & Zidenberg-Cher, 2002; Graham, Lane Beall, Lussier, McLaughlin, & Zidenberg-Cher, 2005; Hermann, et. al., 2006; Parmer, Salisbury-Glennon, Shannon, & Struempler, 2009). Gardens in education settings can contribute to children’s overall learning. An earlier review found that schools that established gardens integrated them with the curriculum and used them as part of teaching Graham et al. (2005). The review did, however, identify that specific curriculum development was variable across the regions where gardens were used, and the researchers argued that in order to maximise learning benefits, curriculum resources and training were needed Graham et al. (2005).

2.4.2.8 Health Promotion in a New Zealand Context

Working in partnership to achieve the advancement of Māori health aspirations, and ensuring active participation of Māori, are central obligations under the Treaty of Waitangi (Ministry of Health, 2002b). In order to be effective, interventions must also be owned by Māori communities and be framed in terms that reflect the values of those communities. Concepts of health and wellbeing are intrinsically linked with culture. Recognising the interdependence of people and placing whānau (family) at the centre of efforts is essential to improving Māori health outcomes (Minister of Health & Associate Minister of Health, 2002). When developing an intervention for children/tamariki, from a whānau ora approach, this intervention must consider the wider whānau, because tamariki are not separate from their whānau. Whānau forms a cornerstone of Māori models of health such as Te Pae Mahutonga (Durie, 2004) and Whare Tapa Whā (Rochford, 2004), and is central within He Korowai Oranga, the Māori Health Strategy (Minister of Health & Associate Minister of Health, 2002). The role of family has been highlighted, particularly in relation to Health Promoting Schools, as central to supporting health choices by children and young people.
Engagement with family is important in order that the health messages and practices at home complement what is taught and promoted at school (Booth & Samdal, 1997).

2.4.3 Summary

Health promotion practice is based on a broad definition of health, has a focus on reducing inequalities, and is distinguished from other forms of health intervention by its emphasis on capacity building and empowerment. A wide range of approaches come under the banner of nutrition health promotion. These include: health education, which focuses on increasing knowledge and skill; ecological models, which also consider wider factors present in the physical and socio-cultural environments and how these interact; and settings based approaches, which focus on change within a particular place, such as a school. Implementation of national health promotion interventions occurs as a part of the policy process. Policy implementation models and related theories will be discussed in the next section.

2.5 Policy Implementation

2.5.1 Policy Implementation Models

According to Birkland (2005), policy implementation is, “The process by which policies enacted by government are put into effect by the relevant agencies” (p. 181). Implementation requires goals to be set in relation to the policy, and steps for achieving these goals to be documented; including which organisation is responsible for the various activities (Thomas, 2001). The organisational and institutional arrangements of the environment within which the policy is being implemented have a large bearing on the implementation process. They may lead to unintended changes to the policy (as delivered), depending on how well understood and accounted for these factors were during the development of the policy. Policy implementation evaluation seeks to understand how policy outcomes are shaped, and investigate both their intended and unintended effects (Thomas, 2001). This field of evaluation developed during the 1960s and 1970s in response to failures in the implementation of policies. Where it was once assumed that policy implementation was an unproblematic next step after policy development, the experience of policy ‘fiascos’ and the work of researchers began to challenge this and highlight the political nature of implementation (Finlayson, 2001).
Two common models used by researchers examining policy implementation are the top-down model and the bottom-up model (Birkland, 2005). The top-down approach assumes that implementation is a discrete step in the cycle of policy making and that overriding power rests with the policy makers. There is little acknowledgement of the need to involve those at the implementation level in the development of the policy (Peck & 6, 2006). Implementation research using this model does not examine the wider factors that limit what policy is developed and how it is received and put into practice by the relevant actors at implementation level (Finlayson, 2001). In contrast, the bottom-up approach to policy implementation views those implementing the policy as potentially having the greater power because of their capacity to change policy to fit local circumstances and priorities (Finlayson, 2001). This approach has sometimes received criticism for overstating the ability of implementers to modify policy, given the control central government has over their resources and the structural arrangements they work within (Finlayson, 2001; Peck & 6, 2006).

A third approach to studying policy implementation combines elements of both top-down and bottom-up approaches (Birkland, 2005). This approach recognises that there is an ongoing negotiation between policy makers and policy implementers, and that communication between actors at each level is central to the implementation process (Birkland, 2005). For Sabatier (1986, in Peck & 6, 2006), a combined approach is needed to give weight to the importance of policy development at government level without losing sight of the role of local actors. For Peck and 6 (2006), policy implementation can be seen as either a structural process occurring via social structures and patterns, or a cognitive process where meaning is negotiated via conversation and text. They argue that attention must be given to both these views, and an understanding formed of the way they are linked.

Their account of policy implementation is based on three hypotheses. Firstly, that policy implementation requires creativity, due to the competition between the multiple policies and priorities in existence at a point in time (Peck & 6, 2006). They argue that implementation “must be seen as adaptation rather than adoption. Implementation has to be a process whereby the whole set of government and ministerial intentions, institutional and professional commitments, wider public values and so on are taken up by the local networks of managers and organisations and
creatively resolved into settlements” (p. 20). Their second hypothesis is that this creative adaptation leads to variation due to pre-existing programmes and goals. Local actors also have to balance their accountability to central government against their accountability to their local population (Peck & 6, 2006). The third hypothesis Peck and 6 (2006) put forward is that the negotiation and settlement that characterises policy implementation involves ‘sense-making’ on the part of implementing organisations. This sense-making takes place within organisational processes and structures. The sense-making process involves individual implementers actively interpreting policy in keeping with their pre-existing knowledge and belief systems (Spillane, Reiser, & Reimer, 2002). A high level of control is exerted over public services in an attempt to ensure uniformity in relation to organisational structures and processes, and hence policy implementation. Peck and 6 (2006) argue that, where successful, this enables but may also limit the ability of public services to be effective.

2.5.2 Actor Network Theory
A useful theory to inform the examination of policy implementation is Actor Network Theory. This theory developed in an effort to understand the interaction between human and non-human components of the sociomaterial world (Baygeldi & Smithson, 2004). Within this theory, systems of interaction are referred to as networks, and the components within networks that are able to direct and control other components are called actors (Baygeldi & Smithson, 2004). Networks are dynamic, with all elements, objects, individuals, groups of people and structures interacting continuously. All elements interact to determine patterns of behaviour through an ongoing process of redefinition and reordering (Nicolini, Gherardi, & Yanow, 2003).

Within actor network theory, translation is used to refer to the transfer of knowledge and social practices between actors. It is through this process that many actors link together and actor networks develop (Czarniawska & Hernes, 2005). The translation process is shaped by actors joining and leaving the network, and the knowledge they bring from other networks they are part of (Baygeldi & Smithson, 2004). Through the process of translation, knowledge is constructed and reconstructed, and does not necessarily travel in the same direction towards convergence. New actors, for
example, may bring new knowledge to the network that leads to divergent translations (Baygeldi & Smithson, 2004).

As described by Latour (1992; in Nicolini, Gherardi, & Yanow, 2003):

ANT emphasizes that the propagation in time and space of anything whatsoever – statements, orders, artifacts, products, or goods – depends on what the concerned individual or collective actors do with it… With each passage the translated item acquires energy that carries it further forward, and in this chain each actor modifies and adapts the item according to its own interests and uses it for its own purposes. The process of translation, therefore, creates the network and the actors just as much as the object [p. 210].

A key tenet of actor network theory is that the individual parts of the network cannot be examined separately. They make sense only in relation to other parts of the network and are defined by the network (Baygeldi & Smithson, 2004). These ideas have significance for policy implementation research because the sense-making processes discussed above in relation to policy implementation do not occur in isolation, but by actors and groups of actors within networks, as do the processes of programme implementation.

2.5.3 Complexity Theory

Complexity theory, which has some synergies with actor network theory, is also relevant when examining the implementation of policy interventions. Complexity theory provides a framework for understanding complex systems with a large number of continuously interacting components (Lewis, 2005). Like actor network theory, complexity theory views system elements as part of a connected whole, rather than individually. It also shares a focus on the contextual and local nature of knowledge (Byrne, 2005). Because all elements within a system are connected, changes due to particular decisions and actions may affect many other parts within the system, or connected systems (Mitleton-Kelly, 2003). Relationships between elements and individuals within complex systems are not static and the strength of these relationships fluctuates over time. The transfer of information and influence within a complex system is dependent on the strength and nature of the interconnections between individuals and organisations (Mitleton-Kelly, 2003). The interactions and connections may develop in a planned way, or they may be unplanned.
Complex systems are also constantly adapting and reordering. This self-organisation may occur at different locations and levels within the system, making it possible for local action to occur in the absence of knowledge about what the whole system is doing (Mittleton-Kelly, 2003). Following this theory, policy implementation research must consider the characteristics of the whole system, (e.g., in relation to the education system, the introduction of a new curriculum, timing of Board of Trustees elections) and the potential changes that may occur following policy introduction.

Mittleton-Kelly (2003) emphasises the importance of strong connections within a system, or network. However, the work of Granovetter (1973) provides an argument for the importance of weak connections for information propagation throughout a network. Granovetter (1973) highlights the crucial links between otherwise distinct groups within a population that are provided by weak connections. While strong links ensure that information is shared among people with common characteristics and close ties, weak ties provide a pathway for information to be transferred between groups with few characteristics in common. These weaker connections enable ideas and information to be distributed far wider than they would if only strong connections were utilised (Granovetter, 1973).

An example of the application of complexity theory to policy is given by Walton (2010), who undertook an analysis of policy options for promoting child nutrition in New Zealand primary schools. Complexity theory was chosen as the framework for this analysis due to the range of interacting factors and settings that make up the complex system of child nutrition. One of the key tensions identified in the research was that between the rigidity of central government processes and the flexibility needed for effective intervention at local level (Walton, 2010). In this thesis complexity theory has not been used as a framework for analysis. However, in concordance with the recognition of childhood nutrition as a complex system, it is included as an important interpretive device.

2.5.4 Policy Networks

The idea of complexity in relation to policy development and implementation has been explored further by Lewis (2005). For her, the concepts of networks and
relationships are central to understanding the policy process. Drawing on ANT definitions of what a network is, Lewis (2005) emphasises the need to consider the policy system as a whole, rather than attempting to reduce it to separate components. For her the separate components are only meaningful in terms of their contribution to the policy process through their interaction with each other.

A key characteristic of networks, as opposed to other organisational structures, is that each member of the network is an independent unit. While the purpose of a network may be driven by a lead agency, and some members may have more resources or influence than others, no member can wholly control the collaboration that occurs through the network (Mandell, 2001). Individuals and organisations within the network retain their own authority. Following this, network functioning requires that all members negotiate together regarding the issue that has linked them together (Lewis, 2005). When networks involve actors from different levels of the policy system this requires a greater level of management to reconcile central government requirements and local needs (Lewis, 2005).

According to Grabher (2004), projects “hinge on a dense fabric of lasting ties and networks that provide key resources of expertise, reputation, and legitimazation” (p. 104). Grabher terms this fabric ‘project ecology’ and argues that project ecologies comprise complex interdependencies whereby the different actors and institutions within them are in constant negotiation with respect to their particular loyalties and agenda. Grahber’s analysis focuses on advertising companies but has implications for many different types of project activity, including policy development and implementation. Similarly to Lewis (2005) Grabher argues that the temporary nature of project collaboration means that the varied organisation structures and processes of members are retained (2002).

2.5.5 Summary

Policy development and implementation involves a complex interaction between national policy makers and regional and local level implementers. The characteristics of health promotion require that the processes used incorporate input from all levels so that individuals and communities also participate in the development of solutions
to the particular issues they may face. An approach that combines both top-down and bottom-up policy approaches provides a potential means of meeting this requirement. A combined approach recognises that policy implementation is characterised by negotiation and interpretation. Networks of actors within complex systems are continuously interacting, potentially producing different effects than the original policy intention. This highlights the importance of robust evaluation. Approaches to evaluation of health promotion interventions are discussed below.

2.6 Evaluation

2.6.1 Health Promotion Evaluation

Evaluation is an integral part of planning and implementing health promotion programmes (O’Connor-Fleming & Parker, 2001). For Waa, Holiber and Spinola (1998), health promotion evaluation involves,

Getting information on the activities, characteristics, context, and impact of programmes that will help us know what the programme is doing and how well it is working. [p. 7]

According to Nutbeam (1998, p. 28), “evaluation concerns assessment of the extent to which an action achieves a valued outcome”. In most cases there is also value placed on the process by which these outcomes are achieved. By including process in his definition, Nutbeam (1998) makes an important link to the Ottawa Charter and emphasises the centrality of partnership and participation in health promotion. Evaluation in relation to health promotion programmes generally falls into one of three types: process, impact and outcome evaluation, which are completed consecutively (Hawe, Degeling & Hall, 1994). Process, or formative, evaluation focuses on whether the programme has been delivered as planned by assessing the reach of the programme, the level of satisfaction of the programme participants, and the activities and resources within the programme (Hawe, Degeling & Hall, 1994). As identified by Sharma (2006) and Peterson and Fox (2007) detail is often lacking on programme delivery in published evaluations.

Once delivery of the programme has been assessed as starting to work in the way it was intended, then impact evaluation can be undertaken to measure whether the objectives of the programme have been met (Hawe, Degeling & Hall, 1994). This is
followed by outcome evaluation, which also looks at the effect the programme has had, but at a higher level in relation to the longer term effects (Hawe, Degeling & Hall, 1994). Impact and outcome evaluations are not limited to looking at whether the planned effects have occurred or not. These forms of evaluation also have a strong focus on uncovering any unintended effects of the programme that may increase or decrease its success (Waa, Holibar & Spinola, 1998). Impact and outcome evaluation includes consideration of how participants have perceived the programme, whether any changes in knowledge and behaviour have occurred, and whether the programme has affected changes in the environment in which it was implemented (Waa, Holibar & Spinola, 1998).

Two common themes come through in the health promotion literature. Firstly, health promotion programmes often do not include evaluation (O’Connor-Fleming & Parker, 2001). Lack of evaluation has been a commonly cited shortfall in health promotion practice (O’Connor-Fleming & Parker, 2001). This is despite the existence of several models developed for health promotion which integrate evaluation with planning. These models include Green and Kreuter’s PRECEDE/PROCEDE model (1991, in O’Connor-Fleming & Parker, 2001) and Nutbeam’s Staged Model for Planning, Implementation and Evaluation of Health Promotion Programs (1998, in O’Connor-Fleming & Parker, 2001). These models each include stages for evaluation as essential components.

The second common theme is that traditional, experimentally based approaches to evaluation are often not suitable for health promotion programmes (Nutbeam, 1998; Koelen, Vaandragher & Colomer, 2001). Health promotion presents several challenges for evaluators seeking to follow a traditional experimental approach due to the nature and complexity of health promotion action (Koelen, Vaandragher & Colomer, 2001). These challenges are discussed below in relation to application of traditional approaches. Furthermore, an experimental approach is usually not able to capture the scope of health promotion and can only provide a partial picture (Nutbeam, 1998; 1999). There may be relationship between these two themes, whereby the difficulties associated with health promotion evaluation contribute to low levels of published research. Lack of specific funding within contracts to cover evaluation and low
evaluation capacity and capability within the health promotion workforce are also likely to be factors in whether there is any evaluation at all.

2.6.2 Traditional Experimental Approaches to Evaluation

There has been an increasing emphasis placed on evidence based health promotion practice over the past decade (Nutbeam, 1999; Wimbush & Watson, 2000). Usage of an evidence based approach is far wider than the clinical settings in which it began. As part of this widening influence there has been a translation of the paradigm followed for evaluation of clinical interventions to evaluation of community-based initiatives and health programmes (Wimbush & Watson, 2000). There has been a great deal of debate in health promotion and evaluation literature regarding whether this transfer is appropriate given the key differences between health promotion and clinical practice (Nutbeam, 1999; Wimbush & Watson, 2000). Firstly, the different approaches define intervention and outcome in different ways. Under the traditional experimental approach, the independent variable (the interventions) and the dependent variable (the outcomes) are defined prior to the intervention (Koelen, Vaandrager & Colomer, 2001). In contrast, health promotion interventions are a process. They are not treatments that are applied to targeted people, but rather activities that people have been a part of developing and implementing, something that evolves in collaboration with stakeholders (Nutbeam, 1998; Koelen, Vaandrager & Colomer, 2001).

The second issue is the focus on quantitative measurement under the traditional model. While health promotion research also employs some quantitative measures, such as changes in knowledge and behaviour, other equally important health promotion outcomes, such as social change and community empowerment, cannot be easily measured using quantitative methods (Koelen, Vaandrager & Colomer, 2001). The third issue discussed by Koelen, Vaandrager and Colomer (2001) is that traditional methods involve random allocation to either the intervention group or a comparison group to control for the impact of factors external to intervention activities. Once again, this is not usually possible for health promotion interventions delivered in comparatively open community settings, where it is often not possible to limit access to intervention activities (Koelen, Vaandrager & Colomer, 2001). In addition, random allocation runs counter to the high value placed on community
participation in the development, implementation, and evaluation of health promotion programmes (Nutbeam, 1998).

Despite these issues, there are researchers who remain in favour of modifying the experimental approach to fit health promotion. An example of this is provided by Campbell and colleagues (2000). They discuss the difficulties in evaluation of complex interventions that are made up of multiple components, including those delivered in school and community settings. They propose that a staged process for design and evaluation of such interventions should be followed. The use of a phased approach is consistent with models of health promotion planning and evaluation developed by Nutbeam and others (O’Connor-Fleming & Parker, 2001). For Campbell et al. (2000) the first step has a focus on exploration of theories applicable to the problem being addressed to aid intervention selection. This is followed by modelling the intervention in order to understand how the mechanisms associated with the various components will interact to produce outcomes. Campbell et al. (2000) then advocate an exploratory trial in which all variables have been clearly described and an appropriate comparison identified. Once this has been completed the next phase is to run the main trial, which may or may not be able to be randomised depending on the intervention. The final phase is ongoing monitoring of the intervention (Campbell et al., 2000). Throughout each step in this process Campbell et al. (2000) advocate for a continual integration of qualitative and quantitative evidence in order to reach the strongest results. They also recognise that the process may not follow a linear sequence if findings at any point indicate that the intervention needs to be re worked (Campbell et al., 2000).

2.6.3 Alternative Approaches

While the suggestions discussed above do provide a way of addressing some of the differences between health promotion and clinical practice in order to apply an experimental design, this assumes that traditional experimental evaluation designs are the most appropriate to begin with. This has been contested by those that advocate for alternative models to evaluate health promotion programmes (Nutbeam, 1998; Koelen, Vaandrager & Colomer, 2001), and social programmes generally (Pawson &
Tilley, 1997). One general argument is neatly summed up by Koelen, Vaandrager and Colomer (2001) in relation to health promotion evaluation when they point out that:

Traditional research models are based on the wish to discover, predict and control natural phenomena. It is a process of reductionism, which entails breaking down components of a complex world into discrete parts, analysing them, and making predictions based on interpretation of these parts. However, this breaking down opposes the holistic nature of health as we wish to see it in health promotion (p. 259).

Opposition to experimental models is shared by many in the evaluation community, with growing numbers critiquing positivistic assumptions of truth and objectivity (Sanderson, 2000). Models for health promotion evaluation were developed on the basis that alternative approaches were needed. Nutbeam’s (1998, in O’Connor-Fleming & Parker, 2001) Staged Model of Health Promotion Planning and Evaluation, for example, goes far towards the necessary kind of evaluation that is required. Such evaluation needs to recognise the fact that health promotion involves changes that occur over time rather than all at once, and that health promotion involves action at multiple levels including political, social environmental and individual (Wimbush & Watson, 2000). One shortcoming that has been identified with Nutbeam’s model in particular, however, is the lack of emphasis on the processes involved in increasing the capacity of individuals and communities to control and determine their health. This is a key goal of health promotion and needs to be evaluated along with changes in health status (Wimbush & Watson, 2000). More recently there has been a greater acceptance of the need for both quantitative and qualitative methods, depending on the health promotion intervention being evaluated (Wimbush & Watson, 2000). Nutbeam (1998) argues that evaluation needs to utilise different methodologies, both qualitative and quantitative, to create a research design that best fits the individual programme.

The development of theory based approaches to evaluation has provided a way to reconcile the quantitative-qualitative split. Theory-based approaches go beyond setting out the aims, objectives and outcomes of the intervention being evaluated, to also focus on understanding the underlying mechanisms that make the intervention work (Chen, 1990, in Wimbush & Watson, 2000). The most prominent example of a
A theory-based approach is Realist Evaluation (Pawson & Tilley, 1997). Pawson and Tilley (1997) argue that experimental models are unsuitable for evaluating any social programme, due to their sole focus on the intervention as the cause of the outcomes. They propose an alternative realist model which emphasises the crucial role of context. Each particular context has its own particular social values, rules and pre-existing relationships that will either help or hinder implementation (Pawson & Tilley, 1997).

For Pawson and Tilley (1997) standard evaluations which focus on programme inputs and outputs are insufficient because they do not adequately explain why the intervention or programme was successful or not. They also ignore the political nature of the programmes themselves (Sanderson, 2000). Evaluations must examine, “what it is about the programme which works for whom in what conditions” (Pawson & Tilley, 1997, p. 72). Following a realist approach, the evaluation equation changes significantly from mechanism causes effect to become mechanism and context equals regularity, or outcome. The focus for research is to understand the mechanisms introduced in the programme and how these depend on the context they were introduced into to achieve change (Pawson & Tilley, 1997).

**2.6.4 Summary**

Evaluation of health promotion interventions, as with any policy intervention, is crucial to assessing the effectiveness of current programmes and informing development of future programmes. The choice of the particular evaluation approach to be used needs to match the intervention. Health promotion interventions are an example of complex, broad ranging interventions, and the methods used in the evaluation must be able to address this. A traditional experimental approach is not sufficient as it assumes that programme effects can be easily isolated and measured, and does not recognise that these effects are dependent on contextual factors. Instead, theory-based approaches, such as Realistic Evaluation, which utilise multiple methods and examine the role of context in mediating programme effects, offer a means of effectively evaluating health promotion interventions.
2.7 Mission On Evaluation

The Ministry of Health commissioned a process and impact evaluation of the Mission On initiative related to improving nutrition in schools and ECE services. The final report for this evaluation was released just prior to the completion of this thesis. The Mission On evaluation assessed the awareness, reach, and use of all the resources and support provided through the initiative. These resources and support materials included the Ministry of Education’s *Food and Nutrition Guidelines for Healthy, Confident Kids*, the change to the National Administration Guideline 5, the Ministry of Health’s *Food and Beverage Classification System* (FBCS), FBCS user guides, and associated website, telephone helpline, and newsletters; as well as the Nutrition Fund (Clinton et al., 2010).

The evaluation was based on computer assisted telephone interviews (CATI) with 480 schools and 496 ECE services, and a further 40 in-depth interviews with schools and ECE services. The CATI interviews were comprised of over 135 question items, 13 of which related to awareness and use of the Nutrition Fund. As only a small proportion of the respondents for the in-depth interviews had accessed the Nutrition Fund, and the Nutrition Fund was one of several resources examined, the results of the CATI interviews provide the most relevant information for this research.

These results showed that there was a high level of awareness across ECE services and schools, and that this translated into a strong response to the Nutrition Fund as measured by the percentage of schools and ECE services that had applied. Of those that applied, many had support to complete their application, and the majority of applicants were successful (Clinton et al., 2010). A number of respondents reported challenges in relation to the application process, and these largely centred on the amount of time required to source quotes and complete the application. Respondents that had received a grant were asked what this was for, and the majority reported that the grant was for a garden. Kitchen equipment was also commonly mentioned (Clinton et al., 2010). Despite earlier mentioning challenges with the application process, the majority of respondents reported that the application process was clear and easy to understand. Respondents were also asked whether the Nutrition Fund grant had been helpful in promoting healthy nutrition and the majority either agreed
or strongly agreed with the statement (Clinton et al., 2010). These findings are consistent with aspects of the results of this research, which will be detailed in chapters four, five, and six. The key difference between the Mission On evaluation and the research in this thesis is that this thesis is not a formal evaluation of the Nutrition Fund. Instead, this research is focused on the Nutrition Fund alone and on explaining the processes involved in its implementation, both at DHB and school/ECE service level.

2.8 Conclusion

Obesity generally, and obesity in children and young people in particular, is an issue of significant concern in many countries today. Addressing the current prevalence of child obesity presents a significant challenge because the factors that influence food selection and eating behaviours are many and complex. It is critical that action is taken now as the future costs to individuals and society as a whole will be immense. Given the evidence regarding persistence of obesity into adulthood, the importance of early learning with regard to eating behaviours, and the link between nutrition and academic achievement, childhood represents a crucial time for intervention. Health promotion approaches to improving nutrition and reducing obesity are needed to address the complex, interacting factors that influence the type of food people eat. Ecological models provide a framework for developing such programmes.

Options for the delivery of health promotion to children include education settings, where almost all children can be reached. Promising initiatives in this area include the application of a Health Promoting Schools approach and peer-led health promotion. Continued evaluation of health promotion initiatives is needed to build the evidence base of what works. Given the nature of health promotion interventions, evaluation approaches that can deal with complexity are needed. Methodology needs to encompass both qualitative and quantitative data to understand the interplay between programme mechanisms and context. Theory-based approaches, such as Realist Evaluation provide a significant advance on traditional experimental approaches to evaluation, which are often not suitable for health promotion programmes. Useful theories to inform the examination of policy implementation include Actor Network Theory and Complexity Theory, together with the literature on policy networks and implementation.
Chapter Three: Methodology and Methods

3.1 Introduction

The purpose of this chapter is to describe the methods used to carry out the research for this thesis, and the rationale behind their use. The central aim of my research was to investigate whether the Nutrition Fund, as a centrally devised initiative, was able to catalyse the development of projects at local level in schools and ECE services. The objectives of the research were:

- to examine the degree to which implementation of the Nutrition Fund occurred in accordance with government guidance; and
- to investigate how schools and ECE services developed and implemented projects, and what benefits these produced.

The overall purpose of the research was to better understand how central government aims are put into action at local level.

In order to meet these objectives, this thesis presents the analysis of 13 semi-structured interviews with DHB staff and Nutrition Fund project leaders, document analysis of key Nutrition Fund documents, and descriptive statistical analysis of quantitative Nutrition Fund grant data. The focus of the thesis is on understanding the processes involved in the implementation of the Nutrition Fund. While some of the data from schools and ECE services will indicate impacts of the fund to a degree, this is not a formal evaluation. The goal of the research is to contribute to understandings of the processes involved in health policy implementation.

I was both an observer and a participant while conducting this research. As a researcher I held the position of observer and sought to analyse the processes involved in Nutrition Fund implementation. At the same time I was also a participant through my involvement as a Ministry of Health employee. My role as a member of the HEHA team during the period examined in this research included working with DHB HEHA Project Managers and District Co-ordinators. This dual positioning means that to those interviewed for this research, particularly DHB staff, I would have been seen as an interested party.
On one hand, I had considerable contextual knowledge of the Nutrition Fund and ready access to, and experience of working with the DHB staff I interviewed. On the other, some of those I interviewed may have responded to me less as a researcher and more as a representative of central government. However, while I was alert to this possibility, I did not see evidence this in participants’ responses to my questions.

3.2 Methodology

Methodological debates often position qualitative and quantitative methods in opposition to each other. However, over the past two decades there has been increasing support for the use of mixed methods, including in relation to public health research (Baum, 1995). Quantitative research can be characterised as having a focus on the measurement and analysis of quantifiable data in order to test theories (Bryman, 2008). In contrast, a qualitative approach focuses on words rather than numbers, is more commonly used to generate theories, and is concerned with understanding people and social settings (Berg, 1995; Bryman, 2008). These characteristics of qualitative research methods are summarised by Green and Thorogood (2004), who say that:

The most basic way of characterizing qualitative studies is that those aims are generally to seek answers to questions about the ‘what’, ‘how’ or ‘why’ of a phenomenon, rather than questions about ‘how many’ or ‘how much’ (2005, p.5).

As defined by the Ottawa Charter, health promotion is a process, therefore research on health promotion must be undertaken in such a way as to be able to examine processes, not just outcomes. It should also be able to provide understandings of the role of context in human behaviour, and explanations of how and why health promotion programmes do or do not work (Blignault & Ritchie, 2009).

In order to utilise all available information, both qualitative and quantitative methods were employed in this research. However, the focus was on qualitative data sources because these best enable an inductive approach and I was seeking to understand how the Nutrition Fund was implemented and how and why schools and ECE services chose to take it up (Willis et al., 2007).
3.3 Description of data sources and methods

The overriding approach to this research was to view the implementation of the Nutrition Fund as a case study of the implementation of a health promotion initiative in education settings. The three DHBs and nine schools and ECE services were then treated as embedded units of analysis (Yin, 2009). Yin (2009) argues that the decision to use a case study method is directly related to the questions the research is seeking to address. Similar to the rationale for employing qualitative methods generally, the case study is highly appropriate for situations where the researcher is seeking to understand how or why a feature of the social world works or occurs (Yin, 2009). Yin defines the case study as:

An empirical inquiry that investigates a contemporary phenomenon in depth and within its real life context, especially when the boundaries between phenomenon and context are not clearly evident (Yin, 2009, p. 18).

The qualitative methods used in the research included semi-structured interviews ranging from 30 minutes to 1 hour. Four interviews were undertaken with DHB staff in three DHBs. A further three interviews were completed within each DHB with end users of the Nutrition Fund, to give thirteen interviews in total. In addition, key documents related to Nutrition Fund implementation were sourced from the Ministry of Health and the three DHBs. Analysis of quantitative data was completed using national data of the number of grants awarded across DHBs. Selection of participants will be discussed in section 3.4.

3.3.1 Semi-Structured Interviews

The interviews were undertaken using a semi-structured approach, whereby I followed interview schedules (one for DHB staff and one for school/ECE service project leaders) developed prior to the interviews, but I also probed beyond the questions contained in these depending on respondents’ answers. This approach was chosen because while there were specific areas I wanted to explore based on my knowledge of Nutrition Fund implementation and the findings from the literature review, I did not want to limit respondents from describing their experience where this was relevant. As described by Berg (1995), the semi-structured interview is:
Located between the extremes of completely standardised and completely unstandardized interviewing structures is the semi-standard interview. This type of interview involves the implementation of a number of predetermined questions and/or special topics. These questions are typically asked of each interviewee in a systematic and consistent order, but the interviewers are allowed freedom to digress; that is, the interviewers are permitted (in fact expected) to probe far beyond the answers to their prepared and standardized questions (Berg, 1995, p. 33).

Berg (1995) states that the development of an interview schedule should begin with the researcher identifying, in general terms, the groups of questions to be addressed. This listing provides the structure of the interview schedule, within which further detailed questions are developed.

The questions for the two interview schedules with DHB staff and school and ECE service project leaders were developed based on my experience of national level implementation and monitoring of the Nutrition Fund, and the findings contained in the literature review. The research questions provided a basis for the major sections of the two interview schedules. Once drafted, the schedules were reviewed by a colleague at the Ministry of Health, who had also worked in the Healthy Eating – Healthy Action project team, and by my supervisors. These were modified based on their feedback and the school and ECE service project leader interview schedule was pre-tested with an ECE service staff member who had lead implementation of a Nutrition Fund project at their playcentre. Copies of the final DHB and school/ECE service interview schedules are included in appendices A and B respectively.

3.3.2 Documentary analysis

A further method employed in this research was documentary analysis of key Nutrition Fund documents. Ministry of Health documentation covering the criteria for the fund and guidelines for its implementation was compared with DHB application forms, information packs, and education subgroup terms of reference.

3.3.3 Quantitative grant data

The final source of information used for this research was a quantitative data set containing information on the number, value, and type of grants awarded by each
DHB. This was analysed using univariate methods to describe the total, average, and range of grants awarded, and the frequency of different types of project funded across DHBs.

### 3.4 Collection and Analysis of Data

#### 3.4.1 Sampling strategy and recruitment of participants

Each of the participants in this research was purposively selected. This method of sample selection is common in qualitative research where research questions often guide selection, together with the researcher’s knowledge about the group of interest, in order to gain a sample that provides rich data (Berg, 2005; Bryman, 2008; Green & Thorogood, 2004).

**3.4.1.1 DHB District Co-ordinator interviews**

Three District Health Board areas were included in this research and were selected to provide a mix of characteristics. The DHBs were chosen on the basis of size, the degree to which they were urban or rural, and the size of their Māori and Pacific populations relative to national averages. The DHBs will be referred to in the results that follow as DHB A, DHB B and DHB C. Key characteristics of each DHB are given in Table 3.1, below.

### Table 3.1 Characteristics of participating DHBs

<table>
<thead>
<tr>
<th>DHB</th>
<th>Description</th>
</tr>
</thead>
</table>
| A   | Large, urban DHB  
population greater than 250,000  
Māori population lower than national average  
Pacific population higher than national average |
| B   | Small, rural DHB  
population less than 70,000  
Māori population equal to national average  
Pacific population lower than national average |
| C   | Mid-sized, urban DHB  
population between 70,000 and 250,000  
Māori and Pacific populations higher than national average |
I approached each DHB by contacting the District Co-ordinator in each of the three DHBs via email initially, and then following up by telephone. After each District Co-ordinator had agreed to be involved in the research a time was scheduled to complete a face to face interview. Prior to the interview I sent each District Co-ordinator an information sheet regarding the research, a consent form, and a copy of the interview schedule (see Appendix A). The District Co-ordinator (DC) was interviewed for all three DHBs. These people were chosen as they were directly responsible for management of the Nutrition Fund. In DHB B, the HEHA Project Manager was also interviewed as the DC had replaced the original person in the DC role 6 months prior to the interview.

3.4.1.2 School and ECE service project leader interviews

At the end of the DHB staff interviews, each DHB DC was asked to provide contact details of grant recipients who could be approached and invited to participate in the research, with a view to covering a range of setting types and projects. When discussing possible participants, DCs were asked to identify three grant recipients who had completed their Nutrition Fund project and that differed as to setting type (e.g. primary school, secondary school, or ECE service) and the type of project implemented (e.g. garden). The requirement that only those schools and ECE services that had completed a Nutrition Fund project be included meant that there was not an opportunity to investigate why some settings chose to participate while others did not. However, the focus of this research was on how linkages between health and education, and government and local communities, were made during Nutrition Fund implementation, rather than on reasons for participation.

Nine grant recipients were interviewed in total. The schools and ECE services interviewed tended to be low decile schools or, for ECE services, in low socioeconomic areas. However, two decile 6 schools and a decile 9 school were also interviewed. Descriptions of each of the nine settings are described in table 3.2, below. Throughout this thesis they will be referred to using a combination of a letter corresponding to which of the three DHB areas they are from (A, B, or C) and a number (01, 02, or 03) to enable identification.
<table>
<thead>
<tr>
<th>Identifier</th>
<th>Description of school/ECE service</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A01</strong></td>
<td>Te Kohanga Reo ECE service.</td>
</tr>
<tr>
<td></td>
<td>Less than 20 families.</td>
</tr>
<tr>
<td></td>
<td>Located in suburb considered to be less in need of funding support but in fact all but two of the families involved in the kohanga came from neighbouring low SES areas.</td>
</tr>
<tr>
<td>A02</td>
<td>Primary school.</td>
</tr>
<tr>
<td></td>
<td>Decile 1</td>
</tr>
<tr>
<td></td>
<td>Roll approximately 350</td>
</tr>
<tr>
<td></td>
<td>Predominantly Māori and Pacific community</td>
</tr>
<tr>
<td>A03</td>
<td>Boys’ Secondary school</td>
</tr>
<tr>
<td></td>
<td>Decile 6</td>
</tr>
<tr>
<td></td>
<td>Roll approximately 640</td>
</tr>
<tr>
<td></td>
<td>There is a mix of ethnicities in the school. Approximately 39% NZ European/Pakeha, 20% Samoan, 20% Māori, and the remainder is 'other', which is predominantly Asian (including Indian), Afghani and Somali. While they are a decile 6 school they have students from across the full spectrum from very low to high socioeconomic status.</td>
</tr>
<tr>
<td>B01</td>
<td>Early childhood centre.</td>
</tr>
<tr>
<td></td>
<td>Approximately 35 children.</td>
</tr>
<tr>
<td></td>
<td>Co-located with a bigger organisation that provides parent education programmes and social work support. They are closely associated with the neighbouring church. They receive a lot of referrals from other social and health agencies as well as self-referrals. Services are targeted at lower income people with preschool aged children. The service is attended by predominantly NZ European/Pakeha families.</td>
</tr>
<tr>
<td>B02</td>
<td>Early childhood centre</td>
</tr>
<tr>
<td></td>
<td>The centre is licensed for 50 children, half of which come from the Teen Parent Unit located alongside the centre. Families with children at the centre come from across the full range of socioeconomic status. Nearly half of the families are of Māori ethnicity, 1 Tongan, 1 Asian and the rest NZ European/Pakeha.</td>
</tr>
<tr>
<td>B03</td>
<td>Primary school</td>
</tr>
<tr>
<td></td>
<td>Decile 9</td>
</tr>
<tr>
<td></td>
<td>Rural school located 15 minutes from a small/mid-sized town. Roll 80</td>
</tr>
<tr>
<td></td>
<td>They consider themselves well funded and receive a high level of support from parents and the community. Families tend to be higher socioeconomic status. Eight families are Māori and the rest are NZ European/Pakeha. Approximately 30% of children come from farming families, 40% from families on lifestyle blocks and the rest a mixture, some renting in the area. Most families would have vegetable gardens at home.</td>
</tr>
<tr>
<td>C01</td>
<td>Primary school</td>
</tr>
<tr>
<td></td>
<td>Decile 1</td>
</tr>
<tr>
<td></td>
<td>Roll approximately 190</td>
</tr>
<tr>
<td></td>
<td>School is made up of about 45% Māori, 40% Samoan, and other Pacific peoples.</td>
</tr>
<tr>
<td>C02</td>
<td>Primary school (lead), Kohanga Reo, Pacific language nest</td>
</tr>
<tr>
<td></td>
<td>Decile 1</td>
</tr>
<tr>
<td></td>
<td>Primary school roll approximately 160</td>
</tr>
<tr>
<td></td>
<td>Located in a low socioeconomic area. Kohanga Reo and Pacific language nest onsite. The school also has a conductive education preschool and primary school class. The school runs a total immersion Māori language class and provides Samoan language enrichment for first language speakers. 50% of the primary school’s students are Māori, 30% Pacific, 20% NZ European/Pakeha and other.</td>
</tr>
<tr>
<td>C03</td>
<td>Primary school</td>
</tr>
<tr>
<td></td>
<td>Decile 6</td>
</tr>
<tr>
<td></td>
<td>Roll approximately 290</td>
</tr>
<tr>
<td></td>
<td>The school is a decile 6 school but takes in families from across the full range socioeconomically. They have a very stable teaching staff and take classes from year 1 to 6. There is good parental support including a formal Parent Teacher Support Group. The ethnic breakdown of the school is predominantly NZ European/Pakeha, with Māori being the next biggest group and a small percentage of Pacific peoples.</td>
</tr>
</tbody>
</table>
My initial contact with each school or ECE service project leader was via email, in which I explained the general purpose of the research and what their involvement would be if they agreed to participate. I then followed up by telephone to discuss further. All school and ECE service project leaders approached agreed to be interviewed and times were arranged to conduct the interviews. Copies of the interview schedule, information sheet, and consent form were provided prior to the interview (see Appendix B).

3.4.2 Other sources of data

3.4.2.1 Key documents
In addition to being interviewed, each of the three DHBs provided copies of their Nutrition Fund application, education subgroup terms of reference, and any other information provided to assist applicants. Draft versions of a Nutrition Fund agreement, application form, and HEHA steering group terms of reference were sourced from the Ministry of Health.

3.4.2.2 National grant data
As part of reporting requirements under the funding agreements for the Nutrition Fund DHBs provided quantitative data on the number and type of grants they awarded. An Excel file containing data for all 21 DHBs covering all grants awarded between January 2007 and June 2009 was sourced from the Ministry of Health.

3.4.3 Interview transcription and analysis
Each of the 13 interviews was recorded using a digital recording device. In addition to the recording, notes were made during the interview of key points. These points were then raised with subsequent interviewees as appropriate. As soon as possible after each interview the recordings were transcribed into a Microsoft Word 2003 document. Once all interviews were completed I then undertook a thematic analysis of the 13 transcripts in their two groupings (DHB staff and school and ECE project leaders). Thematic analysis has been described as a comparative process that involves grouping elements of data across different sources to identify themes (Green & Thorogood, 2004). The analysis of transcripts for this research followed the advice of Liamputtong (2009) who outlines two central steps in undertaking thematic analysis.
Firstly, researchers must become thoroughly familiar with their data by repeated readings of transcripts. Once researchers have a good overview of the data they then undertake the second step of coding the data and looking for themes across the set of transcripts (Liamputtong, 2009).

3.4.4 Documentary analysis

Each of the three DHB DCs interviewed for this research provided copies of the Nutrition Fund application forms and associated information packs, and education sub-group terms of reference used in their DHB. The content of these documents was compared with the content of the documents and guidance given by the Ministry of Health to assess the extent to which national criteria for the Nutrition Fund were implemented.

3.4.5 Analysis of quantitative Nutrition Fund grant data

National grant data was sourced from the Ministry of Health. All DHBs were required to include details of the grants they had awarded with their quarterly reports to the Ministry. This data covered the number, amount and type of grants awarded by DHB. It also identified the number of settings funded by type (school or ECE service) and, for schools, decile rating. The time period covered was from January 2007 to 30 June 2009, when the District Co-ordinator positions were disestablished.

While completing the interviews with school and ECE service project leaders I realised that there were instances where multiple grants were awarded to the same setting. In order to be able to more accurately describe the coverage of the Nutrition Fund I sought further information from DHB staff to enable me to identify the number of settings that received more than one grant. This request was made via email directly to the District Co-ordinator, or to the DHB HEHA project manager where the District Co-ordinator had finished in their role. DHBs responded with spreadsheets that showed the unique settings funded for each round of Nutrition Fund grants they held.

In order to compare grants awarded and settings funded against the number of eligible settings, the database directories for school and ECE services were sourced from the
Ministry of Education website. These directories listed information including the name, location (street, suburb and city), institution type (primary, secondary, composite school, or kindergarten, playcentre etc for ECE services), and regional information (TLA, regional council, general electorate) for all schools and ECE services. The school directory also included the decile rating for each school (Ministry of Education, 2009). Decile ratings are calculated by the Ministry of Education after each Census. The calculation ranks schools using the home addresses of their students on the basis of socioeconomic indicators from Census data. Once ranked, schools are divided into ten equal decile groupings. A decile 1 ranking means that a school has a high proportion of students from low socioeconomic areas, while decile 10 schools have the lowest proportion of students from these areas (Ministry of Education, 2010)

The information from the directories was used to calculate the number of schools, by decile, and ECE services within each DHB. Home-based networks and playgroups were excluded from the count of ECE services, in keeping with Nutrition Fund eligibility requirements set by the Ministries of Health and Education. Analysis of the quantitative grant data was completed using Microsoft Excel 2003. Analysis was made using descriptive statistical techniques in order to form a picture of Nutrition Fund grant distribution by DHBs.

3.5 Conclusion

This chapter has described the methods of data collection and analysis for this research, and the rationale for their use. The next three chapters will discuss the results of the analysis, focusing on DHB implementation first, followed by the experience of school and ECE service project leaders, and then national Nutrition Fund grant data.
Chapter Four: Implementation in DHBs

4.1 Introduction

This chapter presents an analysis of interviews with staff members in three DHBs. The purpose of this chapter is to present results relating to DHB implementation of the Nutrition Fund. It will detail the processes, tools, and relationships they built in order to deliver on Ministry of Health requirements for the fund. The chapter also presents DHB staff members’ views on aspects of the operation of the Nutrition Fund and the direction that was provided by central government throughout implementation. The results will show that while generally DHBs followed national criteria and guidance, the processes used were time consuming, and education subgroups faced some challenges when working together. The analysis has been organised into five main areas: the management processes in DHBs, what DHB staff felt worked well, what aspects did not work well, and the guidance provided from central government.

4.2 Nutrition Fund Management in DHBs

4.2.1 Alignment between DHB Nutrition Fund documentation and direction provided by Ministry of Health

As outlined in the introduction, the Ministries of Health and Education developed a set of criteria that DHBs were required to work within when implementing the Nutrition Fund. These criteria are repeated in table 4.1, below.

<table>
<thead>
<tr>
<th>Table 4.1 National criteria for the Nutrition Fund</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overarching Criteria for Nutrition Fund</strong></td>
</tr>
<tr>
<td>i) prioritise high needs schools and ECEs</td>
</tr>
<tr>
<td>j) encourage applications from clusters of schools and /or ECEs</td>
</tr>
<tr>
<td>k) projects should take a whole school/ECE community approach</td>
</tr>
<tr>
<td>l) projects should lead to sustainable change</td>
</tr>
<tr>
<td>m) encourage innovative activity</td>
</tr>
<tr>
<td>n) encourage and support student-led activity where possible</td>
</tr>
<tr>
<td>o) projects must be consistent with Ministry of Health food and nutrition guidelines, the food and beverage classification system and the Ministry of Education’s <em>Food and Nutrition for Healthy, Confident Kids</em> guidelines</td>
</tr>
<tr>
<td>p) DHBs must follow a clearly documented and transparent selection process</td>
</tr>
</tbody>
</table>
The Ministry of Health provided information and direction relating to the implementation of the Nutrition Fund to DHBs via several means. Specific requirements regarding the Nutrition Fund and the District Co-ordinator role were contained in the funding agreements between the Ministry and DHBs. The Ministry also provided a draft Nutrition Fund application form to DHBs together with draft terms of reference for DHB HEHA steering groups and the list of national overarching criteria. Copies of the draft application form, terms of reference and information on overarching criteria are given in Appendix C.

As mentioned in the introduction chapter, DHBs received funding to implement the Nutrition Fund in two parts. The first funding agreement signed in October 2006 covered grants alone. Funding was increased in October 2007 through a second agreement to provide a position to focus on the implementation of the Nutrition Fund and the Food and Beverage Classification System. The main service requirements from these funding agreements are listed in table 4.2, below.

<table>
<thead>
<tr>
<th>Requirements of Nutrition Fund agreement</th>
<th>Requirements of District Co-ordinator agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Establish education subgroup</td>
<td>• Employ 1 FTE District Co-ordinator, to be collocated with the HEHA Project Manager</td>
</tr>
<tr>
<td>• Manage allocation of Nutrition Fund grants to schools and ECE services</td>
<td>• Implement Nutrition Fund according to Nutrition Fund agreement</td>
</tr>
<tr>
<td>• Report to the Ministry of Health</td>
<td>• Support education subgroup</td>
</tr>
<tr>
<td></td>
<td>• Co-ordinate support to schools and ECE services for the implementation of the food and beverage classification system</td>
</tr>
<tr>
<td></td>
<td>• Report to the Ministry of Health</td>
</tr>
</tbody>
</table>

The first national workshop for DHB HEHA project managers was held in February 2007. At this point the District Co-ordinator (DC) role had not been established. At this workshop DHBs were provided with a template to guide the development of a
DHB HEHA plan for the following financial year (1 July 2007 to 30 June 2008), and additional Nutrition Fund information in the form of draft terms of reference and a draft application form. The draft terms of reference provided by the Ministry were focused on the DHB HEHA steering group as the central HEHA governance group. However, they also listed the education subgroup under groups to be overseen by the HEHA steering group. The draft terms of reference stated that the education subgroup was to focus on Nutrition Fund implementation and co-ordination of service, consistent with the funding agreements discussed above. The objectives for the HEHA steering group, and all subgroups, included improving the health of population groups with the greatest health needs. This was to be done with a focus on reducing inequalities and increasing the involvement of communities in improving their health.

The draft application form provided by the Ministry of Health was intended as a starting point for the development of the DHB’s own version (Ministry of Health, 2007c). The key areas in the draft application form included questions on organisational details, type of setting, total roll, who in the setting would be targeted by the proposed project, the project budget, project plan, project leader, and any other sources of funding. The draft application form did not specifically ask for school decile or another indicator of the need of the setting applying. It also did not ask for a breakdown of the roll by ethnicity. These are interesting omissions given the criterion regarding prioritising high needs schools and ECE services, and may have simply been an oversight.

Each of the three DCs interviewed for this research provided copies of the Nutrition Fund application forms and associated information packs, and education subgroup terms of reference used in their DHB. These were compared with the documents and guidance given by the Ministry of Health. The terms of reference used in all three DHBs were directly aligned with the draft version supplied by the Ministry. They each reflected a strong focus on reducing inequalities in health. The results of the comparisons of the other documentation are summarised in table 4.3, over page. This identifies whether the Ministry of Health criteria and question areas have been primarily addressed by DHBs through the application form or the information pack, or in both equally.
### Table 4.3 Consistency of DHB application form and information pack with Ministry of Health guidance

<table>
<thead>
<tr>
<th>Guidance source and criteria covered</th>
<th>Covered in Documentation?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MoH</td>
</tr>
<tr>
<td><strong>National overarching criteria</strong></td>
<td></td>
</tr>
<tr>
<td>Prioritise high needs</td>
<td>yes (both)</td>
</tr>
<tr>
<td>Encourage cluster applications</td>
<td>yes (IP)</td>
</tr>
<tr>
<td>Whole school approach</td>
<td>yes (both)</td>
</tr>
<tr>
<td>Sustainable change</td>
<td>yes (IP)</td>
</tr>
<tr>
<td>Innovative activity</td>
<td>yes (IP)</td>
</tr>
<tr>
<td>Student led (where possible)</td>
<td>yes (IP)</td>
</tr>
<tr>
<td>Transparent selection process</td>
<td>yes (IP)</td>
</tr>
<tr>
<td>Consistent with Ministry of Health Food &amp; Nutrition guidelines and Food and Beverage Classification System, and Ministry of Education guidelines for Healthy, Confident Kids</td>
<td>yes (IP)</td>
</tr>
<tr>
<td><strong>Ministry of Health specimen application form</strong></td>
<td></td>
</tr>
<tr>
<td>Organisational details</td>
<td></td>
</tr>
<tr>
<td>Name, contact details</td>
<td>yes</td>
</tr>
<tr>
<td>Decile/deprivation rating</td>
<td>no</td>
</tr>
<tr>
<td>Type of setting</td>
<td></td>
</tr>
<tr>
<td>ECE service/primary school/secondary school/cluster</td>
<td>yes</td>
</tr>
<tr>
<td>total roll</td>
<td>yes</td>
</tr>
<tr>
<td>Breakdown of roll by ethnicity</td>
<td>no</td>
</tr>
<tr>
<td>Group targeted by project (teachers, students, parents/whanau, canteen etc)</td>
<td>yes</td>
</tr>
<tr>
<td>Project Budget</td>
<td>yes</td>
</tr>
<tr>
<td>quotes required</td>
<td>no</td>
</tr>
<tr>
<td>Plan for implementing project</td>
<td></td>
</tr>
<tr>
<td>explanation of project</td>
<td>yes</td>
</tr>
<tr>
<td>how it will be implemented</td>
<td>yes</td>
</tr>
<tr>
<td>planned outcomes</td>
<td>yes</td>
</tr>
<tr>
<td>how it will be monitored</td>
<td>yes</td>
</tr>
<tr>
<td>curriculum links</td>
<td>no</td>
</tr>
<tr>
<td>community links</td>
<td>no</td>
</tr>
<tr>
<td>whole school/ECE service approach</td>
<td>no</td>
</tr>
<tr>
<td>identification of potential barriers and solutions</td>
<td>no</td>
</tr>
<tr>
<td>what is the need and how was this identified</td>
<td>no</td>
</tr>
<tr>
<td>Who will lead the project</td>
<td>yes</td>
</tr>
<tr>
<td>Other funding sources for project</td>
<td>yes</td>
</tr>
</tbody>
</table>

**KEY:**
- (AF) application form
- (IP) information pack
- (both) both application form and information pack

As the table shows, there were no criteria or questions from the Ministry of Health guidance that were not addressed by DHBs in either their application forms, or their
information packs, or both. In fact there were additional points added by DHBs to their application forms. These are shown in the second half of the table, where a ‘no’ in the Ministry (MoH) column indicates that the question area was not included in the draft form. The additional questions added by DHBs related to information that would enable them to more easily assess the relative need of schools and ECE services. This included decile rating and breakdown of roll by ethnicity. Other questions added by DHBs covered links with the curriculum and community, how a whole school or ECE service approach was being used, and identification of potential barriers and solutions. These also address national criteria areas. In general there was no significant difference between the three DHBs in the degree to which they addressed the guidance from the Ministry in their documentation. The only small difference was the inclusion in the application form of DHB C of an explicit question regarding the need that the project would address, how this need was identified, and how it would be addressed through the project. DHB A and DHB B did not have a separate question on need but did capture similar information with questions on who was targeted, how the project would be implemented and the outcomes sought.

All three District Co-ordinators (DCs) interviewed felt that their DHB had implemented the Nutrition Fund in keeping with the national criteria. In some instances this was not always easy as there were different opinions among education subgroup members, and across DHBs, as to how strictly criteria should be applied. An example raised by the three DCs was the fact that the Nutrition Fund, in keeping with its name, excluded projects related to physical activity. For the DC in DHB A this presented a continual challenge with regard to managing the education subgroup. Several subgroup members were of the view that physical activity should have also been considered for funding and the DC talked about needing to make sure that the group stayed on track:

There were people on the panel who felt that we should have been able to fund a lot of things that did not fit the criteria... there were things that I had to be quite firm about in terms of, this is a nutrition fund. It says nutrition, it’s not about play – DC DHB A

The other two DHBs also felt that physical activity should have been included but, once again, decision making stayed within the guidelines.
Sustainability was one of the national overarching criteria for the fund. In the context of the Nutrition Fund, sustainability refers to the extent to which the changes brought about by the project being funded will continue beyond the end of the grant period. Sustainability was raised several times by DHB staff during the interviews. In their discussions with schools and ECE services preparing applications DCs each ensured that sustainability was considered.

For all three DHBs sustainability was a key focus of assessing applications. The education subgroup looked for evidence that the change brought about through implementing the proposed project would last beyond the end of the project. Projects needed to be able to continue without ongoing funding and they were also looking for projects that didn’t rely on a single person for implementation. An example of this focus on sustainability is given in the following statement:

_We look at what’s already happening in their school or centre. What they have identified as a need... what sort of support the feel they need to make a difference, make a sustainable change... I’ve talked to people about how it can’t just be one person in the school or centre running this [the project], because if you leave then what’s going to happen._ – DC DHB B

Each DC was asked which projects they felt had the potential to be sustainable. The DCs in DHBs A and B both stated that gardens stood out as projects that could be sustainable due to the potential linkages to the curriculum. The DC in DHB C felt that most of the projects that had been funded in their DHB would continue and that this was due to the education subgroup being very consistent about the types of projects that would be funded. The application of a whole school/whole ECE service approach with support from senior management and links with the curriculum and community were key aspects that the education subgroup in DHB C looked for during the assessment process. These points were seen by the DC as being key, with sustainable projects being:

_The ones that took the whole centre, whole school approach. And where the senior management team isn’t necessarily leading it but they’re fully involved with it. And it’s linked into the curriculum, learning. They’ve managed to link the students right in at_
In a limited number of cases exceptions were made with regard to this criterion, however. In the case of one setting, the education subgroup in DHB C approved two applications that were not sustainable from a funding perspective. Both applications involved provision of discounted food through a breakfast co-operative. The nature of the initiative meant that ongoing funding was needed in order to be able to continue providing breakfast foods for sale at a reduced price. The DC was uncomfortable with this being funded but was overruled by the education subgroup. The DC felt that these instances were examples of special consideration being given by education subgroup members to schools that they were already working with.

The DCs considered sustainability important in regard to the type of projects funded, and also in relation to the support they provided to schools and ECE services as part of their role. The DC in DHB B was focused on creating support mechanisms that would last beyond the end of their role. One initiative they undertook was the establishment of a gardening network. This was made up of all schools and ECE services in the DHB that had received funding to develop a garden from the Nutrition Fund. Regular meetings were organised by the DC with guest speakers and visits to different school and ECE gardens each time. The DC believed that this would continue without their role. Similarly to the DC in DHB C, the DC in DHB B was very aware of the potential for projects to founder where only one person is committed to them.

4.2.2 Nutrition Fund processes in DHBs

4.2.2.1 Advertising

Given the time elapsed between DHBs receiving funding for the Nutrition Fund in 2007 and receiving further funding for a DC in late 2008, DHBs had each run at least one Nutrition Fund round prior to the DC coming on board. Advertising for these initial rounds in the three DHBs interviewed was generally through inclusion of information in existing newsletters (for example, in DHB B a regular newsletter is prepared by the DHB and sent to schools), and advertising on the DHB website.
Members of the education subgroup in each of the DHBs also passed information on to schools and ECE services that they were working with. Once they had begun in their roles, the DCs interviewed increased advertising in different ways. These changes are summarised in table 4.4, below.

**Table 4.4 Methods used to advertise Nutrition Fund rounds**

<table>
<thead>
<tr>
<th>DHB</th>
<th>Methods used prior to DC role</th>
<th>Additional methods used by DC</th>
</tr>
</thead>
</table>
| A   | - Use of personal networks (including education subgroup members)  
- DHB website | - Face to face visits with every eligible school and ECE service  
- DC presentations to education organisations |
| B   | - Information included in pre-existing newsletter sent to all schools  
- DHB website  
- Information emailed/faxed to all schools and ECE services. After the first round a bright, eye catching flyer was created  
- Use of personal networks (including education subgroup members) | - Personal approach to schools and ECE services who had not received a grant to date |
| C   | - Use of personal networks (including education subgroup members)  
- Information included within DHB's regular section in local newspapers  
- DHB website | - DC sent a letter to all schools and ECE services  
- Follow up phonecalls to settings in areas of high need  
- DC presentations to education organisations |

In DHB A additional staff were employed for a short period to enable face to face contact with every setting in the DHB in that time. DHB B initially advertised the Nutrition Fund by including details within existing newsletters and on the DHB website. After the first round, for which a low number of applications were received, the education subgroup decided a change of approach was needed. A brightly coloured flyer was designed that included the information as before, but it was presented within a distinctive A4 design. Given the volume of information that schools and ECE services receive, the aim was to make Nutrition Fund related communication stand out. This flyer was emailed and faxed to all settings. DHB C also contacted all schools and ECE services. Their DC wrote to all schools and ECE services shortly after commencing to introduce the role and provide information on the Nutrition Fund. This was followed up by phone calls to schools and ECE services.
in areas determined as high need, either by school decile rating, or deprivation rating of the area in the case of ECE services.

All three DHBs also utilised networks to distribute information. Firstly, personal networks were used to communicate with schools and ECE services. In DHB B the DC was an ex-teacher who used her contacts to pass on information to schools and ECE services and let them know that support was available for the application process. The education subgroup in each DHB included members who had existing relationships with schools and ECE services, for example Health Promoting Schools (HPS) and Fruit in Schools (FIS) co-ordinators. The HPS and FIS co-ordinators were in contact with low decile schools as part of their role and they used these contacts as opportunities to promote the Nutrition Fund. The DCs in all DHBs also contacted education related organisations such as the Kindergarten Association, Playcentre Association, Bernados, and cluster groups of school Principals and arranged to give presentations at their regular meetings.

After DCs had been advised in April 2009 of the disestablishment of their role and funding reductions across DHB HEHA activity from 30 June 2009, they each independently concentrated their efforts for their final Nutrition Fund rounds using remaining funding on seeking applications from higher need settings that had not yet received a grant. An example of this approach is illustrated in the following statement:

*This last round has been advertised a bit differently because it is the last round. What I did was an analysis of who hadn’t had funding before. And also looking at some data provided by the health promoters and nurses on the needs of schools... and came up with a priority list of schools who I’ve approached personally.* – DC DHB B

This personal contact was in addition to the other communication methods used by DHB B. In general, there was a trend of increasing personal contact with schools and ECE services by the DC in all three DHBs over time to encourage more applications. In some cases this was in response to low application volume overall, while in others it was to ensure that schools and ECE services with greatest need had the opportunity to apply.
4.2.2.2 Application process

The application process in each of the three DHBs interviewed was similar. It involved schools and ECE services completing an application form and submitting this to the DHB prior to the closing date for the particular round. Each of the three DHBs interviewed held two Nutrition Fund rounds each year. The application form included questions covering a range of areas as listed in table 4.3, earlier in this chapter. Applications were then assessed by the DHB’s education subgroup against these criteria. The application forms in all DHBs were developed by their education subgroups based on initial guidance from the Ministry of Health. Staff across DHBs shared ideas and draft forms throughout development. All DHBs interviewed provided support in some form for schools and ECE services to complete their applications. DHB A held workshops at set times in order to be able to provide support to as many schools and ECEs as possible. The other two DHBs, being smaller, were able to provide more personalised assistance. DHB C required interested settings to contact the DC, or an education subgroup member, in order to source an application form rather than have it freely available (e.g. via website) as other DHBs did. This was done to ensure that the DHB was able to provide guidance and support to all applicants.

The level of support provided during the application period was tailored to the individual school or ECE service. Some schools and ECE services needed more assistance than others and DCs were responsive to this, as described by the DC in DHB B:

*It [the level of support] depends on the particular school. For some of them who were on my top priority list, I’ve approached them personally and have rung the principals and started a conversation with them. One in particular has been very self-sufficient about it. ... I’ve offered him further support and he’s said, no I’m fine, the application will be there tomorrow. Whereas others have been, you know, like a weekly basis that I go and talk through a step and sit down with them.* – DC DHB B

In all three DHBs interviewed, the application process was refined in some way over the course of successive Nutrition Fund rounds. In general, the changes were limited to the application form itself and were aimed at making completing the form easier for
applicants and assessors to follow. Each DHB interviewed had one standard application form, irrespective of the amount of funding sought. When discussing the changes made to the application form by the education subgroup, the DC in one DHB did raise the issue of the amount of information required compared with the amount of funding being sought. The example they gave was of an application for the installation of a water fountain. This kind of project application was seen as far more straightforward and requiring less information than others.

There was this apple diagram thing that was all about the whole school approach, and there were boxes that they had to fill out about community participation, and family participation, and curriculum involvement, and all the rest of it.... And you’d look at it and think, they just want to put in a water fountain! You know, it was just a bit much... it was appropriate for a lot of the projects... but not for a water fountain. – DC DHB A

As the DC described above, the education subgroup in DHB A revised their application form in light of feedback regarding its length and their own experience of reading and assessing applications. This was common to all three DHBs, who over time attempted to lessen the burden on applicants by reducing the amount of information required. In DHBs B and C, schools and ECE services provided feedback that they felt the form was too repetitious. Both of these DHBs responded by removing some sections.

4.2.2.3 Format of Contracts with Recipients

Of the three DHBs interviewed, DHBs B and C used letters of agreement as the basis for disbursing grants, while DHB A used full contracts in the same format as used for health services. Each DHB had the flexibility to set their own contracting processes. A letter of agreement could be used, which could be created internally within a DHB, or the DHB could use the full contract process managed through Sector Services, within the Ministry of Health. In order to generate a contract within the Contract Management System (CMS) managed by Sector Services on behalf of the Ministry and DHBs, several steps must be completed. Each provider (in this case the school or ECE service) must be registered in the system. The DHB staff member must complete a contract request form and have this signed off internally. Sector Services then generates the contract on the basis of the information contained in the form using a standard contract template. A draft contract is emailed to the DHB staff member to
check. Once approved two copies are sent to the provider to sign. They then return them for signing by the DHB and finally the contract can be activated.

The DC in DHB A discussed the large work load involved in completing the above steps. This process was completely new for schools and ECE services and they needed to be guided through the steps required, as explained by the DC:

*It required Healthpac internal request forms, the works, service spec’s, PerOrg [registration] forms. And schools didn’t have a clue so we had to follow up and coach them through the process…. It was just a lot of correspondence, and paper and chasing. I’m still doing it from last year, and then the next round has just gone out, so it’s unbelievably burdensome for, you know, a $250 grant – DC DHB A*

DHBs B and C used a letter of agreement generated within the DHB as the contract for disbursing grant funding. This did not require as much time as the CMS process discussed above. Both types of agreement provided the means for DHBs to clearly set out what had been funded and the requirements that the school or ECE service needed to meet. DHB B discussed how the use of letters of agreement provided the flexibility to structure agreements according to the value of the grant. For example, they were able to increase or decrease reporting requirements depending on how large or small the project being funded was.

4.2.2.4 Monitoring of projects

All three DHBs included monitoring and reporting requirements in their agreements with schools and ECE services. DHB A required six monthly, written progress reports. DHB B undertook regular follow up of all projects on a three monthly basis, with more rigorous requirements for larger projects. DHB C visited all projects every six months to check progress. The DC in this DHB discussed the need to be very specific in the grant agreement with schools and ECE services. The DC started in the role after one Nutrition Fund round had been completed and found that the agreements created from that first round were not very specific. This made the task of monitoring implementation very difficult. In some cases schools and ECE services in DHB C changed their thinking and the project that was finally implemented was quite different from what the education subgroup had agreed to fund. The other two DCs
interviewed did not encounter this issue as their DHBs had been quite specific in the wording of contracts from the outset.

4.2.2.5 Amount of Time Spent on Processes

The high level of input required meant that the timing of Nutrition Fund rounds defined the workload of all DCs. In DHB A they received up to eighty applications for Nutrition Fund rounds. The DC checked each application as it came in and followed up where additional information was needed. Once applications had closed the DC distributed the documentation to the education subgroup and convened an assessment meeting. After the assessment meeting the DC spent a lot of time corresponding with applicants to let them know the outcome of the education group’s decisions. A paper had to be written for DHB A’s management team to approve the spending for the projects approved by the education subgroup. After this approval was given it took a further month to generate a contract with each of the schools and ECE services approved for funding. Overall the DC in DHB A estimated that they worked fulltime on the process side of Nutrition Fund rounds for two weeks prior to, and after, the closing date for each round.

DHB B also reported spending a significant amount of time facilitating the assessment process but commented that, given the size of the DHB, they had far fewer applications to assist with, and assess. However, the input into some applications by the DC was quite intensive, with weekly meetings for some applicants in the six weeks leading up to the close of applications. This DHB approached assessment slightly differently from DHBs A and C. Instead of each education subgroup member reading and assessing all applications for each round, the applications were divided between the group members. For any given round the number each member assessed was between three and four applications.

The DC in DHB C also allowed time in the lead up to the closure of Nutrition Fund application rounds to provide individual assistance to applicants. This DC kept the six weeks prior to each round closing relatively free of major commitments in order to be available to schools and ECE services needing assistance with completing applications. Schools and ECE services were able to send in draft applications for review and feedback. This proved very time consuming as the DC often received
multiple drafts of applications. Like the DC in DHB A, this DC also commented on the time spent preparing packs of applications for the education subgroup prior to assessment meetings.

### 4.2.3 Support Provided by District Co-ordinator for Schools and ECE Services

Along with work related to the Nutrition Fund, DCs were required to support the implementation of the Food and Beverage Classification System and co-ordinate support given to schools and ECE services. The distribution of schools and ECE services by DHB is shown in the table below.

**Table 4.5 ECE services and schools by DHB (Ministry of Education, 2009)**

<table>
<thead>
<tr>
<th>DHB</th>
<th>Number of ECE services</th>
<th>Number of Schools</th>
<th>Total eligible settings within DHB</th>
<th>% of total eligible national settings within DHB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auckland</td>
<td>320</td>
<td>161</td>
<td>481</td>
<td>8%</td>
</tr>
<tr>
<td>Bay of Plenty</td>
<td>212</td>
<td>120</td>
<td>332</td>
<td>5%</td>
</tr>
<tr>
<td>Canterbury</td>
<td>384</td>
<td>259</td>
<td>643</td>
<td>10%</td>
</tr>
<tr>
<td>Capital &amp; Coast</td>
<td>263</td>
<td>141</td>
<td>404</td>
<td>6%</td>
</tr>
<tr>
<td>Counties Manukau</td>
<td>387</td>
<td>205</td>
<td>592</td>
<td>9%</td>
</tr>
<tr>
<td>Hawkes Bay</td>
<td>192</td>
<td>133</td>
<td>325</td>
<td>5%</td>
</tr>
<tr>
<td>Hutt Valley</td>
<td>139</td>
<td>74</td>
<td>213</td>
<td>3%</td>
</tr>
<tr>
<td>Lakes</td>
<td>132</td>
<td>67</td>
<td>199</td>
<td>3%</td>
</tr>
<tr>
<td>MidCentral</td>
<td>137</td>
<td>116</td>
<td>253</td>
<td>4%</td>
</tr>
<tr>
<td>Nelson Marlborough</td>
<td>107</td>
<td>87</td>
<td>194</td>
<td>3%</td>
</tr>
<tr>
<td>Northland</td>
<td>176</td>
<td>149</td>
<td>325</td>
<td>5%</td>
</tr>
<tr>
<td>Otago</td>
<td>155</td>
<td>153</td>
<td>308</td>
<td>5%</td>
</tr>
<tr>
<td>South Canterbury</td>
<td>32</td>
<td>47</td>
<td>79</td>
<td>1%</td>
</tr>
<tr>
<td>Southland</td>
<td>95</td>
<td>97</td>
<td>192</td>
<td>3%</td>
</tr>
<tr>
<td>Tairawhiti</td>
<td>65</td>
<td>57</td>
<td>122</td>
<td>2%</td>
</tr>
<tr>
<td>Taranaki</td>
<td>95</td>
<td>96</td>
<td>191</td>
<td>3%</td>
</tr>
<tr>
<td>Waikato</td>
<td>358</td>
<td>283</td>
<td>641</td>
<td>10%</td>
</tr>
<tr>
<td>Wairarapa</td>
<td>37</td>
<td>36</td>
<td>73</td>
<td>1%</td>
</tr>
<tr>
<td>Waitemata</td>
<td>396</td>
<td>194</td>
<td>590</td>
<td>9%</td>
</tr>
<tr>
<td>West Coast</td>
<td>15</td>
<td>27</td>
<td>42</td>
<td>1%</td>
</tr>
<tr>
<td>Whanganui</td>
<td>84</td>
<td>73</td>
<td>157</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3781</strong></td>
<td><strong>2575</strong></td>
<td><strong>6356</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

As the figures in table 4.5 show, the number of schools and ECE services within each DHB varies greatly from as low as 42 settings in West Coast DHB, to as high as 643 settings in Canterbury DHB. The amount of funding allocated to DHBs to make
available to schools and ECEs in Nutrition Fund grants was divided accordingly. The
method of allocating Nutrition Fund grant money to DHBs meant that large DHBs
had a large funding pool to distribute. Following this they had more applications to
assess, more contracts to generate, more projects to monitor, and a greater number of
settings to support than smaller DHBs. Given that the level of resourcing for DCs
was not allocated relative to the size of the DHB, DCs took different approaches to
how they supported successful Nutrition Fund applicants, and schools and ECEs
generally. For example, the DC in DHB A, a large, urban DHB, focused on support
mechanisms for all staff in schools and ECE services, such as workshops and printed
resources, rather than attempting to support every project they funded. The workshops
addressed specific topics, including gardening and nutrition for ECE service cooks,
and were available to all interested settings, not just Nutrition Fund grant recipients.
The resources distributed by the DC included charts showing the fat and sugar content
of different foods and beverages, books with information on vegetables and ways to
prepare them for eating, and a health promotion toolkit for school canteens to promote
healthier food choices. Once again, these were distributed widely.

In contrast, the DCs in DHBs B and C, while also providing workshops, were able to
follow up in person for all funded projects. In DHB B the DC met with each project
leader on a three monthly basis, or more often if additional support was required. The
DC in DHB C also had regular scheduled meetings with each project leader. This was
used as an opportunity to encourage the school or ECE service to develop what they
were doing and apply for a future grant rounds, as well as monitoring the
implementation of the grant that they had received. In this way, smaller DHBs were
able to use meetings with project leaders for two purposes, monitoring of the project
and also as an opportunity for further health promotion.

In addition to the individual support provided, a range of groups were set up in DHB
B to support schools and ECEs and to increase the effectiveness of the agencies
working in these areas. The DC in DHB B set up a gardening network and a canteen
managers’ network in the district. The gardening network was set up as an
information sharing and support network. It was made up of schools and ECE services
that had been funded for gardens, and met every six weeks hosted by a different
school/ECE service. Guest speakers were invited to speak on gardening related topics.
The canteen managers’ network met once a term. The focus of this network was on upskilling canteen managers in ways to promote healthier food options.

4.2.4 Collaboration with other agencies

4.2.4.1 Education Sub-group

As discussed in the introduction, each DHB established an interagency education subgroup to meet Ministry of Health requirements. The membership of this group was drawn from those agencies in the DHB that were involved in service delivery to schools and ECE services. Each of the three DHBs interviewed had established and maintained this group throughout the period examined in this research. Many of the agencies represented on the education subgroup were also agencies that the DC worked closely with to support improved nutrition in schools and ECE services. As shown in table 4.6, over page, the membership of the education subgroup in all three DHBs covered a range of organisations in the health and education sectors. Some agencies and positions were represented on all three groups - for example school principals, regional Ministry of Education School Support Services staff (SSS), Regional Sports Trust (RST) staff, and HPS and FIS co-ordinators.
Table 4.6 Education subgroup membership across DHBs

<table>
<thead>
<tr>
<th>Sector</th>
<th>Role</th>
<th>DHB A</th>
<th>DHB B</th>
<th>DHB C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Council</td>
<td>Council physical activity co-ordinator</td>
<td></td>
<td></td>
<td>y</td>
</tr>
<tr>
<td>DHB</td>
<td>District Co-ordinator</td>
<td>y</td>
<td>y</td>
<td>y</td>
</tr>
<tr>
<td></td>
<td>HEHA project manager</td>
<td></td>
<td></td>
<td>y</td>
</tr>
<tr>
<td></td>
<td>Māori health development unit</td>
<td>y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>Board of Trustees member</td>
<td></td>
<td></td>
<td>y</td>
</tr>
<tr>
<td></td>
<td>Regional Ministry of Education ECE service</td>
<td></td>
<td></td>
<td>y</td>
</tr>
<tr>
<td></td>
<td>ECE service/kohanga</td>
<td></td>
<td></td>
<td>y</td>
</tr>
<tr>
<td></td>
<td>Head teacher</td>
<td></td>
<td></td>
<td>y</td>
</tr>
<tr>
<td></td>
<td>Māori education</td>
<td></td>
<td></td>
<td>y</td>
</tr>
<tr>
<td></td>
<td>Pacific Advisor</td>
<td></td>
<td></td>
<td>y</td>
</tr>
<tr>
<td></td>
<td>Principal(s)</td>
<td>y</td>
<td>y</td>
<td>y</td>
</tr>
<tr>
<td></td>
<td>School nurse</td>
<td></td>
<td></td>
<td>y</td>
</tr>
<tr>
<td></td>
<td>Ministry of Education local School Support</td>
<td>y</td>
<td>y</td>
<td>y</td>
</tr>
<tr>
<td></td>
<td>Services (SSS) adviser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>School teacher</td>
<td></td>
<td></td>
<td>y</td>
</tr>
<tr>
<td>National Heart Foundation</td>
<td>Health promotion co-ordinator</td>
<td>y</td>
<td></td>
<td>y</td>
</tr>
<tr>
<td>Public Health Unit</td>
<td>Dietitian</td>
<td></td>
<td></td>
<td>y</td>
</tr>
<tr>
<td></td>
<td>Fruit in Schools co-ordinator</td>
<td>y</td>
<td></td>
<td>y</td>
</tr>
<tr>
<td></td>
<td>Health Promoter (HPS/FIS)</td>
<td>y</td>
<td>y</td>
<td>y</td>
</tr>
<tr>
<td></td>
<td>Health promoter ECE services</td>
<td></td>
<td></td>
<td>y</td>
</tr>
<tr>
<td></td>
<td>Healthy social environments co-ordinator</td>
<td></td>
<td></td>
<td>y</td>
</tr>
<tr>
<td></td>
<td>Public health nurse</td>
<td></td>
<td></td>
<td>y</td>
</tr>
<tr>
<td></td>
<td>PHU Team leader</td>
<td></td>
<td></td>
<td>y</td>
</tr>
<tr>
<td>Rural Education Activities</td>
<td>Education team leader</td>
<td>y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme</td>
<td>Regional Sports Trust</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Education manager</td>
<td>y</td>
<td>y</td>
<td>y</td>
</tr>
<tr>
<td>Other</td>
<td>Neighbouring DHB’s DC</td>
<td></td>
<td></td>
<td>y</td>
</tr>
</tbody>
</table>

In DHB A, the education subgroup met approximately six times each year. Two meetings were focused on the assessment of Nutrition Fund applications. The other meetings were used to discuss related work, for example the DHB used some Nutrition Fund money to provide resources for settings. The other agencies on the education subgroup assisted with the distribution of these resources and promoted the Nutrition Fund while carrying out their own work in schools and ECE services. Some education subgroup members also supported schools and ECE services to complete
applications to the Nutrition Fund. While this input was appreciated by many applicants, there were instances where there were problems from a DHB perspective. In one case, the Health Promoting Schools adviser gave schools advice that was not in alignment with the direction of the education subgroup. This person also agreed to schools significantly changing their project during implementation without discussion with the education subgroup. In DHB B the education subgroup only convened meetings for assessment of Nutrition Fund applications, which happened twice each year. Initially the education subgroup in DHB C meet every six weeks but this became too burdensome for the group’s members and was reduced to meeting twice a year to assess Nutrition Fund applications and four other meetings held once each school term to co-ordinate service delivery.

4.2.4.2 Other education planning and co-ordination groups

Within each of the three DHBs interviewed there was at least one other education focused group operating in the district, in addition to the education subgroup. These groups met more regularly than the education subgroup and were focused on operational matters related to initiatives other than the Nutrition Fund. These programmes included Health Promoting Schools, Fruit in Schools, Healthy Heart Award, and also professional teacher development delivered through Ministry of Education regional SSS offices. In DHB A the other education focused group predated the HEHA investment in DHBs and the Nutrition Fund. DHBs B and C established similar groups after the Nutrition Fund had been in place for some months. In DHB B there were two additional education groups, one focused on schools and the other ECE services. These each included a wider range of agencies than the education subgroup (e.g. Cancer Society), and as was the case for the other two DHBs, had a greater focus on co-ordination between programmes delivered in schools and ECE services. The DC felt that there had been a significant improvement in co-ordination of activities as a result of the operation of these groups. DHB C described the purpose of the second group that they established as providing a forum to undertake joint planning across the multiple programmes delivered in schools and ECE services.

All three DHB DCs had a working relationship with regional Ministry of Education SSS staff in their area. Education staff were involved on the education subgroups of
each DHB. In DHB A this was the extent of ongoing involvement with regard to the Nutrition Fund. However the DC was involved in other work led by the Ministry of Education staff. In DHB B the relationship with education staff outside of the education subgroup was mostly informal as it was a smaller DHB and staff from different agencies often ran into each other anyway. As with the other two DHBs, education staff were involved on the education subgroup in DHB C. The DC in DHB C felt that communication and sharing of information from education was not as good as it needed to be.

4.2.5 Feedback from schools and ECE services

DHBs each received feedback informally from schools and ECE services throughout the operation of the Nutrition Fund. The DCs in all three DHBs interviewed reported that the vast majority of feedback was very positive, and grant recipients were grateful for the opportunity to undertake the projects that they were funded for. As described below by the DC in DHB B, schools and ECE services were enthusiastic about the availability of the grants and what they were able to achieve with the funding they received:

Well a lot of them have come back and been very appreciative of the fact that they can do these things, and have money to do them. And some of the ones that have been most appreciative have been the ones with the smallest amounts of money... I mean literally hundreds of dollars to some of the early childhood centres, and it’s made a lot of difference – DC DHB B

The DC in DHB A also commented on personal feedback they received regarding the support they provided to schools and ECE services in their area. Schools and ECE services were appreciative of the assistance that was provided throughout the application process and found the print resources the DHB distributed very useful.

In the main, any negative feedback received in DHBs A and C centred on the length and content of the application form.

A lot of the negative feedback was around the form and the amount of time it took to complete the form, the amount of repetition there was, and just basically not understanding what information we needed to see to support an application – DC DHB C
As discussed above, DHB education subgroups modified their application forms in response to this feedback in some instances. For example, in DHB A the DC received feedback that the amount of paperwork required was too much. The education subgroup was able to modify the application form but had to comply with the contracting processes used by the DHB. In DHB C the form was reviewed and sections that repeated areas already covered in earlier questions were removed. They also reworded some sections to make them clearer and easier to follow. The DC in DHB B did not receive any feedback regarding the application form or contracting processes but did comment that schools and ECE services readily took up offers for assistance with completion of applications, and that this could be an indication that they were having difficulty.

4.3 What worked well

When asked what they felt worked well regarding the Nutrition Fund and its implementation, all DCs commented on the opportunity it provided for health to engage with education. All three DCs also discussed the networks they developed and the follow-on effects possible from Nutrition Fund projects.

4.3.1 Opportunity to Engage with Schools and ECE Services

The Nutrition Fund provided an opportunity for health agencies to engage with a wider range of schools and ECE services. While HPS and FIS had enabled health agencies to engage with decile 1 and 2 schools, the Nutrition Fund was available to all schools and ECE services. All three DHBs talked about the Nutrition Fund providing a ‘way in the door’. It was both a reason for the DHB DC to go into schools and ECE services, and an incentive for the school or ECE service to be involved in a health initiative. As discussed by the DC in DHB A, Nutrition Fund grants in some cases provided a catalyst for schools with a food service to review and change what they were providing, and also the means to be able to implement changes. As described by the DC in DHB A:

*It was a good opportunity to have a discussion and find out what was going on. It was a good opportunity for a lot of them [schools] to purchase equipment that they needed to improve their food service. A lot purchased freezers so they could have healthier foods from suppliers. A lot of them also purchased equipment for cooking and things...*
that they hadn’t had the opportunity to buy before, like toasted sandwich makers, and popcorn makers, and smoothie makers, that kind of thing. So it improved the range of food, of healthy food, for them. – DC DHB A

In this way the application process was used for multiple purposes by DHBs, similarly to the dual purpose provided by monitoring Nutrition Fund grants, as was discussed above. The application process provided an opportunity to talk with schools and ECE services about nutrition health promotion, as well as enabling change through access to funding. There were also opportunities in some cases to influence school organisational characteristics. The DC in DHB B gave the example of the potential for water fountain projects to lead to changes in school policy and increase the involvement of students in decision making.

I think that the opportunity for schools to buy water fountains... [was able] to support a water only policy in the school. And that’s been good from a number of perspectives. One of which is getting the students themselves involved in where they put them, and how they’re to be used, and that’s made some of the school principals think about involving the students...so we’ve been able to influence that a little bit and get them to talk to the students more. – DC DHB B

The relationship building that took place during Nutrition Fund implementation between the DHB and education settings was viewed as very positive by the DC in DHB B. The DC stated that the DHB had been seen as inaccessible in the past.

The Nutrition Fund, has been valuable for getting us in the door in a lot of places. It’s been the reason to contact the schools, and it’s been the reason to actually visit them and say, you know, I’m from the DHB and we know you exist. Because some of the little schools have said, we thought that we were off the list sort of thing, because nobody had been there for a while. – DC DHB B

The DC in DHB C also talked specifically about the education subgroup members in relation to this as well. The DHB’s education subgroup members also saw the opportunity to approach schools and ECE services to promote the Nutrition Fund but also their own programmes (e.g. HPS).
4.3.2 Networks and support

The DCs in all three DHBs discussed the usefulness of the networks and relationships they developed with their counterparts in other DHBs. The ability to share information and support each other was seen as important. The DC in DHB B saw information sharing as crucial to ensuring funding decisions were consistent. The DC in DHB A spoke about how their role was very different from other Planning and Funding roles, and that there was the potential to feel isolated. They felt that the collegiality the DCs developed was able to counter this. This DC worked regularly with two neighbouring DHBs in particular, and with a further three other DHBs in the wider region, as explained below:

"We worked together quite well with support and sharing ideas.... It was interesting to hear from other people what they were doing with the funding. Different ways of getting the information out there, different ways of administering it, it was really valuable...and really supportive because a lot of the time I was working in isolation.... So having somebody else who understood what I was talking about was great — DC DHB A"

4.3.3 Flow on from Nutrition Fund projects

Another positive aspect of the Nutrition Fund, from the point of view of the three DCs, was the potential for further change as a result of projects. The DHB DCs saw the Nutrition Fund as providing an initial start to potentially big changes in a school or ECE service’s nutrition environment. The water fountain example discussed above by the DC in DHB B illustrates this view. The DC described how the installation of water fountains in some settings in their DHB was the beginning of a process where the next step was the development of a water only policy in the setting, followed by a later review or development of an overall nutrition policy. Gardening projects were also seen by DCs in DHBs A and B as projects that had the potential for further flow on effects. This was due to the variety of ways they could link with the curriculum and the hands on learning they enabled. As the analysis of national grant data in a later chapter will show, gardens were the most common type of Nutrition Fund project. This popularity was discussed by the DC in DHB A who saw it as consistent with a general trend back to gardening in New Zealand.
A lot of vegetable gardens went in; a lot of settings chose to do that.... Kids could go along and help themselves to strawberries and radishes and cherry tomatoes. And it got people thinking, I think it’s had a huge impact on New Zealand generally because a lot of people are into gardening now anyway. So it was just part of that whole flow.... It provides a lot of ongoing learning things for kids around nature as well as nutrition, so that was very popular. – DC DHB A

4.4 What did not work well

When discussing what aspects of Nutrition Fund implementation did not work well, DCs raised difficulties with intersectoral partners, resistance from schools, and the Nutrition Fund application form. In DHB B the DC felt that the application form was something that could have been improved. They felt that it was hard for applicants to know exactly what information was required and that it was difficult to complete. As discussed in section 4.2.2.2, all three DHBs made changes to simplify the application process.

With regard to cross-sector relationships, the DC in DHB C described the difficulty they had working in a situation where staff delivering other programmes had pre-existing relationships with schools. The staff referred to were employed in the Public Health Unit (PHU) to deliver the Health Promoting Schools (HPS) and Fruit in Schools (FIS) programmes, and were members of the education subgroup. The HPS and FIS initiatives predated the Nutrition Fund and staff were already involved with many low decile schools within the DHB. The DC felt that the PHU staff acted as gatekeepers. As explained in the introduction, DCs were located in Planning and Funding rather than the PHU. Being in a separate location may have added to difficulties with working relationships.

Gatekeeping was not raised by the other two DCs. The DC in DHB A instead raised the barriers they experienced to improving nutrition in secondary schools in particular. They saw two factors contributing to the resistance in these schools, as described in the quote below. The first was that older children have more discretionary money and are more likely to buy food from school canteens, or from shops on the way to and from school. The second factor was the imperative in many schools for the canteen to make money.
Some schools owned the canteen and employed the operator and we had the most success in those settings. Some schools contracted an outside supplier... and that was hard to make changes with. Particularly as they were expected to make a lot of money. A lot of schools were resistant because ... what was the point of having health food for lunch [in the tuck shop] when the kids would just go across the road and buy fish and chips? And nearly every school had that problem. Not many schools wanted to put in regulations around going offsite for lunch. Most of them just let the kids do it – DC DHB A

4.5 Guidance from Central Government

Each DC was asked to discuss whether the guidance provided from central government was adequate, and what else would have helped them in their role. In general, DCs reported that the guidance and support was adequate. However, they felt that the Ministry of Health could have provided a better overview of how the DC role fitted with HEHA activity, that there should have been more resources to support schools and ECE services, and that alignment and communication between central government agencies needed improvement.

4.5.1 Amount of information provided

The DC in DHB A felt that more information regarding the overall picture for HEHA implementation should have been provided at the initial DC training workshop run by the Ministry of Health. This would have given the context in which for DCs to place their role. They found that other DCs were a good source of information and ideas once their network developed. This DC also felt that not enough support was available for schools and ECE services outside of the Nutrition Fund to achieve the wider aim of improving their nutrition environment. They believed that greater investment was needed, and discussed the Healthy Heart Award programmes provided by the National Heart Foundation as an example of what could support change in settings. In the DC’s view the financial imperatives faced by canteens, in particular, needed to be addressed so that schools could make healthier food without losing money. They felt that more needed to be done through the Ministry of Education to create and strengthen relationships within schools between food technology and the canteen.

The DC in DHB B replaced the original DC after the last national workshop had been run so could not comment on the guidance that had been provided in the early stages
of implementation of the Nutrition Fund. The DC worked closely with other DCs in neighbouring DHBs and found the national HEHA website to be a good resource. The HEHA project manager in this DHB was also interviewed. They felt that the amount of information given initially was adequate but it would not have been had they not had the network of HEHA project managers to share and compare information with. The project manager felt that on one hand it would have been good to have been given more direction as to the process but at the same time acknowledged that the Ministry deliberately did not do this in order to allow DHBs to develop local solutions.

4.5.3 Communication and alignment between central government agencies

All three DCs raised the issue of communication from central agencies and a lack of alignment between the Ministries of Health and Education specifically. This led to schools being told one thing by staff from regional Ministry of Education offices (School Support Services) and something different by DCs. If alignment had been better at a national level, implementation at district level would have been smoother. In relation to NAG 5, clause iii, the DC in DHB A stated that there was a lack of clarity as to how it should be interpreted, and that the Ministries of Health and Education each interpreted it differently. This clause required boards of trustees of schools where food was sold or provided to provide only healthy options. Clause (iii) of NAG 5 did not specify what healthy foods were but stated that the Food and Beverage Classification System (FBCS) was a tool to assist with selecting healthy option. As explained in the introduction, the FBCS classified food and beverage items according to nutrient criteria into three categories. Everyday foods were the healthiest and should be eaten most often. Sometimes foods were less healthy and should not form a large part of what is available, and occasional foods should only be eaten once a term (Ministry of Health, 2007b). The fact that foods and beverages were not simply either in, or out, left a grey area with regard to interpretation of the NAG as described below.

*When that clause three came out we read it several times trying to work out whether it was a restriction, or a requirement, or a suggestion. And we were told, by education people, that it was a school setting and it was a suggestion. We were to guide them along the process towards eliminating junk food.* – DC DHB A
The DC in DHB A went on to describe a situation where they were speaking at a joint DHB – School Support Services workshop and they were sharply criticised by the SSS representative for the message they were giving regarding NAG 5 clause (iii) and told that they were wrong in front of the participants.

*The Ministry of Health, even now you see in the media people are saying, oh the government shouldn’t have removed the restrictions on junk food. That’s what the Ministry of Health was thinking [that NAG5 clause (iii) restricted unhealthy food]. The Ministry of Education people that we had to work with...were saying, no there’s no restriction on junk food – schools have to make a critical choice for themselves around that. And we were going, no, we’ve been told this! And when I actually fronted up to a workshop and said what I’d learned from the Ministry (of Health) was the message we were giving I was literally told off. Literally dressed down by the School Support Services. It was devastating. – DC DHB A*

**4.6 Conclusion**

This chapter has discussed the results of an analysis of interviews with DHB staff directly involved in the implementation of the Nutrition Fund. It has shown that while the processes involved were time consuming, and education subgroups faced challenges to working together, DHBs followed the national criteria and guidance provided by the Ministry of Health. A key factor in achieving this was the development of personal networks between DCs in different DHBs, and between DCs and end users in schools and ECE services. New relationships were created with schools and ECE services. Together with existing relationships, these connections enabled health agencies access to more education settings. They also facilitated closer connection to schools that had felt disconnected from health agencies. While these connections developed as part of Nutrition Fund implementation, they were seen as providing an opportunity to develop an ongoing relationship that could be utilised for a broader health agenda. The results detailed in the next chapter will present the school and ECE service perspective on the Nutrition Fund.
Chapter Five: The End User Experience

5.1 Introduction

In this chapter the analysis of nine interviews completed with end users of the Nutrition Fund is presented. Its purpose is to illustrate why schools and ECE services choose to be involved in the Nutrition Fund, how they approached their projects, and what benefits they gained from them. This chapter will demonstrate that a range of projects with broad benefits were implemented. These projects often built on pre-existing activity and contributed to changes that were largely sustainable. While the previous chapter highlighted the separation between health and education agencies, this chapter will show that in schools and ECE services, education and health outcomes are linked.

5.2 Projects implemented

5.2.1 Descriptions

The project leaders interviewed had implemented a range of projects. Some had received more than one grant, either for expansion of the original project, or for a new project. Table 5.1, below, lists the projects completed by each of the schools and ECE services that were interviewed. Full descriptions of the projects can be found in Appendix D.

Table 5.1 Nutrition Fund projects implemented by interviewees

<table>
<thead>
<tr>
<th>Identifier</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>A01</td>
<td>Establishment of an edible garden and picnic area in a Kohanga Reo.</td>
</tr>
<tr>
<td>A02</td>
<td>Installation of drinking fountains in a primary school, and a gardening and cooking project.</td>
</tr>
<tr>
<td>A03</td>
<td>Revamp of canteen in a high school.</td>
</tr>
<tr>
<td>B01</td>
<td>Parent education programme developed and run by an early childhood centre.</td>
</tr>
<tr>
<td>B02</td>
<td>Cooking programme led by an early childhood centre for the co-located Teen Parent Unit.</td>
</tr>
<tr>
<td>B03</td>
<td>Gardening/horticulture project in a primary school.</td>
</tr>
<tr>
<td>C01</td>
<td>Review of a primary school lunch order menu and training of students to make lunches.</td>
</tr>
<tr>
<td>C02</td>
<td>Establishment of a breakfast co-op in a primary school collaboration with onsite Kohanga Reo and Pacific Language Nest.</td>
</tr>
<tr>
<td>C03</td>
<td>Development of a garden in a primary school, followed by a cooking project.</td>
</tr>
</tbody>
</table>
5.2.2 Project Aims

A range of aims were discussed by project leaders when describing their projects. All nine had a clear goal, or goals, for their project. For the purpose of comparison the aims identified by interviewees for each project have been grouped into nine common themes in table 5.2, below. These themes were: to increase knowledge (in relation to gardening, cooking or nutrition), to increase skill (in relation to gardening or cooking), to improve nutrition, to improve food security, to provide a hands on learning opportunity, and to increase confidence and empower. There were, however, differences across projects in terms of how these aims were expressed. These differences are discussed further under each theme in this section.

Table 5.2 Summary of Nutrition Fund project aims

<table>
<thead>
<tr>
<th>Code</th>
<th>Project</th>
<th>Increase knowledge</th>
<th>Increase skill</th>
<th>Improve nutrition</th>
<th>Improve food security</th>
<th>Hands on learning</th>
<th>Increase confidence, empower</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Garden</td>
<td>Cooking</td>
<td>Nutrition</td>
<td>Garden</td>
<td>Cooking</td>
<td></td>
</tr>
<tr>
<td>A01</td>
<td>garden</td>
<td>Yes (c &amp; p)</td>
<td>Yes (c &amp; p)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (c)</td>
</tr>
<tr>
<td>A02</td>
<td>garden and cooking</td>
<td>Yes (c &amp; p)</td>
<td>Yes (c &amp; p)</td>
<td>Yes (c &amp; p)</td>
<td>Yes (c &amp; p)</td>
<td>Yes</td>
<td>Yes (c)</td>
</tr>
<tr>
<td>A03</td>
<td>canteen menu revamp</td>
<td>Yes (c)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B01</td>
<td>nutrition education for parents and community garden</td>
<td>Yes (c &amp; p)</td>
<td>Yes (c &amp; p)</td>
<td>Yes (c &amp; p)</td>
<td>Yes (c &amp; p)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>B02</td>
<td>nutrition and cooking education for teen parents</td>
<td>Yes (p)</td>
<td>Yes (p)</td>
<td>Yes (p)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>B03</td>
<td>garden</td>
<td>Yes (c)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C01</td>
<td>lunch order menu revamp</td>
<td>Yes (c)</td>
<td>Yes (c)</td>
<td></td>
<td>Yes (c)</td>
<td>Yes</td>
<td>Yes (c)</td>
</tr>
<tr>
<td>C02</td>
<td>breakfast coop</td>
<td>Yes (c)</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
<td>Yes (c)</td>
</tr>
<tr>
<td>C03</td>
<td>garden</td>
<td>Yes (c)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

KEY: C children or students  P parents

5.2.2.1 Increase knowledge and skill

All project leaders talked about increasing knowledge and skill as a key aim of their project. For all garden projects (A01, A02, B01, B03, and C03), and the two parent education programmes (B01, B02), this was the main aim. For example, teachers at
school C03 had noticed that children did not know where food came from and they sought to address this through their garden project.

*It was that whole gardening experience, which for a lot of them, they didn’t have at home. And where food comes from. We were finding that children in the junior school, in particular, when we did some of those nutrition units - milk comes from the supermarket, and everything just comes from the supermarket, and they didn't know the stage before.* – Project leader school C03

ECE service A01 had a similar goal in relation to teaching children where food comes from. However, they were also concerned with enabling families to have access to fresh produce.

*We wanted to have an edible garden and sustainable food for the tamariki here, and whānau. And teaching – obviously teaching the tamariki about growing their own kai and teaching them that it doesn’t have to come from the supermarket.* - Project leader ECE service A01

For other projects, such as the lunch order menu revamp (C01) and canteen menu revamp (A03) projects, improving the nutritional value of food provided at school was a central aim alongside increasing knowledge and skill. The only exception to having increased knowledge and skill as an aim was the breakfast co-op project (C02), which focused instead on increasing the capacity of parents to provide their children with nutritious food.

5.2.2.2 Improve nutrition

In keeping with the title of the fund, all but two of the projects had improving nutrition as a main aim. The two projects that did not have this as a main aim were both gardening projects (B03, C03), which had as their central focus the learning outcomes possible from having a garden in their schools. The project leaders interviewed at these two schools were aware of the potential for gardening projects to contribute to improved nutrition, but stated that this was not the main reason for undertaking their projects. The other seven projects that did have improving nutrition as a main aim, with the exception of the breakfast co-op, linked this aim with either improving knowledge or skill, or both. This reason for this approach was summed up by the project leader of the garden and cooking project in a decile 1 primary school
(A02) who said that, “If you want to encourage better nutrition then you need to give kids opportunities to see and learn.”

5.2.2.3 Improve food security

Interviewees who were implementing projects aimed at improving nutrition often also recognised that food security was a factor in poor nutrition. This was the case for a gardening project (A01), the garden and cooking project (A02), both parent education programmes (B01, B02) and the breakfast co-op project (C02).

As discussed above, the breakfast co-op was the only project with an aim of improving nutrition that did not also aim to increase knowledge and skill. This was because the driving force behind the project was to provide a supply of low cost, nutritious food to families without taking away from parents’ role as food providers. The co-op project was chosen in consultation with parents as a solution to the high numbers of children either not having a nutritious breakfast, or having no breakfast at all. As explained by the project leader:

We saw a need in our community and we surveyed our classrooms to see who had breakfast and what they ate. Then we canvassed and did a survey out to the parents about whether they would support it, and that was a good response from them...and as I said earlier, we didn't want to set up a breakfast club because we felt that there were still some responsibilities that parents had to own up to and take on board. – Project leader school C02

Access to fresh produce was also mentioned in relation to gardening projects. The project leader for the gardening project in ECE service A01 described the desire for the families involved in the project to be able to grow enough produce to be a significant source of food on an ongoing basis. At ECE service B01 the project leader described a similar goal of providing a low cost source of produce. While not all parents were involved with the garden, it was something that all the children experienced and would share with their families when they got home.

A lot of it's around that flow-on effect. The garden and interests with the children in having gardens at home. The things they do here, they take home. So it's that flow-on effect that we're trying to sort of work with. – Project leader ECE service B01
This desire was shared by the project leader for the garden and cooking project in primary school A02. However, as the project was run in school time by students rather than having the high level of family involvement that the ECE service did, the knowledge needed to be transferred home first. Having the students growing produce and learn how to prepare it was seen by the project leader as a step towards families creating gardens at home. It was this potential to help people who were struggling financially that provided part of the motivation for the project.

The parent education programmes were the result of a similar concern for families’ financial situations. These nutrition education and cooking projects (B01, B02) also sought to improve people’s ability to provide their families with nutritious food. However, they focussed on increasing knowledge and skill in relation to recipe selection, food preparation and budgeting, rather than directly influencing access to food.

5.2.2.4 Hands on learning

When talking about the aims of projects it was clear that how the project achieved the aim was also important. Interviewees commonly talked about the ability of the projects to provide a hands on learning opportunity for the children at the school or ECE services. Examples of this included the lunch order menu revamp (C01), where the children surveyed the school regarding lunch preferences and analysed responses as part of their maths and English curriculum work. The opportunities for linking with the curriculum were also discussed by every interviewee that had implemented a gardening project.

5.2.2.5 Increase confidence, empower

Other aims mentioned by some interviewees included increasing confidence and empowerment, both for children and their parents. For example, the interviewees for two projects completed in schools emphasised the opportunities for increasing confidence of students by involving them in the development and implementation of projects. In the garden and cooking project (A02) the project leader was seeking to foster student led decision making in terms of the ongoing management of the garden and the selection of recipes. In the second school (C01) the desire to empower was explicit in the aim of the project, which was to train and empower students to become
self-sufficient at running the lunch order scheme in their school. The focus on empowering students was characteristic of how this school had operated for some time and, as part of this, they had an active student health committee. Involvement in this committee had positive effects for students, as explained by the project leader:

*The health team was, they volunteered. They were the kids who were interested. They were the kids that felt they could make a difference... [involvement in the health team] gave them confidence to speak out. ...And it's interesting to note that three of those kids, who weren't particularly dominant in that last year, are now very dominant characters in the school, very confident people.* – Project leader school C01

Several projects implemented in ECE services also sought to increase confidence and empower those involved, but in those instances it was the parents who were the focus. This was the case for the parent education projects completed by two ECE services (B01, B02), and the gardening project in a third ECE service (A01). The desire to increase parents’ skill through projects B01 and B02 has been discussed above in relation to increasing food security.

### 5.3 Nutrition Fund process

School and ECE service project leaders were asked to discuss how they found the Nutrition Fund process. Several project leaders (A01, B01 and A03) particularly emphasised their appreciation of the level of support from the DC in their DHB.

#### 5.3.1 Means of hearing about the Nutrition Fund

Project leaders reported receiving information about the Nutrition Fund from multiple sources, but largely through personal contact in some form. Many heard about the fund through their involvement in other related programmes, such as Health Promoting Schools (HPS), or the National Heart Foundation Healthy Heart Awards. For example, the project leader at school C01 heard about the Nutrition Fund while attending a workshop related to HPS, which they had been involved in for some time. This was also the case for the project leader at school C02. They explained that a local HPS group met regularly to share ideas and plan. In other cases schools and ECE services were approached directly by the DHB DC. For example, ECE service A01 was personally approached by the DC, as were all other eligible settings in that DHB.
This was really appreciated by the project leader, as was the support given through workshops, nutrition resources and information specifically around the Nutrition Fund and how to apply. The table below presents the main means of receiving information for each of the settings interviewed. While all three DHBs interviewed used flyers together with emails or letters as part of advertising the Nutrition Fund, only one setting (B02) stated that this was the primary means of their hearing about the fund.

Table 5.3 Main method of receiving Nutrition Fund information

<table>
<thead>
<tr>
<th>Identifier</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>A01</td>
<td>Visit from DC</td>
</tr>
<tr>
<td>A02</td>
<td>HPS workshop, flyer from DHB DC</td>
</tr>
<tr>
<td>A03</td>
<td>PHU staff, visit from DC</td>
</tr>
<tr>
<td>B01</td>
<td>Contact from DC</td>
</tr>
<tr>
<td>B02</td>
<td>Email with attached flyer from DC</td>
</tr>
<tr>
<td>B03</td>
<td>Via a contact who was a member of the DHB HEHA steering group</td>
</tr>
<tr>
<td>C01</td>
<td>HPS workshop</td>
</tr>
<tr>
<td>C02</td>
<td>HPS workshop</td>
</tr>
<tr>
<td>C03</td>
<td>National Heart Foundation</td>
</tr>
</tbody>
</table>

5.3.2 Application process

All nine project leaders felt that the application process used in their DHB was reasonable and the application form manageable. However, they appreciated the support and input provided by the DHB or Public Health Unit staff to help make sure the right information was provided. When discussing the application process, the most common aspect to be raised was gathering quotes for costs. Project leaders in settings B01, B02, B03, and C03 found this the most time consuming aspect of the application. Overall, project leaders understood the need to provide the costings and other information so that DHBs could assess applications for limited funds.

Where projects involved more than one setting, for example the breakfast co-op (C02) and a parent education programme (B02), this presented an additional challenge when preparing the application. Project C02 was led by the primary school but included the kohanga reo and Pacific language nest that were onsite. Project B02 was led by an ECE service but was targeting parents who were enrolled at the teen parenting unit.
next door. In these cases, additional consultation was required during planning of the projects and this took time.

5.3.3 Contracting and reporting requirements
All project leaders stated that the contracting and reporting requirements were fine. Comments made included processes being clear and straightforward, and requirements being easy to meet. One project leader (C02) did comment that, as with the application form, reporting was somewhat time consuming. However, they appreciated the personal visit from the DC at reporting time. This provided an opportunity to talk generally about how the project was progressing and for the DC to see how things actually operated. Another setting in this DHB (C03) also commented on the value of the reporting related visit.

5.4 Challenges during implementation of the Nutrition Fund project
In general, project leaders reported that implementation of their projects went according to plan. Some challenges discussed included: time out of class for students (C01), low level of help to build gardens from staff and community (A2), maintaining motivation over time (B01, C02, C03), and communication between all parties involved in project (A3).

5.4.1 Time out of class for students
The project leader for the school lunch menu revamp (C01) described how the changing of the menu itself was no issue, but the time out of class for the students involved was challenging. The time referred to was not that spent on surveying the school and analysing results, which formed part of English and maths class work, but the time spent preparing lunches each day. Once the new menu was developed a group of students was trained in food preparation and took turns in pairs to prepare the lunches each day. The original intention was that students from different classes would be involved but there was resistance to that from other teachers. Because of this reluctance the responsibility was carried by the project leader. As the students trained in the first year of the project moved on to a new class and a new teacher, the
project leader had to ensure that sufficient students in her new class were trained to take their place.

5.4.2 Low level of input from other staff and community

One project leader in particular talked about the difficulty getting other staff and the community involved in their project. School A02 received two grants. The first was for the installation of new drinking fountains and required no input beyond the decision of where they were to be installed. The second grant the school received was for a gardening and cooking project. Funding for the second project had been received 3 months prior to the time of the interview but the garden was still to be developed. The project leader explained that there were two reasons for the delay. Firstly, more time was needed in order to set the programme up as something that would allow the application of school’s new inquiry learning approach to be used. Secondly, the principal was not comfortable with the idea of relatively newly planted gardens being left untended over the summer holidays. The Nutrition Fund project leader discussed the school’s current focus on addressing low student attainment and the introduction of the new curriculum. Together these were very time consuming for staff and limited their ability to contribute to other activities. This made gaining support and commitment to assist with the project very difficult as explained below:

So the things that are on the outside of that [addressing student attainment and implementing new curriculum] are pushed aside. So the reading and literacy is it. And that does then give difficulties for the scope of other things that we work on in the school. The money that’s available, and the buy-in and time by the teachers. – Project leader school A02

In addition, the project leader did not expect that many parents would be involved in the establishment of the garden as gaining their buy-in was difficult.

We have some parents that are really involved and really committed to the school, but getting some of the other parents to take part, for whatever reason - whether it's memory of their schooling, or dislike or fear of schools and teachers, or just so busy that they can't come in. So it will pretty much just be child and teacher driven, and hopefully bring a few parents in to help. And the kids will then maintain it. – Project leader school A02
As discussed above, the amount of time being spent by teaching staff preparing for introduction of the new curriculum and raising student attainment meant that staff assistance with implementing the project was also low. The project leader stated it was likely that he would be doing the initial development work for the garden in his own time.

5.4.3 Maintaining momentum over time

Other project leaders described how it was a challenge to maintain the momentum of the project over time. The breakfast co-op (C02) required ongoing adult input to run the stall each week. This project was a joint effort between the primary school and the Pacific language nest and kohanga reo located onsite. The project leader stated that there were times when support in the form of providing someone to run the store dropped off from the ECE services. Subsequently the school made regular contact with the other project partners to check that everything was all right. The issue of maintaining interest was also raised by the project leader at school B01. The challenges they encountered during implementation mainly related to the time required to maintain the garden.

5.4.4 Communication between all involved in project implementation

For another project, a key challenge was ensuring good communication between all involved in implementation. School A03 undertook a project to revamp their canteen. The project was led by the deputy principal with assistance from another teacher, and involved canteen staff and students. As explained below by the project leader, there were difficulties with communication between staff.

*The biggest challenge really was the staffing component - the communication between the kitchen staff, the canteen staff, and the teacher who was running the project. The kitchen staff had their toes trodden on... and I had to act as a go-between a few times. In the end the fact that we had to do the healthy NAG, [meant that] they came around.*
– Project leader School A03

The project leader identified the change to NAG 5, clause (iii) as providing motivation for staff to support the project. As explained in the introduction to this
thesis, from June 2008 to February 2009 schools were required by regulation to ensure that the food sold or supplied onsite were healthy.

5.5 Organisational characteristics

The schools and ECE services interviewed shared many common characteristics but also showed some key differences, as shown in table 5.4, over page.

Table 5.4 Organisational characteristics of participating schools and ECE services

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>A01</th>
<th>A02</th>
<th>A03</th>
<th>B01</th>
<th>B02</th>
<th>B03</th>
<th>C01</th>
<th>C02</th>
<th>C03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source of the project idea</td>
<td>Staff &amp; parents</td>
<td>Students (SHC)</td>
<td>Students (SHC)</td>
<td>Staff</td>
<td>Staff</td>
<td>Staff</td>
<td>Students (SHC)</td>
<td>Staff &amp; parents</td>
<td>Staff</td>
</tr>
<tr>
<td>Project led by</td>
<td>Staff</td>
<td>SHC &amp; staff</td>
<td>SHC &amp; staff (DP)</td>
<td>Staff</td>
<td>Staff (P)</td>
<td>Staff</td>
<td>SHC &amp; staff</td>
<td>Staff (P)</td>
<td>Staff &amp; students</td>
</tr>
<tr>
<td>Other people involved</td>
<td>Children &amp; families</td>
<td>Students</td>
<td>Parents &amp; church parish</td>
<td>Senior students, wider school</td>
<td>Parents</td>
<td>Wider school</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guiding frameworks (explicitly discussed)</td>
<td>Māori concepts &amp; practices</td>
<td>Curric.</td>
<td></td>
<td></td>
<td>School values</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management support</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes - HT led</td>
<td>Yes - P led</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes - P led</td>
<td>Yes - P led</td>
<td>Yes - BoT</td>
</tr>
<tr>
<td>Nutrition programmes</td>
<td>HHA</td>
<td>HHA</td>
<td>HHA</td>
<td>HHA, HPS, FIS</td>
<td>HPS, FIS</td>
<td>HHA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key: BoT, Curric., DP, FIS

5.5.1 Source of project idea

Each project leader was asked to describe how the idea behind their project developed and who was involved in planning. For three projects the idea came directly from students (C01, A02, A03). In each case, the school had a school health committee or health team that predated the Nutrition Fund. In two of these schools (A03 and C01), the health committee surveyed the rest of the students to get their views on the changes to the canteen and lunch menu that were being proposed in the respective projects. In a further three settings the idea for the Nutrition Fund project came from staff with input sought from students, parents or from other staff (A01, B01, C02). For example, one ECE service (A01) held regular meetings with family members as part
of the usual management processes in the ECE service. In the remaining three settings the projects were largely staff driven but there were mechanisms in place for parent involvement and feedback (B02, B03, C03). Being able to choose the project, as opposed to registering for a specific programme, was valued.

5.5.2 Guiding frameworks used in development of project

Most project leaders did not explicitly identify any guiding frameworks when asked to describe the development of their projects. However, curriculum links were evident for all projects once implemented. Of those settings where guiding frameworks were discussed more explicitly, one (B02) did describe how the curriculum was used to guide their projects, as planning for these was included within the usual preparation for upcoming terms at the ECE service. Another setting (primary school C02) was quite explicit about the approach taken by the school to planning their project. For them, all school activity was interconnected and related to their values of care and respecting each other. These values incorporated the environment and the wider school community. The remaining setting that described using a guiding framework during project planning was ECE service A01. Their gardening project was based on traditional Māori concepts and practices.

5.5.3 Key people involved with project

The people involved in the planning and implementation of projects ranged from teachers and parents with some child input (for ECE services), to teacher driven with a high level of involvement from children, to more strongly student led projects. Projects in settings A02, A03, C01 and C03 were jointly planned and implemented by students and staff. Projects A01, B01, B03, and C02 were staff led but implemented with students/children and parents. In the remaining setting (B02) the project was largely planned and implemented by staff, but students were involved in some aspects (e.g., selection of recipes for cooking classes). Those interviewed from strongly student led projects were very positive about this approach, as illustrated in the comment below.

\[
\text{It was... empowering for the kids, very empowering, very empowering. And I think that's probably the key to it - that the kids were empowered. It wasn't adult led and I think that's why it's been successful. – Project leader school C01}
\]
All project leaders reported that their school or ECE service had access to the skills and knowledge they needed to implement their project, either within the setting or its wider community. As table 5.4 (above) details, many projects had input from the whole school or ECE service community, including parents. This was true for A01, B01, B03, and C02. This input ranged from helping with gardening bees (A01, B01, B03) and running the breakfast co-op (C02), to providing spare materials for use by the school in their garden (B03). In addition, some projects were led by senior staff in the setting (i.e. head teacher, principal) while others had support from senior staff. All project leaders reported that their projects had good support from the board of trustees or ECE service management.

### 5.5.5 Pre-existing focus on nutrition

In all settings apart from primary school B03, nutrition had been a focus prior to the Nutrition Fund project, to some degree. As indicated above in table 5.4, most settings were involved with a nutrition related programme, such as Health Promoting Schools, Fruit in Schools, or the Healthy Heart Award, prior to their Nutrition Fund project (A02, B02, C01, C02, and C03). In other settings nutrition was still a focus through the curriculum (A01, A03, and B01). The project leader at school C02 described how the Nutrition Fund project was not the initiator of the school’s focus on nutrition, but it did provide a way to strengthen what they were doing.

> Those projects were already in place here at the school, we saw the Nutrition Fund as support for those projects, not as the establishment of the project. It was all of a sudden, wow we’ve been a health promoting school for years and years, and all of a sudden we can tap into this particular fund that is going to boost and help us foster that culture within the school. – Project leader C02

School B03, while not having a focus on nutrition, also sought to build on activities already underway in their school. The Nutrition Fund enabled further development of the school’s gardens, including the building of a raised bed for younger students.
5.6 Benefits of participating

5.6.1 Benefits

Project leaders each identified multiple benefits arising from the implementation of their projects. In keeping with the aims they had identified, the most commonly mentioned benefit was increased knowledge and skill. However, there were many other benefits discussed as well. These are listed for each project in table 5.5.

Table 5.5 Benefits associated with Nutrition Fund projects

<table>
<thead>
<tr>
<th>Benefit</th>
<th>A01</th>
<th>A02</th>
<th>A03</th>
<th>B01</th>
<th>B02</th>
<th>B03</th>
<th>C01</th>
<th>C02</th>
<th>C03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Better quality and more nutritious food available in canteen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeling of empowerment and sense of achievement for the children</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased confidence to apply knowledge and skill in parents’ own lives</td>
<td>x</td>
<td>x</td>
<td>X</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased cooking knowledge and skill</td>
<td>x</td>
<td>x</td>
<td>X</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased gardening knowledge and skill</td>
<td>x</td>
<td>x</td>
<td>X</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Increased numbers of children drinking water at school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning responsibility, teamwork and problem solving</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning something that can help families be self sufficient</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Links with classroom teaching</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Means for parents to provide breakfast for their children</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More healthy food provided by parents in their children’s lunch boxes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunity for children to try new food</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Opportunity for hands on learning</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunity to build links between the school and the community</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Opportunity for the school to engage with parents in a different way</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Place for parents to meet and form friendships</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Producing enough vegetables to share among families</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students enjoy using the space around the canteen to relax at break times</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students have a greater awareness of healthy eating and nutrition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>
The most commonly discussed benefits related to learning opportunities, increased awareness, and increased knowledge and skill. In some cases this was directly related to the cooking and gardening activities of the project (A01, A02, A03, B01, B02, B03, C01, C03). For example, all the adults involved in project A01 gained knowledge and skill in relation to gardening, and the confidence to apply it. They also gained the knowledge that it was possible to be self-sufficient, and some adults started their own gardens at home after being involved with the project. The children also gained knowledge and skill in relation to gardening, and developed an understanding about nutritious food. In addition, they learned about taking responsibility through having their own plant to tend to and being part of a roster for looking after particular plots. A further example of learning related to the project activities was given by project A03, where improving the school canteen was linked to NCEA credits for the senior school students. The project leader felt this was really positive and would take this approach again if there was an opportunity.

In other instances, learning related to trying new foods (A02, B01), gaining nutrition knowledge (A03, C01), skills for self-sufficiency (A01, A02), or learning responsibility, teamwork and problem solving (A01, B03). As illustrated in the quote below, projects, particularly gardens, enabled integration of learning across a range of areas.

"Apart from the garden skills, the horticultural type skills... it fits around our science curriculum - how plants grow.... And you’re looking at health and wellbeing as well. Healthy eating, diet, that sort of thing....it builds a lot of teamwork and things, with kids all working together and that. – Project leader school B03"

The opportunity for hands on learning was discussed by project leaders for A01, A02, B03, and C03 as a key benefit of their projects. For the project leader at ECE service A01, the ability to combine hands on learning with reading and comprehension was seen as important in order to provide children with the best preparation for the future. As explained by the project leader at school C03, applying the knowledge in a practical way meant that children were able to experience gardening and understand that it was something they were capable of doing themselves.
For these children, that’s the benefit as well for them, just learning that it’s not actually that hard. And also being able to link it to the curriculum, and being able to go and show them, rather than just talk about it. – [Project leader school C03]

There were also opportunities to link the project with classroom teaching. For example, children at school C03 completed a class project on seeds. This included reading seed packets and learning how to germinate them. When bad weather damaged the first planting of the garden, it was turned into a learning opportunity and the class did a project on weather. Project leaders for A03, B02, and C01 also emphasised the benefit of links between projects and classroom teaching, as illustrated in the quote below.

It’s actually quite major really, what the kids did. Because they collected the information, they tallied the information, they made the graphs on the computer, they learned to use Excel and made graphs on the computer. There were big off shoots that came from actually getting this underway. – Project leader school C01

In addition to project activities overlapping with teaching activities, Nutrition Fund projects also had the potential to reinforce curriculum messages.

Our children are totally aware of what they should and should not be bringing to school for eating…. So what we’re standing up in front of class and saying about healthy eating and healthy lifestyles and wellbeing, we’re actually demonstrating as well. – Project leader school C02

A less commonly discussed benefit related to empowerment and increased confidence. This was raised in relation to children for project C01, and parents for project A01. In school C01 children led the Nutrition Fund project with facilitation from the project leader. The children came up with the idea for the project and did all the work for the application. In completing the project, the children were able to learn and apply new skills. The project leader felt strongly that the experience of making decisions and following them through, as well as learning from the project work itself, was very beneficial:
I told the kids that we had the funding before I told the boss. We got our funding, we got our funding - yay! And they felt absolutely fantastic that they had done that... It was... empowering for the kids, very empowering. – Project leader school C01

Increased confidence was also evident in the behaviour of parents involved in the gardening project at ECE service A01. Through contributing to the development of the garden, parents gained skill and knowledge in gardening and some then went on to develop gardens at home.

*That first working bee gave so many whānau so much knowledge that they went home and did their own gardens.... I think (the benefits were) a lot of skill, knowledge, and people actually having the confidence to actually apply it.* – Project leader ECE service A01

The benefits of two other projects also applied particularly to parents. These benefits included reducing the isolation experienced by some parents (B01), and the opportunity to engage with parents in a different way (C02). The parent education programme and garden projects implemented in ECE service B01 provided a way for parents to meet and form friendships. This was seen as an important benefit by the project leader as they were aware that many in their community were socially isolated. The project leader for school C02 also identified relationship building as a benefit, but for them it was about the school building relationships with parents. This was seen as very valuable due to parents not always having had a good experience of school.

*One of the things I find with the breakfast co-op is that there are good community links. You can get out there and talk to your parents that are coming in to collect items and just, not necessarily about school, but just how their day has been, and trying to take the principal's hat off and talk to them as a person so they're not feeling threatened about coming to school. Because the community, their own experience of school wasn't great.* – Project leader school C02

This relationship building was in addition to the benefit of enabling parents to provide breakfast for their children. The project leader reported that the response to the co-op had been very strong,
The first year we set it up we were actually blown away by the amount of interest that was shown by the parents. So we felt that our aims were certainly met by having items for them to purchase at a cut rate. – Project leader school C02

Three project leaders were able to identify benefits related to improved nutrition directly after completion of their projects. The project leader for school A02 reported that consumption of water by students had increased.

The three drinking fountains - they're used a heck of a lot more than the old ones that were unsanitary, they were rusty. So then you see kids drinking a heck of a lot more. Bringing water bottles - there's a lot more of those around as well. – Project leader school A02

The project leader at ECE service B02 noticed that food provided by parents in their children’s lunches had improved following the parent education programme. The changes included more lunches with brown bread instead of white, fruit and vegetables cut up instead of packaged snack foods, and inclusion of leftovers from meals made using recipes learned through the programme. More nutritious food also resulted from the canteen revamp at school A03. After the project was completed healthier, better quality food was available at the canteen. Related benefits included the creation of an outdoor space that students enjoyed using and increased awareness of healthy eating.

5.6.2 Negative impacts

While challenges were encountered during project implementation, none of the project leaders interviewed reported experiencing anything that they would class as a negative impact. In some cases staff were initially wary due to the potential for projects to increase their workload, but all impacts of the project were positive.

5.7 Project sustainability

Sustainability was one of the key overarching national criteria for the Nutrition Fund. This criterion referred to the ability of projects to either: be able to continue without ongoing funding (e.g. gardens), or produce change that would last beyond the length of the project (e.g. drinking fountains). Factors impacting on sustainability include the degree to which the project or a focus on nutrition is integrated within the usual
business of the school or ECE service, and whether continued funding is required to keep the project operating.

5.7.1 Curriculum links

As discussed earlier, links with the curriculum were not always explicitly discussed by the project leaders as having guided planning. However, curriculum links were emphasised in relation to almost all projects when discussing their implementation. Exceptions to this were the installation of drinking fountains in school A02 and one of the parent education programmes in ECE service B01. Several project leaders discussed the way that all activity within their school or ECE service was interconnected. As one ECE service project leader (A01) described, the service followed a holistic approach for everything they did. For them healthy eating was a strong feature of planning and activities already, and was covered as a regular part of the curriculum. This view was echoed by the project leader of school C02 who stated that:

*Everything (the school does) is definitely linked. It's like the spokes on a wheel - there's lots of different spokes but they all hold the outside to the inside and are helping the wheels turn.* – Project leader school C02

The level of curriculum linkage was dependent on the type of project. For example, those projects that were implemented by students as part of class work had very strong curriculum links. This was illustrated by school C01 where the development of the project occurred as part of the usual curriculum development. The work undertaken by the children to complete a survey of fellow students regarding lunch preferences and analyse the results contributed to their English and maths class work for that term.

A further example of curriculum linkage was shown in the gardening project by school C03. As stated earlier in relation to benefits, the students did a project on seeds for their class work where they read seed packets and learned how to germinate them. They also examined the relative costs of growing fruit and vegetables compared with buying them at the supermarket. When bad weather damaged the first planting of their garden that was turned into a learning opportunity and the class did a project on
weather. The project leader for this school explained the project’s links with the curriculum further below:

_We looked at how much seeds cost and what’s involved in the growing. We did a lot of budgeting to show the difference between growing it yourself and buying it. So there were all those links in the curriculum that were linking back to numeracy, to maths, problem solving…. It certainly wasn't just the health part of the curriculum we were using._ – Project leader school C03

Given the workload of teachers and the size of the curriculum, the ability to include nutrition health promotion within existing activities was seen as essential by the project leader of school A03. Their canteen revamp project was linked to NCEA credits for the senior school students. The project leader felt this was really positive and would take this approach again if there was an opportunity because, as he stated:

_If it’s not linked to the boys’ learning then there’s no point in doing it. It's just an extra add-on and time is precious._ - Project leader school A03

5.7.2 Links between Nutrition Fund project and other activities

As discussed above under organisational characteristics, in all but one setting the Nutrition Fund project built on earlier work undertaken as part of other nutrition related programmes (e.g. Healthy Heart Award). In the remaining setting the project built on a pre-existing horticulture focus. For all interviewees, Nutrition Fund projects presented opportunities to become linked into ongoing activities and programmes. At ECE service A01, the garden was integrated into usual activities, and planting and tending the garden was part of the children’s normal day at the kohanga. At school C01 the project was an addition to a very strong focus on nutrition that had developed in the school over the past several years. The school had also been involved in Smokefree, Sunsmart, the Healthy Heart Award, Health Promoting Schools, and Fruit in Schools programmes. For school C02, the Nutrition Fund was also an addition to a pre-existing emphasis on nutrition. The school was already involved in the Healthy Heart Award, Health Promoting Schools and Fruit in Schools. The principal talked about how all the programmes relate and feed into each other and the desire to improve nutrition.
All our programmes link. We have an overarching umbrella at the school, I guess, it's our values - we call them CARE. And that's care and respecting each other. And that incorporates your environment, community. Everything we do within the school, we focus on how we are relating back to our values. – Project leader school C02

The project leader for ECE service B01 explained that the plan for the future was to get the garden producing enough so that it was a regular source of ingredients for cooking with the children. This would enhance the children’s learning regarding food growing and nutrition. This approach was consistent with how ECE service B02 used their garden. In keeping with nutrition not previously being a focus for school B03, their gardening project was linked with gardening and horticulture activities rather than any nutrition related programmes. They have had a focus on the environment and horticulture for a number of years.

5.7.3 Funding

Most of the projects implemented were not dependent on ongoing funding in a significant way. The installation of drinking fountains undertaken in school A02 involved only one-off costs so there were no ongoing funding needs. The canteen revamp in A03 also had no ongoing costs. All of the gardening projects were highly sustainable as there were very little ongoing costs associated with these (A01, A02, B01, B03, and C03). The remaining projects each had varying levels of ongoing cost associated with them. For the lunch order project (C01) the school planned to meet the ongoing cost related to training new students each year once the Nutrition Fund grant was used up. The breakfast co-op (C02) also required ongoing funding and the project leader stated that they would need to source this elsewhere once their Nutrition Fund grant ran out. The parent education programmes (B01, B02) also had some ongoing costs, but the project leaders expected that their respective ECE services would meet these as the Nutrition Fund had provided the means for the projects to prove their worth and the resource materials had been developed.

Project leaders were aware of the limited nature of the funding and the need to think beyond the end of the grant. For example, the project leader of the breakfast co-op (C02) had already made links with another school in the area with a breakfast co-op to share ideas regarding the operation of their co-ops and avenues for further funding.
The project leader saw the Nutrition Fund as providing a time limited boost to what they were doing, rather than being the total means for getting projects started, as explained below:

_Those projects were already in place here at the school, we saw the nutrition fund as support for those projects, not as the establishment of the project. … Sustainability has always been in the back of our minds, because nothing lasts forever_ – Project Leader school C02

5.7.4 Ongoing maintenance

Projects varied in terms of the ongoing input required to maintain them. For each of the gardening, cooking and lunch order projects (A01, A02, B01, B03, C01, C03), project leaders reported that ongoing maintenance was done by either students, or students and teachers. In keeping with the links to the curriculum and tie in to class work, gardening maintenance commonly occurred during the school or ECE service day. Project A01 also closely involved whānau, with a roster established for contributing to maintenance of the ECE services garden. The breakfast co-op (C02) required ongoing input from adults to take the orders and distribute the food, and was largely run by parents. Parent education programmes, by their nature, require resource to run in the future. The only project to have no ongoing input from the project team was the installation of new drinking fountains in A02.

5.8 What would have happened without the Nutrition Fund?

Project leaders were asked whether their project could have been undertaken without the Nutrition Fund grant, and whether the grant was sufficient to complete the project. As shown in table 5.6, over page, without the fund the majority of projects would not have been undertaken at all, while three would have been only partially implemented (A03, B01, and B03). As described by the project leader for ECE service A01, obtaining funding grants for these kinds of projects is difficult:

_Without HEHA there was no way that we would have been able to afford getting what we needed for a garden/picnic area. There is absolutely no way. It's hard enough getting funding for things you think people would say yes to, let alone stuff where people say, … garden? Well do it yourself, sort of thing._ – Project leader ECE service A01
Six out of nine project leaders reported that the amount of funding they received was sufficient for their project. In the remaining three schools (A03, C03) the boards of trustees approved additional funding to assist with the project.

Table 5.6 Reliance on Nutrition Fund grant

<table>
<thead>
<tr>
<th>Code</th>
<th>Would the project have been completed without the NF grant?</th>
<th>Did the NF grant provide sufficient funding for the project?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A01</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>A02</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>A03</td>
<td>Yes, but reduced</td>
<td>Additional funding from Board of Trustees</td>
</tr>
<tr>
<td>B01</td>
<td>Yes, but reduced</td>
<td>Yes</td>
</tr>
<tr>
<td>B02</td>
<td>Unlikely</td>
<td>Yes</td>
</tr>
<tr>
<td>B03</td>
<td>Yes, but reduced</td>
<td>Yes</td>
</tr>
<tr>
<td>C01</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>C02</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>C03</td>
<td>No</td>
<td>Additional funding from Board of Trustees</td>
</tr>
</tbody>
</table>

Schools faced the same difficulty as ECE services in gaining funding for projects given other priorities and limited budgets. However, the funding for projects in three schools was supplemented from the schools’ budgets. The project leader for school A02 stated that there was little chance that the school would have been able to do their first funded project, which was the installation of new drinking fountains. They may have been able to buy cheap models at some point in the future but the project leader said that there is always a list of things waiting for funding. Their second project was even less likely to have happened as building a kitchen facility would have also sat low on the priority list for capital works. The school planned to contribute funding for part of the costs of this project but was not able to do so immediately so the facilities will not be completed for some time.

Similarly, school C03 could not have established a garden to the extent that they did without a Nutrition Fund grant. While the school board of trustees was able to provide some funding to this project, without the Nutrition Fund the garden would have been on a far smaller scale, and would not have had raised beds. The funding from the board of trustees meant that the garden could be fenced to protect it from damage
during playtimes. The canteen revamp undertaken by school A03 was the third instance where a school was able to make a contribution to a Nutrition Fund project. However, as for the other projects, if they had not been able to source funding from the Nutrition Fund it would have been very difficult for the school to undertake the project. The project leader stated that the project would have still happened, but over a longer time period as money was made available by the board of trustees. The breakfast co-op project (C02) required ongoing funding to keep operating, and there was a period where the co-op was suspended before a second Nutrition Fund grant enabled it to start up again. As it required ongoing funding to subsidise the food, the school had been looking at other avenues for obtaining grant funding.

5.9 Conclusion

This chapter has presented the results of an analysis of interviews with nine school and ECE service project leaders. These interviews provided rich accounts of the end user experience of the Nutrition Fund and the results demonstrate that end users of the fund were able to implement a variety of successful projects. While gardens were the most common project, a range of projects were implemented across the nine settings. These projects addressed a number of aims, with increased knowledge and skill, and improved nutrition featuring highly. Curriculum links were also common, which indicates that at school and ECE service level health and education are strongly linked. The importance of personal contact and networks was evident for schools and ECE services, as it was for DHB staff in the previous chapter. Personal contact was how the majority of project leaders heard about the Nutrition Fund. This contact was often as a result of involvement in other nutrition related programmes. Overall, these results indicate that the Nutrition Fund did enable improvements to the nutrition environment of schools and ECE services, and, as far as this research could assess, in most cases these changes were sustainable. The next chapter provides a wider context for the results of the qualitative analysis by quantifying the grants awarded nationally by all 21 DHBs.
Chapter Six: National Grant Data

6.1 Introduction

This chapter presents an analysis of the national grant data reported by District Health Boards to the Ministry of Health as part of Nutrition Fund agreement requirements. The key purpose of this chapter is to analyse the distribution of grants in order to assess the reach of the Nutrition Fund. Firstly, the varied distribution of grants by DHB will be described. This is followed by the distribution by setting type, school decile rating, and project type. As most DHBs allowed schools and ECE services to apply more than once during the period that this thesis examines, this chapter will look first at the distribution of grants overall, and then in the second half of the chapter describe how many unique settings were funded within the total grants awarded.

6.2 Grants Awarded

6.2.1 Grant distribution by DHB

During the period from January 2007 to 30 June 2009 a total of 1888 grants to 2066 schools and ECE services were awarded nationally. The total value of the grants awarded was nearly $6.5 million. Some grants were awarded to a cluster of settings, meaning that they covered more than one school or ECE service. The average grant value nationally was just over $3,100. The distribution of grants awarded by DHB, and the average grant value is shown in figure 6.1, over page. As this graph illustrates, DHBs awarded varying numbers of grants and the average grant value also varied across DHBs. The vast majority of DHBs had average grant values between $1,500 and $4,000. As stated above, a grant could cover more than one school. Encouraging cluster applications was one of the national overarching criteria for the Nutrition Fund. However, Nutrition Fund reporting did not directly capture the number of cluster applications. One DHB that did encourage cluster applications was Waikato DHB, which approved 6 cluster applications (Firth, 2009). These clusters ranged in size from 2 to 13 settings, and grant values ranged from $10,000 to $185,000 (Firth, 2009). The impact of the cluster applications in Waikato DHB is clear, with a much higher average grant value compared to most other DHBs (see figure 6.1).
When the number of settings covered by each grant is added to the analysis the average value of funding received by settings in Waikato DHB falls slightly closer in line with the rest of the country (see figure 6.2), but is still an outlier. The other outlier, Lakes DHB, also has a much higher average funding value. This suggests that per school or ECE service, both Lakes and Waikato DHBs awarded higher levels of funding relative to other DHBs. This could reflect a higher number of multiple year projects instead of smaller, shorter projects.
Further analysis of average grant value shows that the variation did not occur in a systematic way across DHBs. Figure 6.3 shows average grant value plotted against the size of each DHB, as measured by the proportion of schools and ECEs contained within the DHBs’ boundaries. While the larger DHBs to the right of the graph had higher average grant values than the smaller DHBs to the left, the trend was not consistent. Tairawhiti, Lakes, and Hawkes Bay DHBs have far higher average grant values than other DHBs of their size. This suggests a different approach may have been taken by these DHBs. However, further explanation is beyond the scope of this research.

Figure 6.3 Size of DHB versus average grant value

6.2.2 Grant distribution by setting type

Overall, the split of grants awarded to ECE services versus schools was slightly in favour of schools. The total grants awarded included 933 ECE services and 1138 schools, which equates to 45% of settings funded being ECE services and 55% schools. However, there was variation in this split, with some DHBs - including Northland, Otago, South Canterbury, Waikato, West Coast and Whanganui - awarding grants to a greater number of schools relative to ECE services. Other DHBs funded more ECE services than schools (e.g. Auckland), but differences were less marked (see figure 6.4). As described in the introduction, the number of ECE services eligible for the Nutrition Fund was higher than the number of schools (3781 compared
Later in this chapter further analysis will be presented that compares the number of unique settings funded against the number of eligible settings.

6.2.3 Grant distribution by school decile rating

As part of reporting requirements, DHBs were asked to provide a breakdown of schools funded by decile rating. Nationally, an emphasis on higher need was evident, with two thirds of grants awarded to schools relating to schools in decile categories 1 to 5 (the highest need schools). As shown in figure 6.5 (over page), 17% of grants to schools were awarded to decile 1 schools, 16% to decile 2, 13% to decile 3, 11% to decile 4, and 11% to decile 5. As school decile rating increases, the proportion of grants received decreases, with decile 10 schools (with the lowest need) receiving 3% of all grants awarded to schools.
6.2.4 Type of projects funded

6.2.4.1 National breakdown

Consistent with the experiences of school and ECE service interviewees reported in the previous chapter, a range of projects were funded nationally. A breakdown is given in table 6.1 (over page). Edible gardens were the most popular project and were included within 61% of all funded applications. The next most popular project types were for food preparation equipment (e.g. chopping boards, knives, toasted sandwich makers and other capital items (e.g. refrigerators, freezers, and drinking fountains). These were included in 29% and 26% of funded applications respectively. Projects categorised as ‘other’ were included in 11% of funded applications. Examples of projects in the ‘other’ category included breakfast co-ops, canteen revamps, and lunch order menu changes. Professional development was included in 10% of grants, and recipe books and other resources were included in 9% of grants. Just as a grant could be awarded to more than one setting, a grant could also cover more than one type of activity. Following this, the percentages given in table 6.1 do not add to 100%.
<table>
<thead>
<tr>
<th></th>
<th>Food preparation equipment</th>
<th>Other capital items</th>
<th>Edible gardens</th>
<th>Recipe books or other resources</th>
<th>Professional development</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of grants</td>
<td>548</td>
<td>497</td>
<td>1164</td>
<td>179</td>
<td>194</td>
<td>203</td>
</tr>
<tr>
<td>% of total grants awarded</td>
<td>29%</td>
<td>26%</td>
<td>61%</td>
<td>9%</td>
<td>10%</td>
<td>11%</td>
</tr>
</tbody>
</table>

6.2.4.2 DHB breakdown

There was a large amount of variation across DHBs in relation to the number of grants including the project types given in table 6.1. Figures 6.6 to 6.11 show the percentage of applications approved by each DHB that included the identified project type. On each graph the national average from table 6.1 is also plotted for comparison. The proportion of grants that included food preparation equipment ranged from 4% (Bay of Plenty and Whanganui) to 52% (Tairawhiti). For most DHBs the percentage of grants including food preparation equipment exceeded 18%, with the exception of Bay of Plenty, Wairarapa and Whanganui.

![Figure 6.6](image)

**Figure 6.6** Proportion of grants including funding for food preparation equipment

The percentage of grants that included funding for capital items also showed a reasonable variation across DHBs. Some DHBs (Nelson Marlborough 3% and
Tairawhiti 4%) had very low proportions of grants including this type of project, while others (Auckland 57%, Capital & Coast 39%, Counties Manukau 36%, Lakes 40%, and Waikato 36%) had high proportions. However, for most DHBs the proportion of grants including other capital items fell between 10% and 30%.

**Figure 6.7** Proportion of grants including funding for capital items (excluding food preparation equipment)

In keeping with the high national figure, the proportion of grants that included funding for edible garden projects was consistently high across all DHBs. With the exception of South Canterbury, all DHBs had more than 40% for this project type (see figure 6.8). The DHB with the highest proportion was Bay of Plenty with 88% of grants including edible gardens. The proportion of grants covering edible garden projects was greater than 60% in 13 DHBs, and greater than 50% in 17 DHBs.
The remaining three project categories each showed wide variability across DHBs. Recipe books and other resources did not feature in the breakdown for many DHBs with 14 DHBs having 10% or less in this category. However, some DHBs (including Auckland 20%, Bay of Plenty 30%, Hawkes Bay 48%, Hutt Valley 27% and Lakes 35%), did have more of a focus on this type of project (see figure 6.9).

**Figure 6.8** Proportion of grants including funding for edible gardens

**Figure 6.9** Proportion of grants including funding for recipe books or other resources
Similarly, staff professional development did not feature highly in grant distribution overall, with the notable exceptions of Canterbury (83%) and Hawkes Bay (55%) (see figure 6.10). In Canterbury’s case, the high proportion reflected their requirement that all grant recipients attend a workshop. Other DHBs also ran professional development workshops but these were not a requirement of receiving a Nutrition Fund grant.

![Figure 6.10 Proportion of grants including funding for staff professional development](image)

The final project category was for ‘other’ projects. The proportion of grants awarded that included this category varied between 0% and 58% (Hawkes Bay), with few DHBs passing 10% (see figure 6.11). For just over half of DHBs (12) the proportion of grants including this project category was less than 15%. In a further 6 DHBs the proportion of grants including projects in this category was between 15 and 25%. 

114
6.3 Individual settings funded

The second half of the chapter examines the allocation of grants with respect to unique settings. In other words, the number of schools and ECE services that received one or more grants each.

6.3.1 Settings by DHB that received one or more grants

In order to ascertain the reach of the Nutrition Fund more accurately, further information was sought from DHBs to enable identification of how many schools and ECE services received more than one grant. Figure 6.12 shows the number of schools and ECE services in each DHB that received at least one grant. Figure 6.13 shows the total number of unique settings funded by DHB. While larger DHBs generally funded more settings, and smaller DHBs fewer settings, there were exceptions. For example, there were also smaller DHBs that also funded an equally large number of settings. For example, the total number of unique settings funded in Otago DHB was greater than all of the large DHBs (e.g. Auckland, Canterbury, Counties Manukau, and Waitemata) (see figure 6.13). See table 4.5 (page 69) for a breakdown of the number of eligible schools and ECE services by DHB.

Figure 6.11 Proportion of grants including funding for ‘other’ projects
Figure 6.12 Number of individual schools and ECE services funded by DHB

Figure 6.13 Total number of individual settings receiving one or more grants by DHB
6.3.2 Unique settings funded as a percentage of eligible settings

The number of unique settings funded was compared with the number of eligible settings within each DHB. Nationally, a high proportion of settings were reached with 28% of all eligible settings (schools and ECE services) receiving at least one grant. When broken into setting types, 24% of eligible ECE services received at least one grant, and 34% of eligible schools received at least one grant. Figure 6.14 shows the percentage of the total eligible settings funded by DHB, and figure 6.15 shows this percentage broken down into schools and ECE services. There was a large variation across DHBs with regard to the proportion of settings reached. The lowest proportion funded was 10% of total eligible settings in Hawkes Bay, and the highest was 81% in the West Coast DHB. Most DHBs (14) funded between 10% and 40% of the eligible settings in their districts during the period examined in this thesis (see figure 6.14).

![Figure 6.14 Percentage of eligible settings that received one or more grants by DHB](image-url)
Figure 6.15 Percentage of eligible schools and ECE services that received one or more grants by DHB

While the Nutrition Fund was allocated to DHBs on the basis of how many schools and ECE services were in each district, it appears that smaller DHBs were able to reach more settings. For example, West Coast DHB, with 1% of the total number of eligible settings nationally, provided grants to more than 80% of the eligible schools and ECE services in its district. Similarly, South Canterbury and Wairarapa DHBs (containing 1.2% and 1.1% of the total eligible national settings, respectively) funded more than 60% of the eligible settings in their districts. Figure 6.16 illustrates this by plotting the percentage of settings funded against the percentage of national settings within the DHB. While there is not a consistent trend, those DHBs that funded the greatest proportions of settings also had a lower proportion of settings to reach to begin with. In addition, as discussed in relation to figure 6.3, smaller DHBs tended to award lower value grants on average.
Figure 6.16 Percentage of settings in the DHB that were funded versus percentage of total national settings located within the DHB

6.3.3 Proportion of schools receiving one or more grants by decile rating

As already stated above in section 6.2.4, the distribution of grants awarded to schools by decile demonstrates a focus on higher need schools. This is further illustrated in figure 6.17 (over page), which shows the proportion of each decile category that was funded nationally. In keeping with a focus on high need settings, nearly half of decile 1, 2, and 3 schools received a grant (47%, 52%, and 44% respectively). For the next two decile categories the rate falls slightly with close to 40% of decile 4 and 5 schools receiving one or more grants. A further fall is evident for the next three categories with schools in deciles 6, 7 and 8 funded at close to a rate of one in three. By decile 9 the proportion receiving at least one grant dropped to below one in five, and for decile 10 there was a further drop to one in ten schools receiving a grant.
Figure 6.17 Percentage of schools receiving one or more grants by decile rating

6.4 Conclusion

Using analysis of the data reported by DHBs, this chapter has described the distribution of grants made through the Nutrition Fund. A significant number of grants of varying sizes were awarded during the period from January 2007 to June 2009. The average grant size varied from just over $1,500 to just over $15,000, but for most DHBs the average grant value was between $1,500 and $4,000. The variance could reflect differences in the size of projects funded, differences in the number of settings covered by the grant, or both. The analysis showed that the distribution of grants prioritised high need settings, with both a higher number of grants awarded to low decile schools, and a higher proportion of low decile schools being funded, when compared with higher decile schools. A similar measure of need was not available from collected data for ECE services.

Based on the categories used for reporting a range of projects were funded across DHBs. These included food preparation equipment, other capital items, edible gardens, recipe books and other resources, professional development, and ‘other’ projects, such as lunch menu redesign and breakfast co-ops. DHBs each awarded grants that included these project types in varying proportions but edible gardens were
included in a majority of grants by all DHBs, and made up 61% of grants nationally. Overall, 28% of all eligible settings received one or more grants. Proportionally, more schools than ECE services were funded, with 24% of eligible ECE services funded compared with 34% of eligible schools. There was variation by DHB as to the degree of reach achieved. From the data it appears that smaller DHBs, by awarding lower value grants on average, were able to provide grants to a larger proportion of eligible settings in their districts. However, DHB size does not explain all of the variation and some smaller DHBs also had lower portions of eligible settings funded.
Chapter 7: Discussion and Conclusion

7.1 Introduction

The aim of this thesis was to examine whether the Nutrition Fund, as a centrally devised initiative, was able to result in successful projects at local level in schools and ECE services. Two broad questions guided the research. The first was: to what degree did implementation of the Nutrition Fund occur in accordance with government guidance? The second question was, how did schools and ECE services develop and implement projects, and what benefits did they perceive that these had produced? The three previous chapters have presented analysis of information from key documents, interviews, and national grant data aimed at addressing these questions. In this chapter the key findings from the research and their relationship to the literatures reviewed will be discussed. The discussion shows that the Nutrition Fund was implemented in accordance with national guidance and that the projects implemented produced nutrition related benefits in schools and ECE services. The most interesting finding from the research was how this was able to occur.

This chapter will outline the particular co-ordination and governance networks that developed during Nutrition Fund implementation. The effectiveness of these networks was central to the delivery of successful Nutrition Fund projects. The mechanisms involved in the networks developed and operated across three levels, using both formal and informal tools. The three levels can be broadly categorised according to the actors at each level as, central government, regional facilitators, and local developers of projects. This research shows that it was the middle layer that was most crucial to the delivery of successful Nutrition Fund projects. As the mediators between central government and end users, DHB DCs and their intersectoral partners connected central government intentions with local motivations and desires. The literature on implementation often presents local creativity as undesirable for successful policy implementation. This is particularly true of top down conceptualisations of implementation, which place little importance on the involvement of local implementers in the development of policy (Peck & 6, 2006). However, in this chapter I will argue that in the case of the Nutrition Fund, this creativity was not only desirable, but also necessary in order to achieve central government objectives for the fund.
This chapter will outline the development and working of co-ordination mechanisms at each layer, and then discuss how the layers interacted to produce local action that met central government objectives. This will be followed by consideration of the limitations of the research, before the chapter concludes by making recommendations for policy and future research.

7.2 The Nutrition Fund co-ordination network

7.2.1 Overview

The Nutrition Fund was a centrally derived, regionally administered policy intervention that was taken up at local level by interested schools and ECE services with the available capacity. Implementation was based on the development of effective co-ordination mechanisms that were able to mediate between central government objectives and local needs.

Policy implementation does not follow a stepwise process from development through to implementation. Instead, policy makers, implementers, and end users are each engaged in an active process of negotiation and renegotiation (Birkland, 2005; Lewis, 2005; Peck & 6, 2006). This process relies heavily on structures, connections and relationships (Lewis, 2005; Peck & 6, 2006). As stated by Lewis (2005), “Health policy is a complex network of continuing interactions between actors who use structures and argumentation to articulate their ideas about health” (p. 14). The use of the term network is appropriate because each element of the policy system is connected and cannot be understood separately from the rest of the system (Lewis, 2005). The elements, or actors, within a network effectively do not exist without the network because the network is the set of relationships and interactions between them (Baygeldi & Smithson, 2004).

The interactions and connections between elements in the network may be planned, and formal, or they may be unplanned, and informal (Mittleton-Kelly, 2003). Policy networks are multidimensional and the component parts continually interact with each other across the different levels (Mittleton-Kelly, 2003). The strength of the connections has a bearing on how information is distributed throughout the system. Mittleton-Kelly (2003) argues that strong connections are important for influencing
the system. However, weaker connections also play an important role in enabling the spread of information across relatively discrete groups of actors (Granovetter, 1973).

The remainder of this section describes the co-ordination network that developed to implement the Nutrition Fund. This network functioned at three levels and included new structures and mechanisms as well as building on those that already existed. Formal agreements were created at central government level and reflected in service requirements with DHBs at regional level. As a result of these agreements DHBs developed tools and networks, both formal and informal, to support implementation of the fund. This middle level formed the bridge from central government to the local level schools and ECE services. At the local level both formal and informal mechanisms were used to develop successful Nutrition Fund projects.

7.2.2 Central government intentions

The central government layer of the co-ordination mechanism involved in Nutrition Fund implementation was strongly reliant on formal tools. These included the relationships between government agencies, funding agreements between the Ministry of Health and DHBs, and the guidance provided to DHBs to implement the Nutrition Fund.

7.2.2.1 Agreement between central agencies

The Nutrition Fund was implemented within the context of cross-government action under the HEHA Strategy and the Mission On campaign. The initiatives in education settings exemplified this joint approach through the collaboration of SPARC, Ministry of Health, and Ministry of Education. The Nutrition Fund was jointly developed by the Ministries of Health and Education under the banner of Mission On. Up until 2007 the relationship between the three Mission On agencies was formalised in the Tripartite agreement discussed in the introduction to this thesis. In 2007 the Tripartite agreement was allowed to lapse and the relationship was instead maintained through the Mission On Joint Officials Group, which met regularly throughout the Mission On campaign. The formal agreements provided a mandate for the three agencies to work together, and the Joint Officials Group a structure through which to progress joint initiatives.
The need for negotiating an agreed approach between government agencies stems from the restructuring of the state sector through the State Sector Act (1988) and Public Finance Act (1989). Under these Acts the public service was reorganised into separate ministries or departments with their own funding allocation and responsibilities in terms of the outputs agreed with their Minister. Each department reports against their agreed outputs to Parliament on an annual basis (State Services Commission, 1998). This structural separation, together with accountability and reporting cycles, reinforces the tendency of departments to act within their own silo, rather than in an interconnected way. Here ‘silo’ is used to describe the separate ways of working followed by each agency: the different processes, objectives, and areas of responsibility. This issue was identified in the 2001 review of the New Zealand Public Sector. The report of the Ministerial Advisory Group that conducted the review identified the need for better co-ordination across government departments in shared issues. They also highlighted the fragmentation caused by having a large number of separate agencies and the impact of this on delivering whole-of-government approaches (State Services Commission, 2001).

7.2.1.2 Funding agreements and guidance

Further formal mechanisms involved in Nutrition Fund implementation were the funding agreements between the Ministry of Health and DHBs. These covered the implementation of the Healthy Eating – Healthy Action Strategy (HEHA), including the Nutrition Fund and the establishment of the DC roles and the cross-sector education subgroups. These agreements reinforced the mandate for the health and education sectors to collaborate to improve nutrition and provided the funding to enable this to occur.

Included within the funding agreements were the requirements to be met by DHBs. These were supplemented with additional guidance from the Ministry of Health in the form of the national overarching criteria, the draft application form, and the draft terms of reference for the education subgroup. Altogether, the funding agreements and guidance from the Ministry of Health to DHBs set out broad parameters for the fund, including who was to be involved in assessing applications, what process should be followed, and overarching criteria for projects. Having this degree of prescription
ensured that the broad policy goals of central government were met while leaving open the type of project that could be funded.

7.2.3 Regional Translation

While the co-ordination mechanisms of the central layer were largely formal in character, at the regional level both formal and informal mechanisms were used. The formal mechanisms included establishment of an education subgroup with associated terms of reference, and an agreed approach to Nutrition Fund application and assessment processes. The other main formal mechanism was the contracts put in place by DHBs to disburse funding to schools and ECE services. The key informal mechanism was the network that developed between DHB DCs.

7.2.3.1 The education subgroup

Education subgroups were established by DHBs in order to meet requirements contained in their agreements with the Ministry of Health. These subgroups were a key formal structure within the Nutrition Fund co-ordination mechanism and were made up of representatives from organisations involved in nutrition and physical activity service delivery to schools and ECE services. Common to the education subgroups of the three DHBs interviewed was having representatives from the regional Ministry of Education School Support Services (SSS) office, Public Health Unit staff (e.g. Health Promoting Schools advisor, Fruit in Schools co-ordinator), and Regional Sports Trust (RST) staff. Remaining group members varied, but commonly included teachers (primary, secondary or ECE service), principals, and the DHB’s HEHA project manager. While the centrally created Tripartite agreement provided a basis for these representatives developing a close working relationship, this research has demonstrated that there were limits to central agreement being transferred to regional level. The experiences of education subgroups indicate that co-operation at the periphery cannot be centrally imposed but must rather be negotiated by the actors involved.

The reasons for this relate in part to the temporary nature of groups or networks such as this, where each group member is a representative of a particular organisation, with particular views and goals aligned with that organisation (Grahber, 2004; Lewis, 2005). In these situations no one member is able to control the behaviour and views of
other members (Mandell, 2001; Grahber, 2002; Lewis, 2005). Each member came to the education subgroup with the same purpose of improving school and ECE service nutrition environments, and this provided the motivation to work together. However, there were several examples in the interview material to indicate that the education subgroup was a site of negotiation between members that each retained their separate identities.

Firstly, differing views between DHB and local Ministry of Education staff of the school healthy eating guideline were reported by one DHB DC. The DC involved felt that their regional disagreement was representative of poor agreement nationally between the Ministries of Health and Education. They felt that despite the Tripartite agreement, the two Ministries’ interpretations of key aspects of the initiatives were not in alignment. Secondly, while Public Health Units (PHUs) and Planning and Funding divisions are both part of DHBs, being part of the same organisation did not guarantee a strong working relationship between PHU staff and DCs. For example, the DC in DHB C described the PHU staff acting as ‘gatekeepers’ to schools in their DHB. In this case, it would seem that while under the banner of the same DHB, Planning and Funding divisions and PHUs have quite separate identities and ways of working.

A third example of negotiation relates to the ministerial directive to focus on nutrition alone, rather than nutrition and physical activity. This was not simply accepted at regional level. Two of the DHB DCs felt that the links between nutrition and physical activity, and the fact that fund formed part of the implementation of the HEHA Strategy, meant that applications should have been able to include physical activity. This was also a point of contention and negotiation within education subgroups, with one DHB DC reported having to keep their education subgroup on track with the nutrition focus as members also wanted to include physical activity.

A further example of negotiation at the regional level was the funding of the breakfast co-op in DHB C. One of the national overarching criteria for the fund was sustainability. As funding was for a limited time period, DHBs were instructed to prioritise projects that would deliver changes that would last beyond the end of the grant period. The co-op required continuing funding in order to subsidise the food
items it offered. This project was developed to address a specific need in the community and was strongly advocated for by an education subgroup member that knew the school community well through their contact with them as part of the Health Promoting Schools (HPS) programme. While sustainability was one of the key national criteria, the education subgroup in this DHB weighed this against the benefits the co-op would deliver for this particular school community.

These examples of negotiation illustrate the fact that policy implementation involves adaptation and negotiation at all levels of the system. Peck and 6 (2006) argue that local actors balance the accountability they have to the community against their accountability to central government (Peck & 6, 2006). In the case of the Nutrition Fund, mediation between central and local levels was undertaken by regional actors. DHB DCs and education subgroups interpreted the parameters of the Nutrition Fund within the context of what they already knew about the nutrition needs of their community and how best to address those needs, and also within the boundaries of the Nutrition Fund as determined by central government (Spillane, Reiser, & Reimer, 2002). These boundaries were reproduced in the terms of reference for education subgroups, which clearly set out the purpose of the groups. The terms of reference, together with the overarching criteria, ensured that the decision making of the group still delivered the national objectives. DHBs stayed very close to the national guidance when implementing the Nutrition Fund. In terms of the key overarching criteria, DHB documents and interview material demonstrated that these were prioritised as directed. In addition, the distribution of grants by school decile confirmed that DHBs each maintained a focus on high needs.

7.2.3.2 Funding agreements with schools and ECE services

In addition to the education subgroup structure and terms of reference, other formal mechanisms working at regional level were the processes used to administer the Nutrition Fund. The Ministry of Health instruction to DHBs was to follow a clear, transparent process (Ministry of Health, 2007). The processes followed in the three DHBs were similar. Rounds were advertised publicly, support was available during the application period to assist with completing required documentation, applications were assessed by an education sub-group, recommendations from this group were
made to the DHB, and the DHB then entered funding agreements with grant recipients.

These processes proved very resource intensive and were time consuming for both DHB DCs and applicants to the fund. While this did not stop DHBs from fulfilling their requirements or applicants from applying, transaction costs reduce the benefits possible from the total pool of funding. Achieving the greatest benefit within available resources is a key consideration for any government health intervention. With a grants process such as the Nutrition Fund, there is a tension between keeping transaction costs down, while still maintaining a level of accountability for funding and meeting the requirements of the Public Finance Act (1988). All three DHB DCs commented on the amount of time they spent on supporting applications, undertaking assessment, and creating funding agreements. While there was wide acceptance of the need for the process, and willingness to complete requirements in return for funding, the project leaders interviewed also commented on the time required to complete applications.

7.2.3.3 District Co-ordinator network

The third main co-ordination mechanism at regional level was the DC network. DCs were entrepreneurial and created an informal regional network to meet their needs. While DHB administration of the Nutrition Fund was based on national guidelines, a grant scheme of this scale had not been funded by the Ministry of Health before so the details of implementation had to be worked out at local level. DHB staff around the country worked collaboratively to do this through the development of informal networks. The three DCs interviewed were each involved in a regional grouping of DCs from neighbouring DHBs in their areas. These networks were highly valued by the DCs for the opportunities they provided to share information on the operation of the Nutrition Fund in different DHBs, but also to support each other as their roles were quite different from their colleagues in their DHB Planning and Funding Divisions.

The DC from DHB A talked about how they felt isolated from the rest of the Planning and Funding staff at their DHB due to their role being different from rest of the group. They stated that their DC network was important in ameliorating this sense of
isolation as well as for sharing ideas and information relating to implementation of the Nutrition Fund. The DCs were the local actors and the development of a collaborative network between them enabled maximum use of their experience to inform on going implementation. This utilisation of expertise was a key factor in the successful implementation of the Nutrition Fund because it was at the local level, not centrally, that the knowledge of how schools and ECE services worked and what they needed was held. The DHB DCs, as the key local level actors, worked together to figure out how to best implement the fund based on their community knowledge (Peck & 6, 2006).

7.2.4 Local implementation

The co-ordination network for Nutrition Fund implementation at local level also involved a mix of formal and informal aspects. Interaction between schools and ECE services and DHB staff during the application process was a formal means of co-ordination in the sense that it was related to the Ministry of Health’s requirements of DHBs regarding the promotion and administration of the fund. In contrast, the pre-existing relationships between schools and ECEs and organisations, such as Public Health Units and the National Heart Foundation, represent an informal mechanism. This section discusses the utilisation of each of these relationship types and their role in Nutrition Fund implementation.

7.2.4.1 Relationships developed by DHB DCs

Making contact with schools and ECE services in some form was an important part of promoting the Nutrition Fund. As was commonly expressed by the DCs interviewed, the Nutrition Fund provided a ‘way in the door’, to connect with schools and ECE services that they had not had before. While programmes such as Health Promoting Schools and Fruit in Schools had been operating for some time, these were limited to low decile primary schools. For organisations concerned with nutrition health promotion delivery in education settings, the Nutrition Fund provided the opportunities to forge new links that could subsequently be utilised to further their implementation of other related programmes. The opportunity to initiate contact with a wider number of schools and ECE services was also recognised by education subgroup members. These people worked for different organisations who each had an interest in service delivery to schools and ECE services. If schools and ECE services
were interested in applying for a grant, the application process provided a further chance to discuss where the school or ECE service was at in terms of nutrition, and to provide support and information regarding health promotion practice generally.

The importance of the opportunity provided by the Nutrition Fund to connect is illustrated by the reactions of schools that did not feel connected with health services when approached by the DHB DC. As reported by the DC in DHB B, some schools felt they were “off the list” in terms of who the DHB was concerned with. For these schools and ECE services the Nutrition Fund provided an important opportunity to connect with the health sector and gain support to enable their setting to further a health agenda. The connection made through the Nutrition Fund could then be maintained and used in the future. This meant there was potential value to be gained from the Nutrition Fund even in situations where a grant application was not successful.

7.2.4.2 Pre-existing connections and relationships

The Nutrition Fund was widely advertised by DHBs using websites, school and ECE newsletters (posted and emailed), local newspapers, and personal networks. This ensured that all eligible schools and ECE services were able to access the fund. However, analysis of project leader interviews indicated that pre-existing personal networks at local level were even more effective in the promotion of the Nutrition Fund.

Most schools and ECE services interviewed were involved with programmes such as the Healthy Heart Awards (delivered by the National Heart Foundation) or Health Promoting Schools and Fruit in Schools (delivered by Public Health Units) prior to the Nutrition Fund. Each of these programmes included face to face support to guide participating schools and ECE services. It was through connections to these programmes that project leaders often first heard about the Nutrition Fund, rather than through mass media advertising. Participation in other programmes meant they were already connected to a degree to the health policy system and already actively involved in the area of nutrition (with the exception of one school which was involved in horticulture). This connection is supported by the fact that work was already underway in their settings prior to the establishment of the Nutrition Fund.
As participants in established programmes, the schools and ECE services had a strong tie into health and nutrition through their relationship with the organisation delivering the programme. For them the addition of a new contact point, in the form of the DHB DC, was not as important in terms of receiving information as it was for others. Following this, it could be argued that some settings were primed by their prior involvement in nutrition programmes to be more likely to apply for the Nutrition Fund. This research is not able to examine the extent to which prior involvement with other programmes was a necessary precursor to application, but the fact that so many of the interviewees were involved in programmes prior to the Nutrition Fund does suggest that it could have been an important contributor to the success of interviewees’ projects.

7.3 Delivering local priorities within a government agenda

7.3.1 Nutrition Fund co-ordination summarised

As the sections above have described, formal and informal tools and co-ordination mechanisms were utilised across three different levels during implementation of the Nutrition Fund. Each of the three layers in the co-ordination network played a role in achieving successful Nutrition Fund projects. Central government provided the mandate for health and education to collaborate and the funding to deliver the Nutrition Fund. It also set the overarching requirements for how the fund could be used, but rather than these rigidly constraining each level of the system and resulting in poor local engagement, they allowed a level of flexibility. Within the space afforded by this flexibility, the DHB actors in the middle layer played the most crucial role because they mediated between the objectives of central government and the aims of school and ECE service communities at the local level. This enabled development of an initiative that successfully drew on local knowledge and energy, was aligned with the principles of health promotion, and also fulfilled the accountability requirements of government.

7.3.2 Consistencies and contradictions with the policy implementation literature

The literature on policy networks and implementation points to the importance of connections within the system. It is through interaction between different actors in the
network that information is translated and the network itself created (Baygeldi & Smithson, 2004). What this research has shown is that DHB DCs and their intersectoral partners were key points of connection, or nodes, between the government at the centre, and schools and ECE services at the periphery. They played an entrepreneurial role, working with schools and ECE services to develop projects that met their needs and also those of central government. The literature emphasises that the translation that occurs during implementation is not simply reproduction because actors seek to exert their own influence over the system (Baygeldi & Smithson, 2004), and policy is interpreted at the local level within existing structures (Peck & 6, 2006).

DHB DCs and education subgroup members negotiated how the Nutrition Fund would be implemented in their districts. These negotiations were based on their own views of the right approach and what the needs of their community were, but at the same time were bounded by the criteria for the fund. This experience contrasts with the suggestion by Booth and Samdal (1997) that central agreement between health and education ministers can flow easily down through central agencies to schools. While reaching such an agreement centrally is an important factor in enabling health-education collaboration, this research shows that the interactions that occur within and between each layer of the policy system also play a key role, and in fact it is the regional and local actors who are the experts in implementation because they translate policy into workable solutions. This local creativity is often presented as a problem in policy implementation research due to the potential variability this introduces. However, the government goal in the case of the Nutrition Fund was to enable local diversity. This goal was in keeping with the health promotion underpinnings of the HEHA Strategy, and diversity in projects delivered at local level was therefore a desirable policy outcome.

A demonstration of the impact of networks is provided by the differing proportion of settings funded depending on the size of the DHB. The analysis of national grant data in chapter six showed that smaller DHBs funded a greater proportion of settings. So whereas Canterbury DHB, which contained 10% of all the eligible settings nationally, funded 18% of their settings (103 grants), a smaller DHB such as Northland, which had just over 5% of all eligible settings, was able to fund 35% of their settings (144
grants). Part of the explanation for this relates to the tendency of most smaller DHBs to award lower value grants on average than large DHBs. This meant that they were able to fund more schools and ECE services. What may also be important is the differential impact of networks on information distribution depending on the size of the region. For example, the DC in DHB B reported that the staff in key organisations all knew each other well due to it being a smaller area. As discussed above, personal networks were the most common way that project leaders first heard about the Nutrition Fund. The number and type of connections between actors in policy networks affects the spread of information (Lewis, 2005). While a stronger tie, such as the connection between a school and the HPS coordinator, ensures information is passed from the Public Health Unit to schools in the HPS programme, weaker ties, such as between teachers at different schools whose children are in the same sports team, make it more likely that information is passed between otherwise distinct groups (Granovetter, 1973). Weak ties between groups are an essential part of the information diffusion process because, without those ties, relatively distinct groups within a population would not otherwise interact or share information (Granovetter, 1973). It may be that in a smaller geographic area different groups, such as teachers and health agency staff, are more likely to have some form of connection between them than in areas with larger populations. If this was the case, information on the Nutrition Fund would have been more likely to achieve greater diffusion in smaller DHBs than larger ones.

7.3.3 Nutrition Fund benefits: stretching the health envelope

The scope of the Nutrition Fund meant that it could deliver a broad range of projects and benefits. Many of these benefits went far beyond addressing nutrition to also encompass empowerment, learning outcomes, and community links. The ability to generate their own solutions and ideas was appreciated by the end users of the fund and allowed them to complement the more structured activities undertaken as part of other programmes. A key principle of the Ottawa Charter for Health Promotion is to empower people and communities so that they can gain control of their own health (World Health Organization, 1986). Being able to determine what activity will be done to improve nutrition is a key ingredient to achieving this empowerment.
Teaching and learning were central features of Nutrition Fund projects. In keeping with the role of education settings, increased skill and knowledge were very strongly reflected in both the aims and benefits of the projects examined. School-based health interventions are therefore both valuable for learning in its own right and valuable because of the effect that learning with peers has on children and young people. Interaction with people and the environment plays an important role during the learning process (Nutbeam & Harris, 2004). The influence of peers is a key part of the success of school-based interventions as children and young people are more likely to modify their behaviour if their peers do also (Ozer, 2007).

The desire to increase knowledge and skill was also consistent with the choice of project types. Analysis of the national grant data showed that the majority of grants awarded were for gardening and food preparation equipment. These projects are strongly related to teaching and learning. Gardening and cooking are very hands on activities and also link well with the curriculum. Gardening is commonly undertaken as part of class time in United States and British schools, and in some areas specific curriculum development has been undertaken to guide the use of school gardens as a learning tool in order to maximise the potential linkages across the different areas of the curriculum (Graham, et al., 2005). In addition, school gardens have been shown to be effective at increasing knowledge of, and preferences for, vegetables (Morris, and Zidenberg-Cherr, 2002; Graham et al., 2005; Hermann et al., 2006; and Parmer et al., 2009).

The opportunity to undertake activities that complemented the curriculum was likely to have been a key factor in the strong uptake of the Nutrition Fund. Integration of projects with teaching and learning is essential from the point of view of managing time within already very busy education settings. Added to this is the need to contribute to the core business of education settings, rather than be an add-on. Curriculum integration ensures that projects contribute to the business of schools and ECE services and become a part of the everyday fabric of these settings. This is an important factor in long term sustainability (Woolfe & Stockley, 2005).

Aside from learning related benefits Nutrition Fund projects were able to contribute positively in other ways. In addition to the establishment or strengthening of health-
school relationships, Nutrition Fund projects also provided opportunities for schools and ECE services to build relationships with parents. The breakfast co-op provided an example of this potential, but the desire to connect with parents was raised by other project leaders as well. Where parents may have had a less than positive experience of school themselves, they may be less likely to get involved in their children’s schooling. However, the co-op illustrates the potential for projects to assist with the development of more positive relations by providing a different context for interaction. Other Nutrition Fund projects, such as the parent education programmes and gardens, also had the potential to engage parents and the wider school or ECE service community. This engagement is central to a family/whānau centred approach, and a crucial part of improving Māori health outcomes (Minister of Health & Associate Minister of Health, 2002). Children and young people are not separate from their whānau, which is a key foundation within Māori models of health (Durie, 2004; Rochford, 2004). Involvement of parents and whānau increases the alignment of messages at home with those at school. This is important for supporting young people to make healthy choices (Booth & Samdal, 1997).

The broad benefits discussed above were only possible because of the flexibility allowed by central government for locally determined solutions. This enabled projects to deliver wider benefits beyond improved nutrition and shows the potential for grant schemes to achieve health and social outcomes.

7.4 Limitations of the research

While this thesis has provided important insights into policy implementation in a decentralised health system, its limitations need to be considered. These include the focus on process rather than outcomes, the means of selecting participants, and the range of participants covered in the interviews. This thesis has deliberately focused on understanding the processes involved in the implementation of the Nutrition Fund and it has not attempted to deliver an evaluation in a formal sense. In terms of how evaluation is conceptualised, this research contributes to the first stage of evaluation, namely process, or formative, evaluation (Hawe, Degeling & Hall, 1994). Consideration of the impacts and outcomes of the Nutrition Fund was beyond the scope of the research. The time period between completion of Nutrition Fund projects
and interviews also meant that this research was not able to assess the long term sustainability of projects.

In addition, selection of participants was undertaken purposively rather than using a random sample. While this method of selection was chosen so that the research could focus on successful Nutrition Fund project implementation, it does limit the generalisability of results. Given the scope and timeframe of this research, only three DHB areas were included, and only three education settings within each of them. DHBs vary considerably in terms of geography, population size and composition, levels of deprivation and health needs. The DHBs included were chosen in order to cover as much of this variation as possible. However, there were factors, such as geographical isolation, that were not able to be included. The number of schools and ECE services that could be included in this research was also limited. Of the nine interviews completed, the majority were with primary school project leaders. It was not possible within the number of interviews completed to cover the full range of variation in education setting types and decile ratings, in the case of schools. It was also not possible to explore why some schools and ECE services had not applied to the fund or, if they had applied, why they had been unsuccessful.

7.5 Recommendations for policy

While acknowledging the limitations described above, the findings of this research hold some important implications for policy. These relate to local and regional engagement in the development of cross government agreements, reducing transaction costs, identifying and addressing predisposing factors to participation, investing in support for schools and ECE services for this kind of initiative, and curriculum development. These implications, together with accompanying recommendations, are detailed below.

7.5.1 Engage regional and local actors in central government agreements

Regional level collaboration, as demonstrated in this research by the education subgroup, has the potential to achieve co-ordination between different agencies and sectors. However, it takes time to build relationships across sectors and develop shared understandings for joint work areas. While an agreement was reached
centrally, in the form of the Tripartite and Mission On, this did not necessarily translate to agreement at DHB level as evidenced by the negotiations that took place between education subgroup members. Future cross-government initiatives would benefit from including representatives of local level agencies in the negotiations that occur centrally during its development. This would facilitate smoother implementation by ensuring that local level realities are better reflected in the original policy. This could potentially reduce the amount of local level renegotiation required later in the process in order to implement initiatives and policies.

7.5.2 Reduce transaction costs

While Nutrition Fund grants proved an effective means of generating activity in schools and ECE services, the administration of those grants was time consuming and resource intensive. In order to maximise the amount of funding that can be allocated to the desired activity through the project grant, future schemes should focus on keeping transaction costs as low as possible. In some cases DHBs used the same contracting process they used for health services to disburse grants. Given the relatively very low value of Nutrition Fund grants, this was unnecessarily burdensome. With clearer direction from the Ministry of Health as to the level of accountability, and hence type of funding agreement required, DHBs could have reduced the resource required to process the funding.

The use of grant schemes to fund local activity is common across government departments and schemes range from sustainable farming to business development (Ministry for the Environment, 2010). However, these are generally centrally managed rather than devolving decision making to regions or local communities as was the case for the Nutrition Fund. One such grant scheme that provides an example of a way for central government to fund local communities with low transaction costs is the Ministry of Social Development Community Action Fund. This scheme is run as part of the campaign against family violence and its application form includes a declaration section at the end where applicants agree to implement the project as stated in the application if they are successful (Ministry of Social Development, 2010). Having the funding agreement integrated with the application form removed the need to undertake a further contract generation process after selecting successful
Applicants. Using a declaration given as part of completing an application form in place of a separate contract for successful applicants would have been well suited to the relatively low amounts of funding involved in the majority of Nutrition Fund projects.

An alternative approach would be to simplify the fund and provide one-off grants of a fixed value, and reduce reporting requirements. This was the approach taken by the Australian School Health Incentive Programme (SHIP) grant scheme which limited the amount of funding a school could apply for to $1000 (Cass, Price, & Rimes, 2005). They also did not use a contract to process the funding but simply provided each school with a cheque to be used for the activities covered in their application (New South Wales Government, 2007). Follow up of projects was undertaken selectively with short case studies written to share ideas and experiences. Further evaluation of the scheme is planned in 2010 (New South Wales Government, 2007). While the information available suggests a far less time consuming approach to administration, it should be noted that this corresponded to a limited amount of funding per school. Whereas schools and ECE services in New Zealand were able to apply for funding to cover the full cost of their projects, the SHIP grants were set up as a seeding grant only, with schools responsible for sourcing any other funding needed.

7.5.3 Identify potential predisposing factors to participation

This research suggests that successful Nutrition Fund project implementation was related to prior relationships and participation in health programmes, although not all the schools and ECE services interviewed fit this criterion. This raises the question of whether access to the Nutrition Fund flowed along and strengthened pre-existing networks of connection, rather than forging new ones. The literature on policy networks and complex systems argues that information is more strongly transferred via closer connections and when elements of the system are more interdependent (Mittleton-Kelly, 2003). Any future grant scheme needs to consider whether the likelihood of involvement is higher for some potential participants than others due to previous experiences and existing relationships. Where differences are identified, the scheme should be set up in such a way to ensure additional reach. For example, some
DHBs set up workshops specifically to assist with the application process. This reduced the potential barrier of the application process itself.

7.5.4 Invest in additional health promotion support for schools and ECE services

Many of the schools and ECE services included in this research were already involved in other health or nutrition programmes, such as the National Heart Foundation’s Healthy Heart Award or Health Promoting Schools. Through this involvement they had been able to gain access to face to face advice and resources to support them to improve health. For these settings the funding received through the Nutrition Fund enabled them to enhance existing activity. Making changes to school or ECE service nutrition environments is a process that occurs over time. Given the fact that often one teacher leads this work and education settings are already very busy, the input of an outside support person can be important for maintaining momentum. While the Nutrition Fund included a DC in each DHB, the number of settings that could be given personal support by this co-ordinator was limited, especially in larger DHBs. Investing in some form of ongoing support for schools and ECE services, ideally through enhancing already proven programmes, would ensure that the gains made through Nutrition Fund projects can be consolidated and extended over time.

7.5.5 Undertake curriculum development

Opportunities for enhancing teaching and learning were commonly sought by the projects leaders interviewed for this research. Linkage with the curriculum was viewed as highly important for projects. Gardening was one project type that has strong potential to contribute to several aspects of the curriculum. It was also the single most popular type of project funded through the Nutrition Fund. If gardens are to be supported as activities in schools and ECE services into the future, consideration should be given to maximising the learning benefits from gardening by undertaking appropriate curriculum development, as has occurred in other countries.

7.6 Recommendations for Future Research

The research presented in this thesis provides a picture of the experience of three DHBs and nine end users of the Nutrition Fund. While the results of the research have enabled key themes regarding policy implementation and health promotion to emerge,
it is a partial picture of the implementation of the Nutrition Fund. In order to fully understand the degree of effectiveness of the fund, a complete evaluation is required. A full evaluation would cover process indicators but would also include impact and outcome evaluation. It would have a wider scope and include the views and experience of intersectoral partners at local level, and central government agencies. A full evaluation should also include measures to enable assessment of the cost effectiveness of the initiative. Such research would provide impetus for funding similar initiatives in the future, and would address a large gap in the literature as very little has been published on the use of grant schemes in health (or other sectors).

Aside from the need for a full evaluation, the findings from this research point to particular areas where further research is required. Questions raised by this research include the degree to which Nutrition Fund participation was dependent on prior involvement in a nutrition or health programme. A research design that employed a representative sample of all schools and ECE services, Nutrition Fund recipients as well as those that were not, would be needed to answer this question. The research in this thesis was also only able to make limited comment on the sustainability of Nutrition Fund projects. Further research is needed that includes follow up of projects over time in order to assess what projects are able to be maintained.

7.7 Conclusion

This chapter has discussed the findings of this research in relation to literatures on policy implementation and health promotion. The research found that the implementation of the Nutrition Fund occurred via the development of an effective, multi-layered co-ordination network. This network was constructed from a mix of formal and informal mechanisms. It did not conform to the normative models of top down policy implementation, but rather than presenting an impediment, this enabled successful projects to be delivered at local level. Central government set the overarching requirements for how the fund could be used, but instead of these being rigidly expressed at each level and resulting in poor local engagement, the actors at regional level mediated between the other two layers and enabled successful development of local projects.
Consistent with international research, this thesis showed that centrally agreed policy is not simply translated into local level implementation but is rather negotiated at each level. Findings also indicated that centrally driven policy initiatives can be successful where flexibility is given to local implementers to allow them to meet the needs of their communities. In contrast to some policy implementation research, the implementation of the Nutrition Fund shows that there are situations where it is desirable to have local flexibility in order to achieve the policy aims sought at the centre. The clear national guidelines ensured key policy goals were met, while at the same time allowing a wide degree of flexibility in terms of project types eligible for funding. This allowed schools and ECE services to deliver broad benefits through their projects and integrate them with the curriculum. It also gave scope to engage the interest and motivation of schools and ECE services to decide on what project they would complete.

These findings also lend support for a settings based approach to health promotion. The features of a settings approach include the access that is achieved by focusing on a particular setting, in this case schools and ECE services, and the ability to tailor health messages to different audiences (O’Connor-Fleming & Parker, 2001). Analysis of national grant data indicated a good level of reach and DHB DCs commonly referred to the ability of the fund to provide a ‘way in the door’ to schools and ECE services. Regarding tailoring of messages, the integration of Nutrition Fund projects within classroom or ECE service learning activities meant that the information was delivered in an appropriate way for the age of the children.

Despite its limitations, this research has a number of important implications for policy. Firstly, all levels of the policy system need to be involved in the negotiation of any cross-sectoral agreements, rather than assuming that agreement will flow from the centre to local actors. Secondly, accountability for funding needs to be balanced against transaction costs to streamline the operation of future grant schemes. A third implication for policy is the need to anticipate differences in uptake, and to develop responses to these. The final two implications relate to specific characteristics of schools and ECE services. While education settings can be responsive and willing to act to address health needs, organised support is important to achieving this. Finally, the potential for schools and ECE services to undertake projects with both health and
education benefits is strong and could be strengthened by curriculum development specific to certain projects.

Poor nutrition and obesity present significant health concerns in New Zealand. The Nutrition Fund formed part of wider government action to improve the nutrition of children and young people. This thesis has investigated aspects of the implementation of this initiative as an example of health policy in action, and as a health promotion initiative. While the findings of this thesis require further investigation, they add to the evidence in support of settings based health promotion and provide ideas for improving the implementation of similar policy initiatives in the future.
References


Appendix A

NUTRITION FUND STUDY
INFORMATION SHEET FOR
DHB PARTICIPANTS

11/08/2009

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part there will be no disadvantage to you of any kind and we thank you for considering our request.

Please note that this project has been reviewed and approved by the Department of Public Health, University of Otago, Wellington.

What is the Aim of the Project?

This research is being conducted as part of study towards a Master of Public Health degree.

The aim of this research is to investigate the effectiveness of the Nutrition Fund as a tool for change in schools and early childhood education services. The research will examine how the Nutrition Fund has been implemented, its reach, and whether school and early childhood education (ECE) services feel that the grant they have received has supported them to improve the nutrition environment in their schools or ECE service.

What Type of Participants are being sought?

District Health Board staff that are responsible for the management and administration of the Nutrition Fund are sought to participate in this research.

What will Participants be Asked to Do?

Should you agree to take part in this project, you will be asked to participate in an interview of approximately one hour’s duration. The interview results will be made anonymous. These interviews will include questions relating to the Nutrition Fund application process, the assessment of applications, and assistance provided to schools and ECE services to apply and implement projects.

Can Participants Change their Mind and Withdraw from the Project?

You may withdraw from participation in the project at any time and without any disadvantage to yourself of any kind.

What Data or Information will be Collected and What Use will be Made of it?

The interviews will be audio-taped and transcribed.
This project involves an open-questioning technique where the precise nature of the questions which will be asked have not been determined in advance, but will depend on the way in which the interview develops. Consequently, although the Department of Public Health, University of Otago, Wellington, is aware of the general areas to be explored in the interview, the Department has not been able to review the precise questions to be used.

In the event that the line of questioning does develop in such a way that you feel hesitant or uncomfortable you are reminded of your right to decline to answer any particular question(s) and also that you may withdraw from the project at any stage without any disadvantage to yourself of any kind.

You will not be identified by name or by your specific organisational position in any reporting of the research. The data collected will be securely stored in such a way that only the researcher (Kirsty Craig) and her two supervisors (Geoff Fougere and Dr George Thomson) will have access to it. At the end of the project any personal information will be destroyed immediately except that, as required by the University's research policy, any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed.

Reasonable precautions will be taken to protect and destroy data gathered by email. However, the security of electronically transmitted information cannot be guaranteed. Caution is advised in the electronic transmission of sensitive material.

The information from the interviews and other sources will be used to assess how effective the Nutrition Fund has been in supporting and facilitating improved nutrition in schools and early childhood education services. The results of the project will be available in thesis form in the University of Otago Library (Dunedin, New Zealand). They may also be used for publication in academic journals and other media.

You are most welcome to request a copy of the results of the project should you wish.

**What if Participants have any Questions?**

If you have any questions about our project, either now or in the future, please feel free to contact any of the following people:-

Kirsty Craig  
Department of Public Health  
Telephone: - 04 918 6040

Geoff Fougere  
Department of Public Health  
Telephone: - 04 918 6046

Dr George Thomson  
Department of Public Health  
Telephone: - 04 385 5541 ext. 6054
NUTRITION FUND STUDY
CONSENT FORM FOR
DHB PARTICIPANTS

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:-
1. my participation in the project is entirely voluntary;

2. I am free to withdraw from the project at any time without any disadvantage;

3. the audio recordings will be destroyed at the conclusion of the project but any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed;

4. this project involves an open-questioning technique where the precise nature of the questions which will be asked have not been determined in advance, but will depend on the way in which the interview develops and that in the event that the line of questioning develops in such a way that I feel hesitant or uncomfortable I may decline to answer any particular question(s) and/or may withdraw from the project without any disadvantage of any;

5. The results of the project may be published and available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve my anonymity; and

6. This project has been reviewed and approved by the Department of Public Health, University of Otago (Wellington).

I agree to take part in this project.

.......................................
...............................  .......................................
(Signature of participant)  (Date)
DHB Questionnaire

Date:
Name of DHB:
Name of interviewee:
Position title:

Thank you for agreeing to be interviewed. I am researching the impact of the Nutrition Fund and would like to ask you some questions about the implementation of the Nutrition Fund in your DHB.

The interview will take approximately 60 minutes. I will be recording the interview. All information will be kept confidential and you and your DHB will not be identifiable in the write up of this research.

Do you have any questions about the research project or today’s interview?

1. What steps did the Nutrition Fund grants process follow in your DHB?
   a. How were rounds advertised?
   b. What did the application process involve? How were schools and ECE services supported in this process?
   c. Who assessed the applications and what steps did this process follow?
   d. What information was asked about need in the application form and how was this used in the assessment of applications? (e.g. decile rating, ethnicity breakdown of roll)
   e. What contractual and monitoring arrangements did you put in place between the DHB and grant recipients?

2. Was the application and assessment process refined over time? If so, what lead to these changes?

3. What form has your involvement with schools and ECE services taken throughout implementation of the Nutrition Fund?
   a. How much of your time was spent managing the application and assessment process?
   b. How much of your time was spent supporting implementation of projects?
   c. How much of your time was spent on other tasks? What were these tasks?

4. What other agencies did you worked with in relation to the implementation of the Nutrition Fund?
a. What level of involvement did these agencies have? (i.e. member of DHB education subgroup, worked directly in schools and ECE services)

b. In particular, how close a working relationship did you have with regional education staff?

5. Aside from the Nutrition Fund, are there other avenues available to schools and ECEs to get funding for projects that you know of?

6. From your perspective, what do you think has worked well regarding the Nutrition Fund and implementation of Nutrition Fund projects? What things have not worked so well?

7. Are there particular Nutrition Fund projects that have stood out to you as being activities that could be sustainable? If yes, can you name any common features of these? (e.g. a particular type of project such as gardening, integration within HPS)

8. Do you feel that you (as the staff member responsible for the Nutrition Fund at your DHB) received adequate guidance from the Ministries of Health and Education as to how the Nutrition Fund should be managed and administered?
   a. What guidance did you receive?
   b. Was it adequate?
   c. What else would have helped?

9. How well aligned do you think implementation of the Nutrition Fund by your DHB education subgroup was to the Ministry of Health overarching criteria for the Fund?
   a. Were there criteria that were not followed and why?
   b. Were further local criteria developed? If yes, what were these criteria and why were they developed?

10. Did you receive feedback from schools and ECE services during the time period that your DHB offered a Nutrition Fund?
   a. What form did this feedback take?
   b. What particular aspects of the Nutrition Fund process did this feedback relate to?
   c. What did the DHB do as a result of the feedback?

11. What do you think should be done differently for any future grant schemes?
   a. By central government?
   b. By the DHB?

12. Is there anything we haven’t covered that you would like to talk about?

13. Is there anyone else who you think I should talk to in relation to this research?

14. Do you have any documentation, reports or papers that you think would be useful for me to review as part of this research?
Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part there will be no disadvantage to you of any kind and we thank you for considering our request.

Please note that this project has been reviewed and approved by the Department of Public Health, University of Otago, Wellington.

What is the Aim of the Project?

This research is being conducted as part of study towards a Master of Public Health degree.

The aim of this research is to investigate the effectiveness of the DHB Nutrition Fund as a tool for change in schools and early childhood education services. The research will examine how the Nutrition Fund has been implemented, its reach, and whether school and early childhood education (ECE) services feel that the grant they have received has supported them to improve the nutrition environment in their schools or ECE service.

What Type of Participants are being sought?

Staff from schools and ECE services that were successful in applying for a Nutrition Fund grant, and who have completed the project they were funded for, are sought to participate in this research.

What will Participants be Asked to Do?

Should you agree to take part in this project, you will be asked to participate in an interview of approximately one hour’s duration. The interview results will be made anonymous. These interviews will include questions relating to how you found the Nutrition Fund application process, the experience of implementing the project and how effective you think the project was in improving nutrition at your school or ECE service.

Can Participants Change their Mind and Withdraw from the Project?

You may withdraw from participation in the project at any time and without any disadvantage to yourself of any kind.
What Data or Information will be Collected and What Use will be Made of it?

The interviews will be audio-taped and transcribed.

This project involves an open-questioning technique where the precise nature of the questions which will be asked have not been determined in advance, but will depend on the way in which the interview develops. Consequently, although the Department of Public Health, University of Otago, Wellington, is aware of the general areas to be explored in the interview, the Department has not been able to review the precise questions to be used.

In the event that the line of questioning does develop in such a way that you feel hesitant or uncomfortable you are reminded of your right to decline to answer any particular question(s) and also that you may withdraw from the project at any stage without any disadvantage to yourself of any kind.

You will not be identified by name or by your specific organisational position in any reporting of the research. The data collected will be securely stored in such a way that only the researcher (Kirsty Craig) and her two supervisors (Geoff Fougere and Dr George Thomson) will have access to it. At the end of the project any personal information will be destroyed immediately except that, as required by the University's research policy, any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed.

Reasonable precautions will be taken to protect and destroy data gathered by email. However, the security of electronically transmitted information cannot be guaranteed. Caution is advised in the electronic transmission of sensitive material.

The information from the interviews and other sources will be used to assess how effective the Nutrition Fund has been in supporting and facilitating improved nutrition in schools and early childhood education services. The results of the project will be available in thesis form in the University of Otago Library (Dunedin, New Zealand). They may also be used for publication in academic journals and other media.

You are most welcome to request a copy of the results of the project should you wish.

What if Participants have any Questions?

If you have any questions about our project, either now or in the future, please feel free to contact any of the following people:

Kirsty Craig  
Department of Public Health  
Telephone:- 04 918 6040

Geoff Fougere  
Department of Public Health  
Telephone:- 04 918 6046

Dr George Thomson  
Department of Public Health  
Telephone:- 04 385 5541 ext. 6054
NUTRITION FUND STUDY
CONSENT FORM FOR
SCHOOL AND ECE SERVICE PARTICIPANTS

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:-

1. my participation in the project is entirely voluntary;

2. I am free to withdraw from the project at any time without any disadvantage;

3. the audio recordings will be destroyed at the conclusion of the project but any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed;

4. this project involves an open-questioning technique where the precise nature of the questions which will be asked have not been determined in advance, but will depend on the way in which the interview develops and that in the event that the line of questioning develops in such a way that I feel hesitant or uncomfortable I may decline to answer any particular question(s) and/or may withdraw from the project without any disadvantage of any;

5. The results of the project may be published and available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve my anonymity; and

6. This project has been reviewed and approved by the Department of Public Health, University of Otago (Wellington).

I agree to take part in this project.

........................................................... ...........................................................
(Signature of participant) (Date)
School/ECE Service Questionnaire

School/ECE Service Context
1. To provide some context for today’s interview, could you tell me about your school/ECE service?
   a. How would you describe your school/ECE service and its wider community in terms of socioeconomic status, ethnicity etc?
   b. At the period when the grant was given, were there any particular challenges that the school/ECE service was currently dealing with?
   c. Is nutrition a particular concern in your school/ECE service, or has it been in the past?
   d. Did you school have a nutrition policy at the time of applying for your grant? If not, do you have one now, or are you planning to develop one?

Project Description
2. Could you tell me about the project you implemented with your Nutrition Fund grant?
3. Would the project have been undertaken if you had not received funding from the Nutrition Fund?
4. Did this project continue or build on any existing project or activity?
5. What was the aim of your project and what were you hoping to achieve?
6. Did the project go as you had planned, or did you face some challenges? What were these challenges?
7. Was the Nutrition Fund the total source of funding for your project? If not, what other sources of funding were utilised? – and were there any issues about having more than one source of funding?

Application process and reporting requirements
8. Thinking back to the application process - how did you hear about the Nutrition Fund?
9. Can you tell me how you found the process of applying to the Nutrition Fund?
10. What were the contracting and reporting requirements you had to follow as part of receiving your grant? How did you find these processes? Were they straight forward/not too time consuming?

Organisational characteristics and relationships within school/ECE service
11. Who identified the project as something worthwhile, and who was involved in applying for the Nutrition Fund grant?
12. Had nutrition previously been identified as an issue?
13. Did the project have the support of higher manager/principal?
14. Was there any framework or strategy that was used to guide the development of the Nutrition Fund project?
15. Who was involved in the planning stages of the project? Was any consultation undertaken? With whom?
16. Who was involved in implementation of the project?
Supports and barriers
17. Did your school/ECE service have the skill and knowledge available to implement your Nutrition Fund project?
18. Did you receive outside support to implement your Nutrition Fund project?
19. Was the amount of funding you received sufficient to complete your project?

Sustainability
20. Is any ongoing maintenance required now that the project has been completed? Who does this?
21. What other programmes and activities does the Nutrition Fund project fit with or link to?
22. How well does the project link with the curriculum in your school/ECE service?

Benefits of participating
23. What do you see as the benefits to your school/ECE service of the project you have implemented?
   a. In relation to health and wellbeing?
   b. In relation to learning and educational achievement?
24. What other benefits of participating have been noticed?
25. Were there any negative impacts of participation?
26. How does the impact of the Nutrition Fund grant your school/ECE received compare with other nutrition related programmes and projects you have implemented or been involved with?

27. Is there anything we haven’t covered that you would like to talk about?
Appendix C

Overarching Criteria for selection of Nutrition Fund applications
(Information for DHB’s)

Prioritise high need schools and early childhood centres
DHB’s must document the criteria used to prioritise provision of support for high-need early childhood centres (ECC) and schools. Whilst decile rating is useful for identifying high need schools, high-need early childhood centres are more difficult to identify. Public Health Intelligence are able to map early childhood centre geographic location with NZ Dep, however, local knowledge of members of the education sub-group will also be crucial to identify high need schools and centres.

Applications from clusters of schools and or/early childhood centres encouraged
International and New Zealand research supports the use of clusters of schools and/or early childhood centres as a delivery mechanism because they enable quality learning through effective sharing common resources, support planning and implementation of initiatives and enhance professional development and evaluation. The Fruit in Schools programme has very successfully utilised a cluster model to support and implementation.

Training/professional development an initial priority
The Ministry of Education food and nutrition guidelines and the Ministry of Health food and beverage classification system are being introduced to the education sector from late March 2007. Professional development support and training are being offered to teachers, principals, boards of trustees, early childhood centre supervisors, canteen managers and food preparation staff. Support to schools and early childhood centres in the form of teacher release time for up to two teachers is suggested as an initial priority for the nutrition fund. To simplify the process for applying for the nutrition fund, template claim forms for attendees of the initial professional development training sessions are appended.

Whole school (ECC) community approach
Applications should indicate that a whole school/early childhood community approach is being used to ensure sustainable change. This is the approach used by Health Promoting Schools and Fruit in Schools and involves three components: teaching and learning (the curriculum); school organisation and ethos (policies and procedures) and involvement of the wider community.
Applications to support sustainable change ideal
Whilst the nutrition fund is available for four years, the aim for the nutrition fund is for sustainable change to be made in early childhood centre/school communities to improve the nutrition environment. Ongoing planned activities will be more likely to receive support than on-off events which are less likely to foster development of sustainable change.

Innovative activity encouraged
Whilst the focus for the first year is on supporting schools and early childhood centres to receive professional development encouraging and supporting innovation is an ongoing focus of the fund. A list of some innovative possibilities is provided for consideration when making an application.

Student–led activity
Where possible, student-led activity should be encouraged and supported through the fund.

Consistency with Ministry of Health food and nutrition guidelines, the food and beverage classification system and the Ministry of Education’s food and nutrition guidelines for healthy confident kids.
Applications should support and promote the messages in the food and nutrition guidelines and the food and beverage classification system. These documents will be provided to schools and early childhood centres.

Process of selection of proposals must be transparent.
The selection process used by the HEHA schools group to identify successful applications must be clearly documented and transparent for stakeholders.
NUTRITION FUND APPLICATION

To apply for the Nutrition Fund, please complete each section of this form, including:

- your organisation’s details
- details of children and young people targeted
- the project budget
- signatures from all early childhood education services and/or schools in your defined cluster.

Send your application to: The Healthy Eating – Healthy Action Project Manager at your local District Health Board

Your educational organisation’s details

<table>
<thead>
<tr>
<th>Name of fund-holding ECE service/school</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mailing address</td>
<td></td>
</tr>
<tr>
<td>Contact details</td>
<td>Phone ( )</td>
</tr>
<tr>
<td>Contact person</td>
<td></td>
</tr>
<tr>
<td>Supervisor/Principal’s name</td>
<td></td>
</tr>
<tr>
<td>Supervisor/Principal’s signature</td>
<td></td>
</tr>
</tbody>
</table>

Type of ECE service/school cluster:

<table>
<thead>
<tr>
<th>Composition of ECE service/school cluster (tick as many as applicable)</th>
<th>ECE service</th>
<th>Primary</th>
<th>Secondary</th>
<th>Combined</th>
<th>Public schools</th>
<th>Private schools</th>
<th>other (please specify)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of children and young people</td>
<td>Under 50</td>
<td>Under 100</td>
<td>100–500</td>
<td>500–1000</td>
<td>Over 1000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What group(s) will your project target?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(can be more than one box)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Project budget

Note: If you intend your planned initiative to extend beyond one year, you must submit a budget to cover the entire running time of the project. (Only one application per year can be submitted by any ECE service/school cluster.)

<table>
<thead>
<tr>
<th>Administration costs</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractor costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healthy eating activities to be undertaken?</td>
<td>How do you intend to carry out the project?</td>
<td>What are the expected outcomes for the ECE service/school community?</td>
<td>How do you intend to monitor your success?</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-------------------------------------------</td>
<td>---------------------------------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>For example: • establish a vegetable garden</td>
<td>For example: • engage the ECE service and/or school community in creating and tending an edible garden</td>
<td>For example: • a better informed school community on health eating, vegetable growing, food preparation and cooking</td>
<td>For example: • numbers of participants actively involved; application of learning into other areas</td>
</tr>
</tbody>
</table>

**Who will lead the project?**

- [ ] students
- [ ] teachers
- [ ] other (please specify)

**Have you sought funding from another source?**

YES  NO

*If YES, please give details of other funders.*

**Signatures of cluster ECE services and schools**

<table>
<thead>
<tr>
<th>ECE service or School</th>
<th>Signature</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**For further information and assistance, contact** your local District Health Board Healthy Eating – Healthy Action project Manager
Background:
Government’s Healthy Eating-Healthy Action: Oranga Kai-Oranga Pumau Strategy (the Strategy) led by the Ministry of health aims to improve nutrition, increase physical activity and achieve healthy weight for all New Zealanders.

The Strategy has been developed to address the increasing burden of diseases resulting from obesity, poor nutrition and physical inactivity. Such diseases are now amongst the leading causes of preventable deaths in New Zealand.

The success of the Strategy requires strong links and sound working relationships within and between sector groups. The Ministry of Health has adopted a national coordinating role with government agencies and DHBs. The Ministry of Health has also funded DHBs to take a leadership and coordination role at district or regional level in the delivery of the Strategy.

Purpose:
The Ministry has funded DHBs to create an inter-sectoral District Healthy Eating Healthy Action (“HEHA”) Co-ordination Group (“HEHA Group) to take responsibility for planning, prioritising, funding and monitoring HEHA initiatives in their districts. The HEHA Group will have a leadership role in implementing initiatives under HEHA at district level.

Role:
The role of the HEHA Group is to facilitate and co-ordinate the work of stakeholder agencies, including the DHB, PHOs, NGOs, education organisations, regional sports trusts, local government, and communities in implementing the District HEHA Plan. The group will:

- Provide guidance, advice and support to the DHB HEHA project Manager, and
- Ensure the District HEHA Plan meets the requirements of the Ministry of Health.

Objectives:

- To build on existing services and networks to deliver HEHA services in a manner that reflects local needs.

- To create an environment that promotes and supports physical activity, improves nutrition and reduces obesity.

- To improve alignment of district HEHA related planning processes and funding decisions across the sectors and agencies.

- To develop a strategic direction and funding plan for HEHA at a district level and ensure alignment of activity that is focused on improving health outcomes and building a sustainable and co-ordinated health sector.
• To strengthen community actions ensuring high need communities are actively involved and successful in influencing the availability and supporting the promotion of healthy food and physical activity in their communities.

• To focus on Maori, Pacific; children, young people, and their family and whanau; lower socio-economic groups and other high need groups in their area.

• To ensure the tripartite agreement, “Partnership in Action (2003)” between the Ministry, the Ministry of Education, and Sport and Recreation New Zealand (“SPARC”) (“Partnership in Action”) is operationalised at district level.

• To ensure that “Healthy Eating-Healthy Action: Oranga Kai-Oranga Pumau (MOH 2003)” and the four pathways of “He Korowai Oranga: the Maori Health Strategy (MOH 2002)” are integrated into all health sector planning to improve physical activity, nutrition and reduce obesity.

• To contribute to improvements in whanau ora and to reduce health inequalities for Maori and Pacific peoples, with reference to “He Korowai Oranga – the Maori Health Strategy”, “Whakatataka – Maori Health Action Plan”, and to the Pacific Health and Disability Action Plan.

Sub-groups
The HEHA Group will oversee the work of the HEHA Group’s Education Sub-group to:

• Ensure the effective implementation of the Nutrition Fund, and
• Ensure the Sub-Group co-ordinates their agency service delivery to schools and ECEs to prevent schools and ECEs becoming overloaded.

As the project progresses, other sub groups may be formed with the permission of the HEHA Group. The HEHA Group will oversee the work of such groups.

Accountability

Project Sponsor:
The project sponsor for the XX DHB HEHA project is ----

Chair
The Project Sponsor will be the chairperson, or in his/her absence a deputy Chairperson as nominated by the Chairperson.

Secretariat Support:
The HEHA Project Manager will ensure secretariat support is available for the HEHA Group and that records of meeting are kept.

Membership of the group
The members of the HEHA Group will be appointed for their particular expertise and seniority in matters relating to this project. The members will include:

• The XXX DHB Project Sponsor
• The XXX DHB Project Manager
• DHB Maori Manager
- DHB Pacific Manager where appropriate
- A senior representative from the PHU
- Senior clinician representation
- Senior PHO representation
- A senior representative from education sector
- Senior representation from TLA(s)
- Maori community representation
- Pacific community representation where appropriate

Membership should not be delegated to substitutes, unless agree by the Project Sponsor.

**Meeting Frequency**
The HEHA Group will meet on (state frequency) at (state venue).

The meeting time, date and location can be changed by the Chair, provided there is at least one week’s notice given.

**Term, Appointment, Approval, and Resignation**

Members will serve a term that will be for the duration of the project term (expected to be until 30 June 2010.)

If members of the Group must resign before the end of the project term, they will notify the Chair at least one month in advance in writing.

The Chairperson will use discretion either to:
- a) appoint members or
- b) formally solicit nominations to replace resigned members

A minimum of five members, including the Project Sponsor XXX DHB HEHA Project Manager, Chair or Deputy Chair and three other members, must be present to establish a quorum for group meetings and activities.

When a member is absent for more than two consecutive group meetings, without prior apology, or if the member is not able to contribute to the good of the group, then the Chair will consider their membership status for revocation, following discussion with the member or reasonable attempts to contact the member.

**Procedure of the meetings**
HEHA Group to insert meeting procedure.

**Changes to these Terms of Reference**

Revisions to these Terms of Reference (TOR) require agreement and acceptance by the HEHA Group. Any changes should be made through a formal change control process.

Signed HEHA Group Chair

Signed Project Sponsor

Date:
### Appendix D

<table>
<thead>
<tr>
<th>Identifier</th>
<th>Project description</th>
</tr>
</thead>
</table>
| A01        | **Establishment of an edible garden and picnic area in a Kohanga Reo.**  
The garden is one aspect of a wider focus on revitalising the Kohanga. The garden has been developed from scratch. It has been structured in order to be easily accessible for all and has a wide range of plantings. In planning the garden they have been mindful of keeping the garden at a manageable size in order to retain the interest and effort of whānau. Hands on learning is a big focus for the project but they also recognise the need to combine this with reading and comprehension. In keeping with this, some of the funding has also been used to buy gardening and nutrition related books. The establishment of the garden has been phased to align with Matariki. Ongoing use of the gardens is part of the daily activities of the Kohanga. Whānau have been highly involved in the establishment of the garden and are also involved in an ongoing way with a roster in place for maintenance. |
| A02        | **Installation of drinking fountains in a primary school, followed by a gardening and cooking project.**  
The student health group raised concerns about the poor state of the school’s current drinking fountains. Following a successful application three new drinking fountains were installed in the school. The second grant the school received was for a gardening and cooking project. The garden was yet to be established but cooking lessons were underway at the time of interviewing. Cooking was something that the teacher had already been doing with his class. The funding for that side of the project means that there will be dedicated space and equipment for classes to use, rather than students being taught in the staffroom. The gardens will either be set up by teachers with a particular group of children or the whole school may be involved through different syndicate groups each having particular areas of responsibility. Parents may also be involved but this is expected to involve only a limited number of parents as getting their buy in is often difficult for this school. |
| A03        | **Revamp of canteen in a high school.**  
The project involved reviewing and changing the menu in the school canteen, promotion of new menu items, equipment for the canteen, and picnic tables for the area around the canteen. The canteen was something that the school had been wanting to improve for some time. The project developed as a result of work the school had been doing with a health promoter from the public health unit. The project was led by the Vice Principal together with the food technology teacher and the school health committee. The students on the health committee ran a survey of the student body to find out what foods they liked and what they would like to see happen with the canteen. The surveying included testing samples of particular items of food in much the same way as is done in |
supermarkets. This informed the development of the new menu and other changes, such as the introduction of EFTPOS and Snapper payment facilities.

**B01**

*Parent education programme developed and run by an early childhood centre.*

The centre has received two grants. The first was for a parent education programme and the second was for a gardening project. The parent education programme is run conjointly with the Women's Centre. It is made up of several different modules, each with a particular focus. The first module covers the effects of food and diet on children's behaviour. The second module covers food selection and marketing. In the third module parents learn different lunch ideas and go off with a particular budget to the supermarket and come back and make lunch for the group. The fourth module covers healthier homemade options as lower cost alternatives to takeaways. The final module focuses the importance of physical fitness and things families can do together to be physically active. The second grant that the centre received was for the development of a children's community garden in collaboration with the neighbouring church. Ongoing use of the garden forms part of daily activities at the centre. Part of the reason for wanting to develop a garden was that so few of the families involved with the centre had gardens of their own due to being in rental properties.

**B02**

*Cooking programme led by an early childhood centre for parents at the co-located Teen Parent Unit.*

The cooking programme was made up of a range of sessions including: an in-class session with a nutritionist, supermarket tours with the nutritionist to learn to select healthier foods, budgeting advice from Work and Income, and practical cooking sessions with a cooking tutor. The programme was incorporated into the curriculum for one day each week for a term. The programme was run during class time due to the difficulty in students arranging babysitting and the need to use the college's cooking facilities. The subject matter covered, and the recipes for the practical sessions, were developed in consultation with some of the students from the Teen Parent Unit. The focus was on affordable, easy recipes. The early childhood centre received a second grant for the development of their garden. The nutrition fund grant allowed them to buy child sized tools, build raised beds and generally extend on what they were doing. The garden is well integrated with the daily activities of the centre. Food is grown, harvested, cooked/prepared and eaten as part of teaching related activities. The centre is also part of the garden network that was set up by their DHB. Involvement in the network has provided a great source of information and support.

**B03**

*Gardening/horticulture project in a primary school.*

This project involved building onto and expanding the existing gardening areas. Two extra raised vegetable gardens were built, an automatic watering system for all gardens (pre-existing plus the two new beds) was installed, a worm farm was created, and orchard and berry fruit area was
created, and lime was put down around the gardens as the grounds got very wet during winter time. The expansion meant that the school was able to involve more children in the gardening activities. They were also able to grow a wider variety of produce than before.

**C01**

*Review of a primary school lunch order menu and training of students to make lunches.*

As a follow on from the school’s focus on nutrition as part of the curriculum, students on the school health team came up with the idea of making the school lunch order menu healthier. Prior to the Nutrition Fund project the lunch order menu had not been changed for many years. The health team surveyed all the students in the school to find out what they wanted for lunch and collated the results. The project included funding for a person qualified in food preparation and hygiene to train the students in food preparation and help develop the new recipes. The adult input remains to provide oversight and train new students each year. As part of the training the students receive their own workbook, which is filled with reference material as training progresses.

**C02**

*Establishment of a breakfast co-op in a primary school in collaboration with the Kohanga Reo and Pacific Language Nest onsite.*

Staff in the early childhood centres had reported that they were often feeding children when they came in the morning. The school surveyed students to see who was eating breakfast each day and what they were eating and recognised a need there as well. In opting for a co-op over a breakfast club they wanted to support parents to provide for their children rather than taking over the responsibility. They looked at how a neighbouring school ran their breakfast co-op in order to plan their own. The co-op involves the school buying in bread, milk and cereals and selling these on to parents one day each week at a discounted rate. Parents organise the co-op now, taking the orders and giving the items out.

**C03**

*Development of a garden in a primary school, followed by a cooking project.*

School C03 received two nutrition fund grants. The first was for the development of a garden, including raised beds and a fence around the garden. The second was received more recently and builds on the gardening project with kitchen equipment for cooking. The garden is a greater focus during October to March with winter being a difficult time given the weather. The gardening project developed initially as a learning opportunity for an extension class in the school. The early planning was undertaken by the lead teacher and her extension class of 10 students. The extension class began by creating a seed bank while the garden was being built and then transferred them to the garden. The project was set up to be flexible in terms of how classes in the school would be involved, and what would be planted.