



Performance Audit

Achieving a Healthier Nutrition Environment in Schools

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List of Abbreviations

BMI	Body Mass Index
CINDI	Countrywide Integrated Non-communicable Disease Intervention
DES	Directorate for Educational Services
DQSE	Directorate for Quality and Standards in Education
EHS	Education Health Services
EO	Education Officer
EU	European Union
FAO	Food and Agriculture Organisation
FBS	Food and Beverage Standards
HBSC	Health Behaviour in School-aged Children
HELP	Healthy Eating Lifestyle Plan
HESC	Home Economics Seminar Centre
HIS	Health Inspectorate Services
HoS	Head of School / Heads of School
HPU	Health Promotion Unit
HSNAB	Healthy School Nutrition Audit Board
HSU	Health and Safety Unit
KMS	Malta Sports Council
MEEF	Ministry of Education, Employment and the Family
MHEC	Ministry for Health, the Elderly and Community Care
MRRA	Ministry for Resources and Rural Affairs
NAO	National Audit Office
NBG	Nutrient Based Guidelines for Food and Drink Providers
NCC	National Curriculum Council
NMC	National Minimum Curriculum
PE	Physical Education and Sport
PIS	Projects and Initiatives Section
PSD	Personal and Social Development
QAD	Quality Assurance Department
SDP	School Development Plan
SFS	School Fruit Scheme
SMSS	School Milk Subsidy Scheme
SMT	Senior Management Team
TASNE	Task Force for Appropriate School Nutrition Environments
WHO	World Health Organisation



Executive Summary

Executive Summary

Background

1. Childhood obesity is acknowledged as a national public health concern, with changes in eating patterns and an increasingly sedentary lifestyle the most likely explanations for its widespread prevalence. Halting this upward trend presents a major challenge and, therefore, various efforts in areas that are central to addressing the rising prevalence of obesity are critical national priorities. Schools are now being called upon to play a leading role in addressing the ‘new social morbidities’, including the unhealthy dietary behaviours and inadequate physical activity of children and adolescents. Whilst the latter aspect relating to physical activity was addressed by the National Audit Office (NAO) in its report entitled ‘Physical Education and Sport in State Primary and Secondary Schools’, the former aspect relating to healthy nutrition is the focus of this report.

2. Although the problems identified will not be overcome by the efforts of the educational system alone, schools provide an important opportunity for prevention over other environments, as they offer the most effective method of reaching large numbers of people, including youth, school staff, families and community members. Furthermore, children spend a large portion of their time at school, where many lifestyle and behavioural choices develop. Healthy food and improved nutrition should be a high priority on every school agenda because of the positive effect on child well-being, and subsequent enhanced learning abilities and academic performance.

3. The school environment has a vital role in shaping children’s health behaviours. In response to growing concerns over obesity, national attention has focused on the need to establish school nutrition standards and limit access to competitive, less healthy food alternatives. Students can learn how to choose a healthy diet, through

the meals and snacks consumed at school, whilst also developing a range of consumer-based skills including food growing, handling, hygiene, preparation and cooking through the formal educational process. School nutrition programs could be an important means for ensuring that students have daily access to fruit, vegetables, and other healthy food products during the school day.

4. Through this study, NAO sought to evaluate the level of uptake of policies, guidelines, and initiatives by individual schools as outlined in the Healthy Eating Lifestyle Plan (HELP) document. This document does not constitute formal policy but comprehensively addresses the issue of creating healthy nutrition environments within schools. In addition, this audit examined a number of measures listed in HELP and assessed the extent to which these measures were being implemented and monitored. Moreover, the degree of impact and level of achievement of established objectives, together with the extent of compliance with established food and beverage standards and regulations, was also evaluated.

5. This NAO study also sought to assess the factors that were facilitating or hindering the implementation of HELP and highlight the issues and areas that need to be addressed by the competent authorities in order to ensure a comprehensive and effective approach to school nutrition. Whilst carrying out this audit, NAO sought to explore the contributions provided by various stakeholders with regards to the achievement of a healthy nutrition environment within schools. Moreover, this study drew up a comprehensive appreciation of the identified best practices encountered throughout NAO’s review and subsequent analysis.

6. The following are the key conclusions and recommendations of this report.

Key Conclusions

7. One of the key issues addressed in this study (Chapter 2 refers) focused on how schools could achieve a healthier nutrition environment through the fostering of a supportive school setting, particularly through the development and implementation of healthy eating lifestyle plans and School Development Plans. It is envisaged that such an environment facilitates the adoption of a healthy lifestyle and promotes healthy choices early in life. This part of the study also addressed the staff-related concerns at play, systems of internal monitoring and the dynamics in school stakeholder collaboration.

- a. From the data collected in this study, it is immediately apparent that a number of schools have developed considerably comprehensive internal health-related policies. These proactive schools have translated policy into practice and are engaged in a variety of health-related activities, whilst also liaising with various stakeholders. However, given that the onus for formulating and implementing these policies is largely dependent on the individual initiative and prioritisation of the school, it is also evident that a considerable number of schools may not be diverting sufficient energy and resources towards creating a healthy nutrition environment. In fact, despite general agreement with the principles expounded upon in the HELP document, a significant number of schools failed to produce the documentary evidence that would normally constitute a formal, yet internal, school policy. Furthermore, NAO noted discrepancies in the depth and content between the various internal school policies it reviewed.
- b. Consonant with the above, are the findings relating to staff responsibility, their subsequent level of involvement and relevant training, or lack thereof. Heads of School (HoS) commented on the difficulties they encountered in assigning duties relating to the achievement of a healthy nutrition environment, mainly stemming from the lack of a clear policy framework. Shortcomings were also identified with regards to the level of training provided to staff, possibly further constrained through Union agreements, as well as other support resources and teaching aids. NAO noted that no in-service training specifically focusing on healthy nutrition has been provided or organised from 2008 to date.
- c. In the context of monitoring, three focal concerns emerge. The first relates to the diversity of staff assigned to internal monitoring duties, ranging from HoS to tuck shop assistants. Second, in a significant

number of schools, the responsibility for internal monitoring of the healthy nutrition environment was a task left unassigned. Third, the vast majority of schools indicated that no internal audits were carried out, or alternatively relied on third-party input, namely, the ‘What’s in your lunchbox?’ survey carried out by the HELP Committee.

8. Another fundamental issue that was evaluated (Chapter 3 refers) was the extent of application of a flexible school curriculum, which served to highlight health, diet, nutrition, food safety and hygiene, food preparation and cookery. More specifically, the degree of involvement of the theme of nutrition with other curricular subjects was reviewed. This aspect of the report also addressed the organisation of activities, events and initiatives undertaken by schools in their respective efforts towards promoting healthy eating and a generally healthier lifestyle.

- a. The results obtained from the questionnaire administered to HoS clearly illustrated that the vast majority of schools did in fact integrate the theme of nutrition education and healthy life skills across a variety of curricular subjects. This cross-curricular theme was addressed by a number of schools through, *inter alia*, Physical Education and Sport, Personal and Social Development, Home Economics, Social Studies, together with Science and languages.
- b. The majority of schools engaged in a wide range of activities, events and initiatives with the strategic intent of providing a practical and tangible expression to the promotion of a healthy lifestyle. Noteworthy good practices were prevalent in those schools with members of staff that were committed and took initiative, and organised activities including healthy eating days, healthy breakfasts, formal talks and cookery sessions, at times in collaboration with other stakeholders. NAO observed that schools organised and/or participated in programmes and activities out of their own initiative. It is effectively up to the school’s management to further pursue their respective interest in the area of healthy nutrition, and is largely dependent on their individual set of priorities.
- c. NAO noted that such initiatives organised by entities other than the school itself often resulted in significant uptake. Two initiatives of particular note were the School Fruit Scheme and the School Milk Subsidy Scheme, which were subsidised by the European Union. Such schemes complemented other initiatives undertaken by schools, ranging from the direct procurement of tuck shop stock, the installation of drinking water dispensers, to the creation of a student reward system.



9. The final component of this NAO study (Chapter 4 refers) delved into the importance of delivering clear and consistent messages regarding nutrition-related issues throughout the school day and across the school environment. Attention was directed at the critically important role played by parents in collaboration with schools, and how this bears influence on subsequent student behaviours and attitudes towards healthy nutrition. Finally, other pertinent issues, such as the influence of school tuck shops, access to drinking water, street hawkers and school sponsorships, were reviewed.

- a. In this context, the most critically important stakeholders, besides the school itself, are the students' parents. The vast majority of HoS indicated that they involve, support and collaborate with parents through the organisation of various meetings, information seminars and by providing relevant tools and resources which are useful in developing a better understanding of healthy nutrition. In spite of the above, approximately one third of HoS voiced concerns with regards to the objections and resistance encountered when introducing or implementing healthy nutrition-related measures. Similarly, a considerable majority of HoS indicated that students often brought lunches from home that were of an unhealthy nature despite efforts by schools to the contrary.
- b. Despite the regulation of school tuck shops through their respective tender agreements, which also include provisions relating to healthy nutrition standards, there seems to be an apparent interstice with regards to the health aspect of items being sold. Although the majority of HoS whose schools have tuck shop facilities indicated that only healthy food items were being sold from such premises, NAO maintains its reservations on the matter.

These reservations arise from comments made by other actively involved stakeholders, whose point of view on the current situation regarding tuck shops drastically deferred to that put forward by a significant number of HoS. This concern is particularly relevant to the case of Secondary Schools, where tuck shops are available.

- c. Unfortunately, the work of schools, teachers, parents and other stakeholders was being undermined by street hawkers and other vendors located in the immediate vicinity of schools. Although the formal regulations which control such operators are presumably being adhered to, the nutritional aspect of food and beverage items being sold to school children, once outside the school premises, does not fall within the scope and remit of these regulations.

Recommendations

10. Comprehensive implementation of NAO's recommendations will require the coordination of efforts of all involved stakeholders. It is only through such collaboration that schools may be transformed into healthy environments. The process of evolution by which concepts relating to healthy nutrition are integrated into the curriculum must be maintained. Finally, the importance of conveying clear and consistent messages that resonate the maxims of a healthy lifestyle must be disseminated to all stakeholders and, where necessary, appropriate measures be taken to rectify shortcomings. Corresponding to the above elaborated considerations and conclusions, the following is a selection of the study's most salient recommendations.

11. NAO's principal recommendation is the instatement of a policy governing and regulating the school nutrition environment. NAO considers the HELP document to be the ideal platform that could serve as a



basis for the subsequent development of a policy that is specific and restricted enough to be enforceable and educationally useful. The absence of an enforced and centralised policy framework with regards to the creation of a healthy nutrition environment in schools is cause for concern. Relying on the initiative of individuals or particularly motivated schools will certainly not address the present situation of childhood and adolescent obesity in schools in a comprehensive manner.

12. The conclusions relating to staff responsibility, staff level of involvement and training all converge upon one common theme, namely, the lack of an active and present coordinating body. This coordination function was intended to be the remit of the Healthy School Nutrition Audit Board, yet ownership of this important issue is somewhat insufficient, unclear and not of the desired standard. NAO considers this organisational gap to be a critical weakness, subordinate to the aforementioned policy gap. NAO is of the opinion that only when the existent policy-related constraints and issues are resolved, can the necessary coordinating body come into effect. Such an organisation would effectively streamline adopted internal school policies, initiatives and other aspects of the nutrition environment within schools, whilst being recognised as the official focal point addressing all concerns relating to the subject matter.

13. Lacunae with regards to coordination are manifested in a twofold manner. Firstly, HoS are uncertain on some key policy concerns, such as, for example, the level of staff responsibility in achieving a healthy nutrition environment within schools. Secondly, good practices are limited to the individual schools that happen to have staff driven by personal initiative. NAO strongly recommends that such good practices are capitalised upon and introduced to other schools too.

14. NAO recommends that the theme of healthy eating, and the generally healthier lifestyle, be further incorporated and elaborated upon within the curriculum, thereby reflecting current trends and concerns. This recommendation closely ties in and is more or less contingent on NAO's predominant concern regarding the lack of a clear and formal policy relating to the healthy lifestyle of students.

15. Although a number of schools provided NAO with detailed information on how the theme of healthy nutrition and lifestyle was integrated across the curriculum, it was also apparent that schools operated independently of one another and did not follow a formal, structured programme. Hence, NAO recommends the establishment of a formalised cross-curricular programme, encompassing all aspects of this theme, with clearly delineated sub-themes assigned to specific subject areas.

16. NAO recommends that schools continue to capitalise on EU subsidised schemes and do not stop at that level of activity alone. Such schemes must be further complemented with other initiatives undertaken by the schools themselves or organised centrally by the Directorates for Education.

17. NAO considers the role played by parents to be an integral part of schools' efforts at conveying clear and consistent messages regarding healthy lifestyle. The resistance and objections put forward by certain parents are a challenge that schools must seek to overcome. Although a number of schools have already devised various means by which parents were actively engaged within the school community, NAO is of the opinion that such practices should be extended further. It is recommended by NAO that schools consider the implementation of monitoring systems, whereby instances of student non-compliance to internal health-related school policies are appropriately

redressed through corrective action. Such a system would potentially entail the closer overseeing of students' school lunches, thereby encouraging healthy eating.

18. The formal monitoring of the nutritional aspect of food and beverage items sold through school tuck shops is a conspicuous absence, and a cause for concern to NAO. This lacuna may be addressed by means of an organised system of nutrition-related monitoring, possibly carried out in conjunction with the already enforced monitoring of other aspects of the tuck shops' operations. NAO recommends that this function is assumed, coordinated and supervised by a central authority within the Directorates for Education.

19. Despite all efforts by schools at addressing healthy nutrition-related issues within their respective environments, this work is undone by street hawkers and other commercial outlets located in their immediate vicinity. NAO is of the opinion that some form of regulation is necessary in rectifying this situation, which has street hawkers and other vendors selling unhealthy food and drinks just outside the school gate. Other countries have addressed similar circumstances by adopting corrective measures, which include distance bans and regulation by means of special permits. Whilst acknowledging that this situation cannot be directly addressed by the Directorates, Colleges or Schools, NAO nevertheless considers these organisations ideally suited and placed to apply the necessary pressure.

Chapter 1



Healthy Body, Healthy Mind: An Overview of Nutrition within the School Environment

Chapter 1 – Healthy Body, Healthy Mind: An Overview of Nutrition within the School Environment

This initial chapter provides background information with regards to nutrition and the influence of shifts in eating patterns on obesity amongst children and adolescents. The role of schools in addressing these nutrition-related concerns is explored and is followed by an analysis of the various stakeholders involved. Finally, this chapter outlines the overall objectives and scope of this audit.

1.1 Background Information

About Nutrition

1.1.1 Nutrition is the intake of food, considered in relation to the body's dietary needs. Good nutrition is the foundation of good health, and implies an adequate, well-balanced diet combined with regular physical activity. Poor nutrition can lead to reduced immunity, increased susceptibility to disease, impaired physical and mental development, and reduced productivity.

1.1.2 Childhood and adolescence are critical periods for health and development, as the physiological need for nutrients increases, thereby accentuating the importance of a diet high in nutritional quality. Eating habits, lifestyle and behavioural patterns are established during this period and may persist throughout adulthood.

1.1.3 Eating patterns have a significant influence on health and well-being. A healthy diet during childhood and adolescence reduces the risk of immediate nutrition-related health problems, namely obesity, dental caries and lowered self-esteem. In addition, young people who develop healthy eating habits early on in life are more likely to maintain them and are therefore at a reduced risk of developing non-communicable diseases such as cardiovascular ailments, cancer, type II diabetes, stroke, Alzheimer's disease and osteoporosis in adulthood.

1.1.4 Research (WHO, 2006) has shown that healthy nutrition improves child well-being and learning abilities, leading to improved academic performance. Furthermore, good nutrition also fosters mental, social and physical well-being, contributing to increased self-esteem and a positive body image.

Eating Patterns

1.1.5 One of the fundamental issues behind public health concerns for young people relates to the changes in food habits that have developed. Over the past few decades, significant changes in eating habits and home environments have taken place. Time, financial, educational and social determinants may be leading to the 'convenience revolution' with pre-packed, processed products forming the basis of the majority of meals prepared at home.

1.1.6 In this context, the opportunities for children to learn and develop basic food preparation skills at home are on the decline. Lacking the basic skills and knowledge on healthy nutrition, children and adolescents are more likely to resort to fast-food outlets and the use of convenience foods, thereby encouraging the consumption of large portions of energy-dense and micronutrient-poor meals and snacks.

1.1.7 The consumption of snack products high in energy, fat, sugar and salt may be responsible for the decline in fruit and vegetable consumption evidenced in recent research. Results from the World Health Organisation (WHO) (2006) international study, Health Behaviour in School-aged Children (HBSC) shows that the average fruit and vegetable consumption amongst children and adolescents is very low. Moreover, the proportion of children and adolescents eating fruit and vegetables on a regular basis decreases further with age.

1.1.8 A useful tool in the design of students' diets is the Countrywide Integrated Non-communicable Disease Intervention (CINDI) food pyramid, which was developed by WHO. The overall objective of the CINDI programme is to improve health by reducing mortality and morbidity from the major non-communicable diseases, through integrated collaborative interventions that prevent disease and promote health. The CINDI dietary guide is based on foods, rather than nutrients, and can be used as a reference for all individuals responsible for the nutritional quality of students' diets, parents, teachers and tuck shop operators.

1.1.9 The CINDI food pyramid (Figure 1) uses colour codes similar to those used in a traffic light scheme. The green colour, which is found at the base of the pyramid, indicates that those foods should constitute the largest part of the diet and hence includes items such as cereals, fruits and vegetables. Milk and dairy products, meat, fish, pulses, nuts and eggs are in the orange, middle part of the pyramid, which signifies that only moderate amounts of these foods are needed for a healthy balanced diet. The red colour which is found at the top of the pyramid, covering fats, sugars and salt, informs people that only very small amounts of these foods are to be consumed.

Obesity amongst Children and Adolescents

1.1.10 Obesity is a condition in which weight-gain reaches the point of seriously endangering health. While some people are more susceptible than others, the direct cause of obesity in any individual is always an excess

of energy intake over energy expenditure. Virtually all obese people develop some associated physical symptoms by the age of 40, and the majority will require medical intervention for diseases that develop as a result of their obesity before they are 60 (National Audit Office – United Kingdom, 2001).

1.1.11 Obesity is most commonly defined by clinicians in terms of the body mass index (BMI). This is a tool used for indicating weight status and is defined as the weight in kilograms divided by the square of the height in meters (kg/m^2). Obesity in adults can be identified by a BMI of greater than $30\text{kg}/\text{m}^2$. However, this definition cannot be applied to children, as the ratio of weight to height gain changes during children's normal growth. Therefore, the figure must be adjusted for age and gender when using BMI for children. In general, a BMI greater than the 95th percentile for age is an indicator of obesity while a BMI between the 85th – 95th percentiles is considered overweight and at risk of developing obesity. BMI ranges reflect the effect of body weight on health and disease. The risk of some diseases is heightened as BMI increases.

1.1.12 Malta's National Audit Office (NAO) report, entitled 'Physical Education and Sport in State Primary and Secondary Schools', published in 2010, outlined how childhood obesity is acknowledged as a national public health concern. Changes in eating patterns and an increasingly sedentary lifestyle are the most likely explanations for the rising prevalence in the problem of obesity.

Figure 1: CINDI Food Pyramid



1.1.13 Halting this upward trend presents a major challenge, though even modest weight loss confers significant medical benefits. Therefore, various efforts in areas that are central to addressing the rising prevalence of obesity become critical national priorities. These include participation in physical education, sports, and physical activity, as well as due focus on food, nutrition, health education and the creation of healthy eating scenarios complemented by hands-on practical interventions.

1.1.14 Obesity in childhood was first recognised as a public health problem in Malta in 1992, when a study carried out in conjunction with the WHO and the Food and Agriculture Organisation (FAO), presented at the International Conference on Nutrition, showed that 11 to 13 percent of five-year-old children were already obese. Ten years later, the 2002 WHO's survey on HBSC classified Malta with some of the highest rates of 11 to 15-year-old children reported as overweight or obese according to the BMI.

1.1.15 The 2008 report on the HBSC survey carried out in 2005/2006 showed a deteriorating situation and listed Malta and the United States of America as the two countries with the highest overall percentages of children reported to be obese or overweight according to the BMI. In the case of Malta, the indicators for young persons reported to be obese and overweight were as presented in Table 1 below.

1.1.16 Furthermore, a study by Grech and Farrugia Sant'Angelo (2009) assessed 3,461 children entering the first year of Primary School (that is, aged between five and six). The study revealed that, based on the International Obesity Task Force criteria, over a quarter of Maltese school-entry children were already overweight or obese. Applying the stricter criteria established by the Centre for Diseases Control would have classified one third of the children in this study as overweight or obese.

1.1.17 In addition to the health hazards it can cause to individuals, obesity has serious financial consequences for the national health system and for the economy. It is estimated by the Health Information and Research Department within the Ministry for Health, the Elderly and Community Care (MHEC) that overweight and obese

people are costing taxpayers approximately €18 million a year in medical treatment alone (Calleja & Gauci, 2009). These costs are considered just a fraction of the total financial burden as the expenses for operations and drugs are not included. In fact, Grech and Farrugia Sant'Angelo (2009) go further and estimate that obesity will eventually cost Malta as much as €70 million per annum.

1.1.18 Tackling obesity amongst children and adolescents requires changes to the behaviour of children and their parents, together with broader attitude shifts in society as a whole. Such changes are only made possible through appropriate nutrition and physical activity. The latter focus on physical exercise within schools has already been the subject of the aforementioned NAO report (2010), whilst attention is now drawn to the complementary issue of whether local educational institutions are creating a suitable nutrition environment for children and adolescents alike.

1.2 The Role of Schools

1.2.1 Interventions targeted at healthy nutrition need to occur early in childhood and adolescence, when health behaviours are shaped, in order to prevent or reverse the adverse health effects of overweight and poor eating habits. Schools have a long history of addressing the health of school-aged children through, for example, health screening and immunisation programmes. Schools are now being called upon to play a leading role in addressing the 'new social morbidities', including the unhealthy dietary behaviours and inadequate physical activity of children and adolescents.

1.2.2 Although the problems identified will not be overcome by the efforts of the educational system alone, schools provide an important opportunity for prevention over other environments, as they offer the most effective method of reaching large numbers of people, including youth, school staff, families and community members. Furthermore, children spend a large portion of their time at school (around 40 to 45 percent of their waking time, contributing to a substantial part of calories of their total daily consumption) where many lifestyle and behaviour choices develop. Healthy food and improved nutrition

Table 1: Percentage of Obese or Overweight School-aged Children

Age	Boys Obese or Overweight (%)	Girls Obese or Overweight (%)
11 years old	30	25
13 years old	31	31
15 years old	32	28

Source: HBSC, WHO (2008)

should be a high priority on every school agenda because of the positive effect on child well-being, and subsequent enhanced learning abilities and academic performance.

1.2.3 The school environment has a vital role in shaping children's health behaviours. In response to growing concerns over obesity, national attention has focused on the need to establish school nutrition standards and limit access to competitive, less healthy food alternatives. Students can learn how to choose a healthy diet, through the meals and snacks consumed at school, whilst also developing a range of consumer-based skills including food growing, handling, hygiene, preparation and cooking through the formal educational process. School nutrition programs could be an important means for ensuring that students have daily access to fruit, vegetables, whole-grain based products, and low-fat dairy products during the school day.

1.2.4 The WHO Regional Office completed a Programme for Nutrition and Food Security in 2006, which was intended to serve as a tool for the development of school nutrition programmes across Europe. This document listed five steps central to the design and implementation of a food and nutrition policy for schools:

- a) Assemble a core action group;
- b) Carry out a baseline assessment of nutrition in your school;
- c) Develop a food and nutrition policy based on:
 - i. WHO European recommendations for healthy eating and active lifestyle for children and adolescents;
 - ii. Four key elements: the school community, school curriculum, school environment and school nutrition and health services;
- d) Develop an action plan in the core action group; and
- e) Implement, monitor and evaluate the action plan.

1.2.5 In 2003, a Task Force for Appropriate School Nutrition Environments (TASNE) was set up by the National Curriculum Council (NCC) to formulate a National School Nutrition Policy and to make recommendations for its implementations. The recommendations drawn up by TASNE were subsequently submitted for the consideration of the NCC in 2006. These recommendations included the provision of a healthy nutrition environment in all Maltese schools, both State and Non-State; the provision of a regulatory and organisational framework; and a monitoring and enforcement mechanism, which could help schools sustain their efforts in providing a healthy nutrition environment for their students.

1.2.6 The TASNE report claimed that research undertaken in the last decade shows that many Maltese students are consuming foods that are high in calories, fats, sugars or salt, but low in key beneficial nutrients. Schools were called to intervene proactively and in synergy, namely with entities within the then Education Division. These included the Home Economics Seminar Centre (HESC), the Health and Safety Unit (HSU), the Education Health Services (EHS), the Health Promotion and Disease Prevention Department and other agencies to embark on a strong and effective strategy to educate children and young people with regards to healthy eating, drinking habits and lifestyle.

1.2.7 For the purpose of the document prepared, TASNE reviewed the nutrition environment in schools, focusing on the following components:

- a) Food and drink sold in school premises;
- b) Food and drink brought to school by students;
- c) Water and milk provision in schools;
- d) Marketing by food industry in schools and in school publications;
- e) School sponsorships by food industry;
- f) Eating and drinking facilities; and
- g) Time and duration allocated to eating and drinking within the timetable.

1.2.8 The TASNE report was to serve as a basis for an eventual school policy. The subject matter was to be incorporated in the existing curriculum and to form an integral part of what was being taught in class. At the same time, school tuck shops were to serve as the practical expression of this philosophy. In this way, it was envisaged that schools would be encouraging the extension of these desired eating patterns outside of school, and influencing national nutrition-related patterns, present and future.

1.2.9 Following the submission of the TASNE report in August 2006, the then Director General of the then Education Division, appointed a working group to study the TASNE report, which mainly focused on healthy eating and what was being offered in school tuck shops. The terms of reference of this group, referred to as the Healthy Eating Lifestyle Plan (HELP) Committee, were to study the TASNE report and present a draft which would eventually help schools formulate a healthy eating policy.

1.2.10 In 2007, the then Education Division launched the HELP document. This document highlighted the school



environment, school curriculum and school nutrition as the three key objectives for this initiative to succeed. Each objective was developed to include strategies, which needed to be implemented so that schools are transformed into healthy schools. Schools had to consider the extent to which their practices reflected these objectives as a means of getting started and identifying opportunities for improvement.

1.2.11 The HELP document also included the Food and Beverage Standards (FBS) as well as the Nutrient Based Guidelines for Food and Drink Providers (NBG), which had been established to cover food and drink provision across the school day, and outlined clear time frames for action. The FBS and NBG are respectively reproduced in Appendices A and B.

1.2.12 The following are the timeframes established by the then Education Division:

- Launch of food and beverage standards in schools with immediate effect in 2007.
- Implement food and beverage standards for tuck shops in September 2007.
- Compliance date for all Primary and Secondary Schools in January 2008.

1.2.13 In order to ensure that these standards were maintained across schools, monitoring had to be carried out by the Healthy School Nutrition Audit Board (HSNAB), effectively tasked with ensuring appropriate regulation and enforcement.

1.2.14 The ‘Our Resources’ document, which complemented the HELP document provided: (a) a step-by-step guideline on how to develop a healthy eating lifestyle plan; (b) a Food and Beverage audit pack aimed

at helping schools review current practices; and (c) the Food and Beverage Guidelines which highlighted simple and sustainable ways through which schools can promote healthier food and drink for packed lunches. The HELP document was made available to all members of the Senior Management Teams (SMT) in schools, teachers and Learning Support Assistants to help correct and redirect the poor eating habits which have an increasingly negative effect on health.

1.2.15 To date, the HELP document is considered to serve as guidelines for schools interested in implementing health-related internal policies. The extent of use of this document is determined by, and at the discretion of, individual schools, primarily due to the fact that it is not considered to be official policy. Related monitoring and enforcement mechanisms addressed in the HELP document are similarly subject to the particular preference of the schools concerned.

1.3 Key Players and Stakeholders

1.3.1 The HELP Committee claimed that, through the participation of all stakeholders, one would be fulfilling the goal of turning schools into healthy ones and of contributing towards a more holistic education for future generations. NAO considers the need for strong leadership and close partnership between different organisations within the Directorates as integral and critically important for the said targets to be achieved. In addition, close collaboration with other Ministries and Departments is required. The main players and stakeholders identified in NAO’s study include the following:

- a) The Directorates for Education;
- b) The Quality Assurance Department (QAD);



- c) The HELP Committee;
- d) HSNAB;
- e) College Principals;
- f) Heads of School (State and Non-State);
- g) Projects and Initiatives Section (PIS);
- h) HESC;
- i) HSU;
- j) EHS;
- k) The Health Promotion Unit (HPU);
- l) The Health Inspectorate Services (HIS); and
- m) Ministry for Resources and Rural Affairs (MRRA).

Directorates for Education

1.3.2 Between 2007 and 2008, the Directorates for Education went through a reform which directly addressed decentralisation and the relevant autonomy of the new Colleges and State Schools. In November 2007, two Directors General were appointed and entrusted with responsibility of the following two Directorates, reporting directly to the Permanent Secretary of the Ministry of Education, Employment and the Family (MEEF):

- a) The Directorate for Quality and Standards in Education (DQSE) – The mission of this Directorate is to regulate, establish, monitor and assure standards

and quality in the programmes and educational services provided by schools. It is the function of this Directorate to regulate, guide, evaluate, verify, research and report on the various elements and results of the compulsory educational system. The aim of the DQSE is that of assuring quality education for all and promoting good practices in all activities related to such education in a national curricular framework of lifelong learning.

- b) The Directorate for Educational Services (DES) – The mission of this Directorate is to ensure the effective and efficient operation and delivery of services to the Colleges and State Schools within an established framework of decentralisation and autonomy. The Directorate is in constant collaboration with the colleges and schools, to plan, provide and allocate the resources, services, and learning tools required. The latter-referred tools encompass a variety of pedagogical, psychosocial, managerial, operative and other ancillary support tools, as required in the State Colleges, schools and educational institutions. Finally, DES is also tasked with encouraging and facilitating the networking and cooperation of schools, colleges and other educational institutions.

Quality Assurance Department

1.3.3 The QAD was set up within the DQSE, following the reform started in late 2007 within the Directorates for Education. One of the main objectives of this Department is helping schools and colleges to improve by: (a) supporting schools in undertaking effective internal reviews; (b) developing and implementing effective School Development Plans (SDP); and (c) by supporting colleges in induction and mentoring, amongst other duties.

1.3.4 The QAD is also responsible for external reviews of all State and Non-State Kindergartens, as well as of licensed Primary and Secondary Schools. In addition the Department carries out various functions related to Non-State Schools including: regular compliance confirmation checks; approval of reimbursement to Church Schools following the engagement of new staff; data gathering of Non-State licensed schools and issues associated with licensing of new Non-State Schools.

Healthy School Nutrition Audit Board

1.3.5 In the HELP document, the Education Division committed itself to the setting up of an HSNAB within the DQSE. The duties of the HSNAB, as outlined in the HELP document, included:

- a) Keeping nutrition standards updated and formulating new ones;
- b) Regulating all health, safety and nutrition-related activities and events in schools;
- c) Ensuring compliance with the national food and beverage standards and regulations by carrying out regular periodic audits;
- d) Liaising with HIS to ensure that food and drink provision on school premises is compliant with food safety legislation;
- e) Taking any necessary enforcement action to ensure that school food and drink provision is in accordance with the set standards;
- f) Ensuring that guidelines and action plans concerning students having special diet-related conditions, such as diabetes and food allergies, are in place;
- g) Liaising and working in coordination with other main stakeholders, so as to maintain a healthy nutrition environment within schools;
- h) Ensuring that the tuck shop contracts are in compliance with standards;
- i) Issuing certificates of approval to local food manufacturers, importers and distributors whose products fall within the parameters established in the food and nutrient standards; and
- j) Carrying out additional duties as instructed by the Director General for DQSE.

1.3.6 Despite all of the above, QAD stated that, to date, the HSNAB has not yet been set up due to the Government's wider reforms in the education sector as a whole and that the former is not intended to serve as a replacement for the planned Audit Board.

College Principals

1.3.7 The reform introduced by Government in 2006 categorised State Schools in Malta and Gozo into ten colleges, with nine colleges in Malta and one in Gozo. Colleges were set up to ensure educational experience and services in a full and continuous process starting from early childhood education, and through to the Primary and Secondary levels. Each College is under the responsibility, guidance and administration of a Principal, whose role is regarded as the Chief Executive Officer of the College. The Principal is accountable to the Directors General as regards to the performance of his/her functions and those of the College.

Heads of School

1.3.8 In the case of State Schools, it is the Heads of School (HoS) who are responsible for their overall management and leadership. The HoS are accountable, amongst other responsibilities and duties, to:

- a) Provide professional leadership and ensure the implementation and the development of the National Curriculum Framework;
- b) Secure whole-school commitment to the curricular philosophy, values and objectives;
- c) Promote and further the holistic education of each student;
- d) Organise, manage and control efficiently and effectively the human, physical and financial resources of the school; and
- e) Actively participate in the meetings of the College Council of Heads and collaborate with other Heads, maximising networking under the leadership of the Principal.

1.3.9 For Non-State Schools, the term HoS applies to Primary Schools, Secondary Schools, or a combination of the two. For the purposes of this audit, the term 'College' in Non-State Schools should not be confounded with its respective use in the State School context.

HELP Committee

1.3.10 As outlined earlier, the HELP Committee was appointed by the Director General of the then Education Division in 2006. At its launch, the then Minister of Education, Youth and Employment stressed the importance of Malta's preparedness at policy level outlining quality standards for a healthy lifestyle. The set up of the HELP document was considered to be a step forward in the amelioration of the quality of local education. The members of the committee included:

- a) The Assistant Director of Education in the capacity of Chairperson;
- b) The Education Officer (EO) for Health and Safety;
- c) The President of the Association of School Councils;
- d) EO for Home Economics; and
- e) The Head of EHS.

1.3.11 At present, the composition of the HELP Committee has been altered, also complemented by the introduction of other contributors. Currently the HELP Committee is made up of:

- a) Chairperson – Services Manager – PIS;
- b) Another member from PIS;
- c) DES Service Manager from the Human Resources Department;

- d) EO for Health and Safety;
- e) EO for Home Economics;
- f) EO for Physical Education and Sports (PE); and
- g) A member from the Tender and Procurement Section.

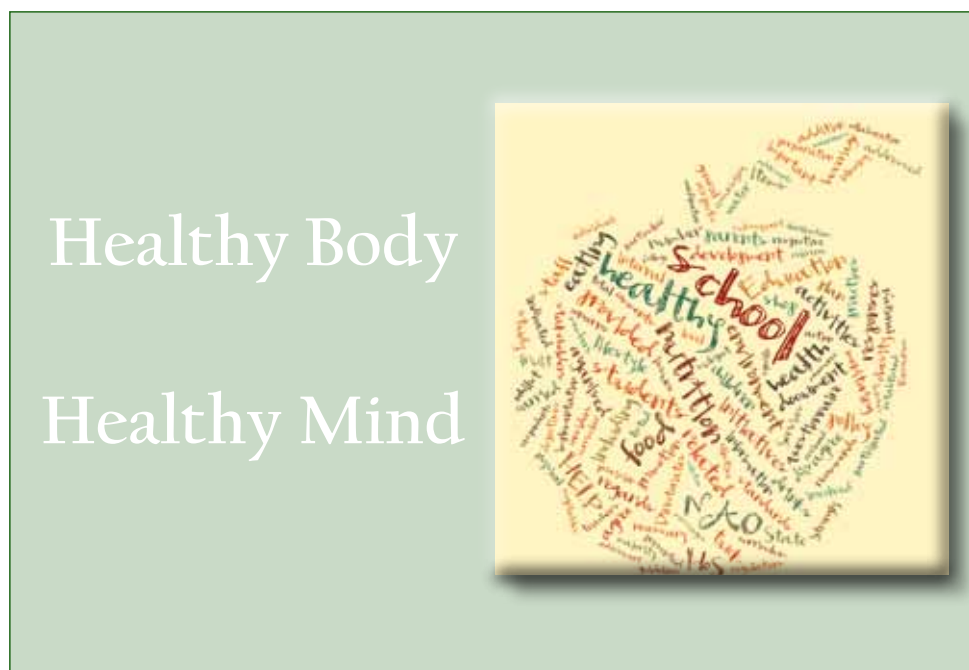
1.3.12 The HELP Committee's philosophy is that of a whole-school approach. The Committee is trying to promote the HELP document by educating and informing schools on healthy eating and nutrition. In January 2010, the committee held discussions with the HELP link teachers and HoS regarding the HELP document.

Projects and Initiatives Section

1.3.13 The PIS forms part of the Student Services Department, within DES. Amongst other duties, PIS are responsible for the coordination of initiatives such as the School Milk Subsidy Scheme (SMSS) and the School Fruit Scheme (SFS) in collaboration with the MRRA. Specifically and directly relating to the scope and objectives of this audit is PIS' involvement in the planning of healthy eating lifestyles within schools. Furthermore, the Section receives complaints and queries, whilst also providing relevant guidance. Members from PIS are also involved in a variety of extra-curricular activities organised by schools.

Home Economics Seminar Centre

1.3.14 HESC forms part of the Curriculum Management and eLearning Department within the DQSE. HESC



promotes health in various settings by offering a diverse array of services. HESC is committed to:

- a) Improving the quality of everyday life for students, their families and the community, through the efficient, effective and sustainable management of nutrition-related resources;
- b) Creating and maintaining supportive environments which promote healthy eating and living; and
- c) Addressing the determinants of health in order to enable students, families and other community members to adopt and enhance lifestyle activities which are conducive to health.

1.3.15 HESC addresses a variety of health-related issues, particularly through seminars, programmes and hands-on practical interventions, which cater for different community members, including children, adolescents, parents, adults and senior citizens. In its approach, HESC embraces the constructivist pedagogy, which is based on action-oriented practices of collaborative learning, peer mentoring, group work, and peer review. Through this pedagogy, students interact meaningfully with their peers, rather than solely with their teacher. HESC considers this approach as conducive to students' intellectual development, particularly through problem solving.

1.3.16 These learning styles are aimed at positively influencing the health behaviours of individuals and their families, by helping them to acquire the right knowledge and understanding as well as skills and attitudes central to the endorsement of change. Ongoing promotion encourages and empowers participants to adopt and enhance sustainable lifestyle activities that are conducive to health.

1.3.17 NAO considers the role adopted by HESC with regards to nutrition within schools to be of central importance, specifically due to the fact that health education is a key and central component within the subject of Home Economics. These aspects are further elaborated-upon in the ensuing chapters.

Health and Safety Unit

1.3.17 HSU forms part of the School Resources Management Department within DES. The Unit is responsible for the promotion of awareness on health and safety issues amongst all students. Its policy is to provide and maintain a safe and healthy environment in schools by: (a) teaching students about health hazards; (b) advising school administrations against such hazards through risk assessments; (c) organising on-going training for school personnel; and (d) providing information, training and

supervision to staff and students within Maltese schools, in order to achieve these set objectives.

1.3.18 The duties of HSU are carried out through the services of peripatetic teachers, and resident Health and Safety Teachers in every Secondary and post-Secondary school. These create a network of experience, which ensures that a safe and healthy setting within schools is presented and preserved. In addition to the aforementioned duties, HSU conducts a number of inspections which assess the level of adherence of school tuck shops to relevant health and safety criteria. The role played by HSU is further delved into in Section 4.4.

Education Health Services

1.3.19 The main objective of EHS, formally referred to as the Education Medical Services Unit, is that of encouraging and supporting the health promoting lifestyle and environment within the education system. The services offered by EHS include the execution of regular studies, such as the BMI survey carried out across schools, as well as reporting on clinics, first-aid facilities and tuck shops within educational institutions.

1.3.20 At present, EHS is not active as outgoing personnel have not been replaced. The absence of key personnel within EHS has also had ramifications on certain health-related tasks carried out within the Directorates for Education, such as the aforementioned BMI survey. In addition, the input and insight generated by EHS merits significant attention in the context of the HELP Committee, which identified it as one of the key stakeholders in achieving healthy nutrition environments within schools.

Health Promotion Unit

1.3.21 The HPU within the Health Promotion and Disease Prevention Directorate under the MHEC strives to achieve its aims through:

- a) Advocating for health based on human rights and solidarity;
- b) Investing in sustainable policies, actions and infrastructure to address the determinants of health;
- c) Building and leading alliances with public, private, non-governmental and international organisations and civil society to create sustainable actions for health;
- d) Monitoring progress through appropriate research, indicators and targets;

- e) Providing capacity building for people to make the right choices for their own health; and
- f) Reaching out to people within the setting of their everyday life.

1.3.22 HPU conducts a series of campaigns related to health promotion and initiatives targeted at the school community as a whole. In addition to its role in raising awareness, HPU participates in health weeks and sports days when requested by schools. When HPU is called upon to take part in such activities, nutritionists from the Unit conduct presentations and talks with students and their parents.

1.3.23 The Unit has also conducted a pilot project in a small number of schools entitled ‘Nutrition Friendly School Initiative’. This is an initiative driven by WHO, which awards schools that are nutrition friendly. It effectively consists of a framework utilised in designing integrated school-based interventions, which addresses aspects of nutrition-related health problems, whilst coordinating the work of various stakeholders.

Health Inspectorate Services

1.3.24 HIS forms part of the Environmental Health Directorate within MHEC and is tasked with promoting and safeguarding the well-being and health of the public at large. HIS is responsible for providing services relating to the areas of enforcement, environmental issues, food-related concerns, licensing and public health risks. It enforces public health laws and regulations through advice, education, persuasion and legal action when circumstances warrant such intervention. In relation to schools, HIS is bound to carry out inspections in all State, Church and Independent Schools with regards to ensuring food safety, as well as with regards to the general standard of hygiene. Generally, inspections are risk-based and graded according to a pre-established checklist. The Health Inspectorate is the enforcement body of several Acts such as the Food Safety Act, 2002 and the Public Health Act, 2003.

Ministry for Resources and Rural Affairs

1.3.25 MRRA is the Ministry responsible for the SFS, which is co-financed by the European Union (EU) and Government, respectively contributing 75% and 25%. The overall aim of the SFS was to provide a policy and funding framework for Member States to sustain an increase in the share of fruit and vegetables in the diets of children, at the stage when their eating habits are formed. In addition to ensuring the well-being of children, a further objective of MRRA was to increase the demand for local produce of fruit and vegetables through the introduction of this scheme in 2009. Besides the SFS, MRRA is responsible

for the coordination and implementation of the SMSS. Further details regarding these two initiatives are provided in Section 3.3.

1.4 Objectives and Scope of the Study

1.4.1 Through this study, NAO sought to evaluate the uptake level of the guidelines established through the HELP document by individual schools. This is of particular relevance as records relating to the effective adoption of these guidelines outlined in the HELP document are lacking and there are no formal records of information regarding its implementation.

1.4.2 This audit examined a number of measures listed in HELP and assessed the extent to which these measures were being implemented and monitored. Moreover, the degree of impact and level of achievement of established objectives, together with the extent of compliance with established food and beverage standards and regulations, was also evaluated.

1.4.3 This NAO study also sought to assess the factors that were facilitating or hindering the implementation of HELP and highlight the issues and areas that need to be addressed by the competent authorities in order to ensure a comprehensive and effective approach to school nutrition.

1.4.4 Whilst carrying out this audit, NAO sought to explore the contributions provided by various stakeholders with regards to the achievement of a healthy nutrition environment within schools. Moreover, this study drew up a comprehensive appreciation of the identified best practices encountered throughout NAO’s review and subsequent analysis.

1.4.5 For the purposes of this audit, the term ‘schools’ refers to all Kindergarten, Primary and Secondary Schools in Malta and Gozo, whether they are run independently, by the State or by the Church.

1.4.6 The audit excluded schools for students with special needs and at the post-Secondary level, as their unique circumstances would require specific studies particularly tailored for their needs and contexts. This distinction was also made in the TASNE report.

1.5 Structure of the Report

The report is structured around the following main areas:

- **Chapter 2 – You Are What You Eat: Fostering a Healthy Nutrition Environment within Schools:** This chapter focuses on how schools can achieve a healthier nutrition environment through the fostering of a supportive school environment,

particularly through the development and implementation of healthy eating lifestyle plans and School Development Plans. It also addresses the staff-related concerns at play, systems of internal monitoring and the dynamics in school stakeholder collaboration.

- **Chapter 3 – Food for Thought: The Curriculum Aspect:** This chapter explores the extent of application of a flexible school curriculum. It also addresses the organisation of activities, events and initiatives undertaken by schools in their respective efforts towards promoting healthy eating and a more general healthy lifestyle.
- **Chapter 4 – Getting Through: Providing Clear and Consistent Messages:** This last chapter focuses on the importance of delivering clear and consistent messages regarding nutrition-related issues throughout the school day and across the school environment. Attention is directed at the critically important role played by parents in collaboration with schools, and how this bears influence on subsequent student behaviours and attitudes towards healthy nutrition. Finally, other pertinent issues such as the influence of school tuck shops, access to drinking water, street hawkers and school sponsorships are reviewed.
- **Appendix A – Food and Beverage Standards:** These standards identify permissible and prohibited food and drinks.
- **Appendix B – Nutrient Based Guidelines for Food and Drink Providers:** These guidelines address nutrient-related levels to be adhered to in the sale of food and drinks.
- **Appendix C – Methodology:** This section describes the information sources and analytical techniques that were used during the study.
- **Appendix D – School Water Audit:** This audit tool addresses the provision of water within schools by focusing on various aspects.
- **Appendix E – NAO Questionnaire distributed to State Schools:** This research tool constituted the main source of data upon which the study was carried out. Questionnaires were distributed to State, Church and Independent Schools at Primary and Secondary level. The document reproduced as Appendix E refers to the version completed by State Schools, whilst those completed by Church and Independent Schools featured minor variations.



Chapter 2

You Are What You Eat: Fostering a Healthy Nutrition Environment within Schools

Chapter 2 – You Are What You Eat: Fostering a Healthy Nutrition Environment within Schools

Chapter 2 focuses on how schools can achieve a healthier nutrition environment through the fostering of a supportive school setting, particularly through the development and implementation of healthy eating lifestyle plans and School Development Plans. It is envisaged that such an environment facilitates the adoption of a healthy lifestyle and promotes healthy choices early in life. This chapter also addresses the staff-related concerns at play, systems of internal monitoring and the dynamics in school stakeholder collaboration.

2.1 Introduction

2.1.1 A healthy nutrition environment at school provides students with consistent and reliable health information, as well as ample opportunities to put it to good use. In a healthy environment, the classroom and other school activities provide clear and consistent messages that explain and reinforce healthy eating and physical activity habits. Students learn to make healthy lifestyle choices not only in the classroom, but wherever they are throughout the school day.

2.1.2 The school environment, attitudes of students and staff, as well as what students learn in the classroom have a major influence on the development of their knowledge and understanding of health. As outlined in the HELP document, the school ethos and environment must characterise the behaviour and attitudes which are expected of both staff and students in relation to healthy eating.

2.1.3 Thus, students need to have opportunities to practice these healthy habits. They should be provided with an array of healthy food options, areas where they can eat in relaxation and comfortable surroundings, together with the provision of daily physical activity. The following information relates to actions and initiatives undertaken by

individual schools in ensuring the provision of a healthy nutrition school environment.

2.2 Internal Policies and Planning

2.2.1 Given that the HELP document is not an enforced policy, the onus of developing a comprehensive healthy eating lifestyle plan is mostly up to the individual initiative of schools. The HELP document provides ample guidance for the development of such a plan under the ‘Our Resources’ addendum, and also recommends that the issue of a healthy eating lifestyle be listed as a priority in the SDP.

2.2.2 In this context, NAO requested information from HoS on the development of a comprehensive healthy eating lifestyle plan, related policy documents, and relevant extracts from the SDP relating to the provision and consumption of food and beverages at school, together with the organisation of related educational and promotional activities for scholastic year 2009/2010. HoS were invited to comment on any strategies adopted by the schools, as well as forward any documentation with relevant policies and established plans.

2.2.3 From the 142 schools that participated in NAO’s questionnaire, the number of schools that forwarded the relevant documentation amounted to 66. It is important to note that whilst a number of schools indicated that they do follow the HELP document and promote healthy eating through various activities, they nonetheless failed to provide any supporting documentation when requested by NAO. In total, 76 schools failed to provide supporting documents to NAO.

Internal School Policies

2.2.4 35 out of the 66 schools, which provided NAO with documentation regarding any policies or plans,

forwarded an internal policy relating to healthy eating, launched within the school community, as guided by the HELP document. These policies were introduced with the intention of increasing awareness on healthy eating and promoting a healthy lifestyle by educating students in all aspects of sustaining a good nutrition environment.

2.2.5 Through these policies, schools indicated how they: ensured that children brought healthy lunches, whilst increasing milk and water consumption; promoted the consumption of fruit and vegetables through the SFS; and avoided prohibited food as listed in the HELP document. In addition, such policies included extra-curricular activities ranging from field trips and health awareness weeks to visits organised at HESC.

2.2.6 The role played by parents in the success of these internal school policies was considered critical, as they were encouraged to provide their children with only healthy food. To this end, meetings and discussions with parents and children were organised, and in some cases the participation and input of nutritionists from HPU and personnel from HESC was sought. Furthermore, as a good practice, teachers explained the details of the policy to pupils and organised classroom activities, which were subsequently interlinked with other curricular areas.

2.2.7 The internal school policies made available to NAO also indicated the integral role of monitoring and evaluation. HoS stated that these policy documents were appraised annually and progress reports were presented during staff and parent meetings. Moreover, HoS remarked that they recorded and documented actions and also set up meetings with stakeholders to identify any strengths or weaknesses. It is important to mention that schools stated that this policy is subject to monitoring by the HSNAB. However, this Board was never set up and relevant duties appear not to have been assumed by a replacement organisation.

2.2.8 NAO noted a number of good practices from the internal school policies received. One particular school was developing a school canteen policy, which involved other ancillary actions, such as better communication between the canteen and school staff regarding the setting up of menus, as well as the increased supervision by teachers during breaks in the tuck shop area. Another school earmarked a section within its grounds for the creation of an outdoor classroom where children could practice gardening. The same school also allocated the area for a kitchen, with adequate seating, where healthy meals could be prepared and consumed as part of its strategy.

2.2.9 In addition, another HoS forwarded to NAO a certificate template, which was presented to students who included fruit and vegetables as part of their daily lunch during a particular month. A Healthy Living Policy booklet

developed and distributed throughout the school was also deemed by NAO to be good practice, as it outlined all the major objectives related to healthy living. Other schools provided NAO with very well-explained and detailed policies, in addition to presentations and other material. However, NAO also noted that the depth of detail encompassed by each of the submitted and reviewed internal policies varied significantly.

Action Plans

2.2.10 A number of HoS forwarded documentation, illustrating various action plans schools undertook or were ready to undertake as part of their healthy eating programme. These action plans were designed to make children aware of the importance of healthy eating and encourage them to be more health conscious. Certain action plans made specific reference to the HELP document as their main resource, whilst others presented an action plan that was part of EkoSkola (an initiative aimed at mobilising the whole school by empowering students to adopt an active role in environmental decision-making) and therefore aimed at promoting healthy eating and physical fitness habits among students.

2.2.11 In these action plans, HoS mentioned the planned activities, including health days/weeks as well as health awareness lessons. These health awareness lessons were to be carried out in combination with curricular subjects, which could be termed as good practice. Furthermore, schools mentioned that they planned to encourage and increase student consumption of fruit, vegetables, water and milk, whilst also adopting a no sweets policy. Other indicated activities were to include promotional campaigns such as talks by nutritionists to students and parents, the distribution of leaflets and hosting of exhibitions.

School Development Plans

2.2.12 Few schools forwarded material that illustrated the incorporation of healthy nutrition environments within their respective SDPs. In these SDPs, schools documented the practices taking place, which included raising awareness with regards to the healthy school environment and the organisation of activities, such as healthy eating day, fira day, and other similar initiatives. Schools also stated that their respective SDP indicated that children were expected and obliged to bring healthy lunches, since their unhealthy equivalent food and beverage items were prohibited.

2.2.13 A few schools also remarked that they were planning to set up a healthy eating policy, which involved actions such as tuck shop monitoring, the administration of questionnaires, and suggestion boxes targeting the subject matter. Another potential good practice, still at planning stage and proposed for implementation, is the promotion of



healthy eating by means of recipes included in the school magazine and school website.

Other Information

2.2.14 A considerable number of HoS provided other information relating to the creation of a healthy nutrition environment, instead of actual plans or policies in force. These schools stated that they advise and provide guidelines on the consumption of healthy food and drinks. Other foods, such as salty snacks, sweets and chocolates are not permitted at all, or by exception on certain special occasions. They also sent circulars or notes to parents informing them about the problem of obesity and/or the new wide variety of healthy items in the school tuck shop, which were in line with the food and beverage standards listed in HELP.

2.2.15 HoS also provided information to students through talks and educational outings related to healthy living, which included fruit days. In addition, few HoS stated that, for such educational outings, monitoring was carried out by means of observation and reporting. Other monitoring was done through teachers' schemes of work and general feedback received regarding the healthy nutrition environment within schools.

2.2.16 A number of HoS also stated that, although written in the schools' behaviour code, actions for the implementation for a holistic healthy lifestyle environment were still not taken. These Heads were planning to increase awareness within the school environment, however, they still had not set up any action group, plan or policy.

2.2.17 Despite the fact that these schools did not have an actual plan or policy in force, a number of good practices were deemed worthy of note by NAO. One particular school established a school motto - I eat therefore I am. This motto represented a list of guidelines, which

highlighted what students must do in order to maintain a healthy lifestyle. Other schools provided their students with a menu, outlining different healthy lunches for a five-day week, presenting also, in addition to the menu, the ingredients needed and the preparation methods.

2.3 Staff Responsibility, Involvement and Training Aids

Level of Involvement

2.3.1 In the provided questionnaire, HoS were asked if any of their staff was involved in the development and implementation of policies, as well as other aspects of the school nutrition environment and healthy eating. Of the 142 schools which participated in the questionnaire, 82 schools provided information which showed that members of the school staff were involved at some stage of the process. Conversely 56 schools indicated that staff members were not involved in any way, whilst four schools failed to provide an answer to this question.

2.3.2 The majority of responses provided by the HoS indicated that the responsible members of staff were engaged at different stages of the drafting or drawing up of the policy and/or action plan for healthy eating, its respective implementation and subsequent monitoring. Staff members contributed to the development of the action plan through their participation in working groups, which served as a forum for their expert contributions.

2.3.3 As was the case in the preparation of action plans, members of staff were involved at multiple levels, particularly in discussions and meetings that took place during SDP sessions, through which initiatives and activities were planned.

2.3.4 A considerable number of HoS also mentioned that staff members delivered lessons on healthy eating



lifestyles. Teachers were encouraged to take the opportunity and tackle the topic in their respective subject by including healthy eating tips in other areas, such as Science and PE, which is further addressed in Section 3.2.

2.3.5 A limited number of HoS commented that staff members supervised and monitored children's lunches, in order to make sure that the adopted policies were adhered to. In addition, the provision of assistance on what should be sold at the tuck shop also featured among the responses outlining the responsibilities of staff members involved.

2.3.6 In view of the above, NAO identified some good practices that were being adopted in certain schools. In a few cases, staff members were involved in the setting up and running of the tuck shop itself, ensuring that only healthy food was being sold. In one particular school, teachers were not only involved in the running of the tuck shop, but also took the initiative of preparing food consumed by students.

2.3.7 In responding to the questionnaire distributed by NAO, HoS cited the difficulties they encountered in assigning duties to subordinate staff. The lack of an official and formally recognised policy was highlighted by HoS as the main source of hindrance in the process of introducing healthy nutrition in schools and the subsequent assignment of relevant tasks to individual members of staff. According to some Heads, the situation was beyond their immediate control. However, some explained that, in the absence of a school policy, there were still some teachers who developed and implemented healthy measures on their own individual initiative.

Teaching Aids and Other Material

2.3.8 Suitable teaching aids and material are essentially important resources to staff responsible for carrying out

duties relating to the establishment of a healthy lifestyle environment within schools. In fact, this was largely corroborated in the responses provided by the HoS, with regards to the level of support (in terms of teaching aids and material) afforded to teachers.

2.3.9 62 out of 142 HoS who participated in the questionnaire agreed with this statement. Another 41 HoS adopted a neutral stance as to whether staff members were given adequate teaching aids/material on nutrition and healthy eating. Of significant interest is the fact that 32 HoS gave negative ratings, disagreeing with the assertion that teachers are provided with enough material. The remaining seven HoS did not reply to this question.

2.3.10 In addition, HoS were invited to provide NAO with further clarifications and information on the type of teaching aids, if present, provided to the responsible staff. Such teaching aids were generally provided by the respective schools or other involved stakeholders. The most prevalent item listed was the HELP document as Heads stated that staff should be aware of this document since it was distributed with the intention of it being used as a reference. However, respondents mentioned other material which was provided to staff including:

- a) Articles, internet links, emails, handouts and other leaflets highlighting the importance of healthy eating;
- b) Nutrition-related books purchased and placed in the school library, with others given to members of the students' council;
- c) Calendars presenting healthy eating messages;
- d) Charts depicting material such as the food pyramid and tips on physical exercise;

- e) Hand gloves and puppets animating different fruits for the consumption of five-a-day;
- f) Other visual aids such as posters and presentations illustrating healthy eating tips in order to increase awareness;
- g) New facilities such as a kitchenette, a refrigerator and an oven; and
- h) Some forms of training (further discussed in paragraphs 2.3.13 to 2.3.18).

In-service Training

2.3.11 From the responses gathered, NAO also observed that some schools are engaged in a number of good practices related to healthy eating in schools. Earlier, reference was made to the members of staff from a particular school, who were directly involved in the preparation of healthy food and running of the tuck shop. Following this successful initiative, these teachers were reportedly involved in the development of a recipe book based on this practice, together with other stakeholders. Furthermore, another HoS commented that an interactive CD as well as a teacher's handbook was developed in 2007 by a member of the SMT qualified in nutrition education, thereby providing teachers with a comprehensive nutrition knowledge resource.

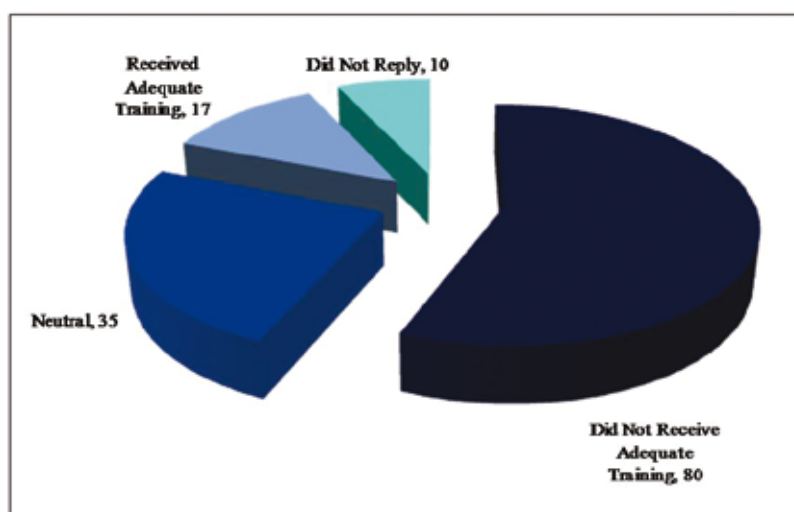
2.3.12 With regards to the negative comments registered in the questionnaire distributed by NAO, some HoS complained that teaching aids and other material should be improved and that more needs to be done in this regard, whilst others implied that no aids were given at all. A number of HoS indicated that limited funds were one of the causes constraining the level of material provided to staff. Of note is the fact that a number of respondents indicated that teachers researched the material themselves and in particular cases resorted to using their own personal resources.

2.3.13 In order to maximise the use of teaching aids and relevant material, staff should be provided with opportunities for development through adequate training on nutrition and healthy eating, as listed in the HELP document. From the 142 schools which participated in the questionnaire prepared by NAO, only 17 agreed with the fact that their staff received adequate in-service training during the scholastic year 2009/2010. Whilst 35 respondents remained neutral, a noteworthy majority of 80 HoS disagreed with the statement posed in this questionnaire. The remaining ten schools did not reply to this question (Figure 2).

2.3.14 According to a selection of HoS whose response to this aspect of the questionnaire was predominantly negative, staff resorted to other means of professional development out of their own initiative. In this context, the absence of formally organised in-service training was offset somewhat by teachers sharing their resources during staff meetings and working groups. On the other hand, one particular respondent remarked that, although teachers had not received any formal in-service training on nutrition and healthy eating, they could have opted to attend in-service courses organised by the Directorates for Education related to this subject matter. Few Heads also commented that teachers were not given any form of training but they nonetheless were still very aware of healthy eating recommendations.

2.3.15 Conversely, a number of Heads mentioned some forms of training. In some cases, in-service training was provided, although not directly related to nutrition and healthy eating. It was provided mainly through other subjects, such as PE, which tackled areas in common with healthy nutrition. Some of the responses made reference to talks, seminars and meetings, including the SFS.

Figure 2: Classification of Responses regarding In-Service Training



2.3.16 NAO reviewed the contents of the in-service courses carried out from 2008 up to 2010. Healthy living was broadly covered in voluntary courses targeting medical issues of relevance to both Primary and Secondary school children. However, the concept of a healthy lifestyle featured fleetingly in compulsory courses relating to the subject of Home Economics and catered solely for Home Economics teaching staff. The Directorates for Education, again state that the limited focus on health-related training was due to the need to address other important pedagogical issues in line with educational reforms.

2.3.17 On the other hand, schools were afforded the opportunity to integrate sessions on healthy eating with staff meetings or through the development and/or review of the SDP. Furthermore, schools were tasked with recommending related topics to feature in their professional development sessions. However, these sessions were provided to staff only at the discretion of the Head or the school's management.

2.3.18 The Directorates for Education further elaborate on the situation concerning training indicating that this aspect is strongly regulated by means of the Government-MUT Agreement. This agreement stipulates the limited number of hours per school year that can be dedicated to the training of staff, and it is with these limitations in mind that the Directorates prioritise what training is to be provided.

2.4 Internal Monitoring carried out in Schools

Designated Staff

2.4.1 As part of the strategy for fostering a supportive school environment, which envisages a healthy lifestyle and promotes healthy choices early in life, schools had to assign a staff member who was to assume the responsibility of overseeing all aspects relating to food. Out of the 142 schools which sent their questionnaire to NAO, 83 mentioned that they had assigned someone in this capacity. The majority of these 83 schools, which delegated this responsibility to a staff member, assigned these duties to a particular teacher or the Assistant Head. The teachers in charge varied between the Health and Safety teacher, the Home Economics teacher, the PE teacher, or any other class teacher. Other respondents included the Head himself/herself as responsible for nutritional aspects across the different schools, amongst other personnel mentioned.

2.4.2 A selection of alternative responses indicated that the persons responsible were assisting in carrying out surveys whilst simultaneously implementing and monitoring the school policy regarding healthy eating and tuck shops' adherence to regulations. In certain circumstances, the appointed person was tasked with promoting a healthy lifestyle and nutrition through sessions, meetings and talks

with students and parents. Through promotion, the whole school community was encouraged to opt for a healthy lifestyle including the choice of healthy food and drinks. Respondents also mentioned the monitoring of the SFS, the implementation of the HELP document and working to integrate healthy eating into the curriculum. However these were only mentioned sporadically.

2.4.3 HELP Link teachers (primarily tasked with liaison duties between the HELP Committee, the school's SMT and council) were also involved in the 'What's in your lunchbox?' survey. The main purpose of this study was to provide and help school council members with the lunchbox checklist, ensure that data entries are valid, keep the SMT updated of any developments and liaise with SMT to market this initiative. This survey was primarily driven by the HELP Committee and carried out in all Primary and Secondary State Schools so as to promote and monitor a healthy eating school environment.

2.4.4 The lunchbox exercise identified eight different categories of food/drinks: (a) bread, cereal, crackers etc.; (b) filling used in bread, crackers, and wraps; (c) vegetables (used as filling); (d) fruit; (e) salad/soup; (f) finger foods; (g) dairy products; and (h) drinks. The students' council members filled in the checklist with their respective class. This exercise was repeated with the same classes for several times and the data collected was to be sent to HESC. At the time of publication of this report, HESC was still in the process of analysing and compiling this data.

2.4.5 On the other hand, five schools mentioned that all of the school's members of staff were responsible for nutritional aspects within the school environment. 52 schools replied that they did not assign anyone to this specific task, whilst two schools did not comment on this particular question.

2.4.6 From the responses gathered, NAO also noted some good practices that took place in particular schools that are worth mentioning. These initiatives included the preparation and provision of healthy food items that were sold at the tuck shop; the monitoring of obese and overweight students with the assistance of the Malta Sports Council (KMS), which subsequently introduced healthy living programmes for extreme cases; an award scheme presenting monthly certificates to students who bring healthy lunches to school; and the development and availability of recipes or handbooks to children.

Internal Audits

2.4.7 Letter Circular SSD 09/10, dated 14th January 2010 and issued by the Student Services Department indicated that two successive audits were to be carried out within schools, driven on the initiative of the HELP Committee. The first, entitled 'What's in your Lunchbox?',

was carried out during the scholastic year 2009/2010. On the other hand, the second school audit, projected to take place during the scholastic year 2010/2011 by the DQSE, sought to address similar health-related issues, but has not yet been carried out.

2.4.8 Furthermore, and as mentioned earlier in Chapter 1, the ‘Our Resources’ document provided schools with guidance on how to carry out an internal audit of the nutrition environment. 105 schools out of the 142 that returned their questionnaire replied that no internal audits on aspects of the school nutrition environment were carried out in recent years, whilst another eight schools did not comment with regards to this question.

2.4.9 The remaining 29 schools replied in the affirmative with respect to the question posed by NAO. The majority referred to the audit carried out by the HELP Committee, the ‘What’s in your lunchbox?’ survey, as the internal audit carried out within the school, whilst others referred to questionnaires or other studies as a means of monitoring the nutrition environment. Despite the above reference to the ‘What’s in your lunchbox?’ survey as an internal audit, NAO maintains that this audit cannot be classified as internal, since it was essentially driven by the HELP Committee.

2.4.10 It must be noted that, from the 29 HoS who stated that internal audits were carried out, only 15 schools provided information on the type of assessment carried out, with just seven schools providing documentation despite it being requested by NAO. This documentation included the provision of copies of the ‘What’s in your lunchbox?’ survey, or copies of a questionnaire in which healthy living only featured as a secondary area of interest.

2.4.11 From the data collected, only one school appears to have carried out a full and comprehensive food audit. This was a comprehensive study featuring a number of responses including: (a) the type of lunch brought from home; (b) the number of students buying from the tuck shop; (c) the eating patterns exhibited by students within the school environment; and (d) the packaging students

were using to bring their lunch in. NAO was also provided with all of the analysis and presentation of data.

2.5 School Stakeholder Collaboration

2.5.1 The HELP document invited schools to work with other partners as part of the strategy for creating a supportive school environment that envisaged a healthy lifestyle and promoted healthy choices early in life. In the questionnaire provided by NAO, HoS were invited to respond and comment on whether their school worked with other partners (apart from students, staff and parents) in order to encourage healthy lifestyle habits within the school community.

2.5.2 89 schools acknowledged that they worked with other partners and stakeholders. Most of the HoS indicated HESC as the main stakeholder whom they collaborated with through various initiatives, such as visits to the Centre and the organisation of healthy breakfasts for all Year 3 students and their parents. HESC also worked in partnership with schools, by delivering presentations and talks to the school community.

2.5.3 A considerable number of responses mentioned other stakeholders, which communicated and worked in partnership with schools. These included amongst others:

- a) MRRA for the provision of the SFS and the SMSS. This same Ministry coordinated outings for selected schools, which involved visits to farms such as the Ghammieri farm, together with participation in rural activities such as strawberry picking and organic farming;
- b) HSU, through the organisation and delivery of talks to different classes, the safety week event, and the promotion for guaranteeing a safe school environment;
- c) Local Councils, by organising various health-related activities in addition to providing general

You Are
What You
Eat



support, such as through the supply of free water for such events;

- d) HPU in giving talks for parents and making posters on healthy eating and exercise available to teachers;
- e) EHS, which delivered talks on health risks at school and conducted screening for obesity in children in selected schools;
- f) PIS, which helped schools in organising events and initiatives and liaising with HESC;
- g) Visits and talks from experts such as dental hygienists, doctors and nutritionists;
- h) Tuck shop operators and vending machine owners, to whom schools expressed their views on which items to put up for sale;
- i) KMS, through its Sports Promotion Unit and other sports associations for the organisation of sports and physical activities; and
- j) A small selection of private companies, such as local suppliers who donated healthy food and local produce to schools; Malta Dairy Products who sponsored milk for activity days and was the main supplier of the SMSS; and Frott Artna being the supplying contractor of the SFS.

2.5.4 However, NAO noted that some of the responses concerning work carried out in conjunction with other stakeholders were not directly related to the nutritional aspect, but to the promotion and awareness of health risks in general. In addition, 49 respondents did not work with other partners, whilst four schools did not reply to this question.

2.6 Conclusions

2.6.1 From the data collected in this study, it is immediately apparent that a number of schools have developed considerably comprehensive internal health-related policies. These proactive schools have translated policy into practice and are engaged in a variety of health-related activities, whilst also liaising with various stakeholders.

2.6.2 However, given that the onus for formulating and implementing these policies is largely dependent on the individual initiative and prioritisation of the school, it is also evident that a considerable number of schools may not be diverting sufficient energy and resources towards creating a healthy nutrition environment. In fact, despite

general agreement with the principles expounded upon in the HELP document, a significant number of schools failed to produce the documentary evidence that would normally constitute a formal, yet internal, school policy. Furthermore, NAO noted discrepancies in the depth and content between the various internal school policies it reviewed.

2.6.3 Consonant with the above are the findings relating to staff responsibility, their subsequent level of involvement and relevant training, or lack thereof. HoS commented on the difficulties they encountered in assigning duties relating to the achievement of a healthy nutrition environment, mainly stemming from the lack of a clear policy framework. Shortcomings were also identified on the level of training provided to staff, possibly further constrained through Union agreements, as well as other support resources and teaching aids. NAO noted that no in-service training, specifically focusing on healthy nutrition, has been provided or organised from 2008 to date.

2.6.4 Despite these limitations, a number of schools nonetheless managed to establish a broad spectrum of good practices. Once again, these good practices were highly contingent on the level of initiative of individual members of staff who, for example, assumed responsibility for the preparation of all food sold in the school tuck shop, thereby ensuring that only healthy food was sold to students.

2.6.5 Similarly, a very select group of schools exhibited high standards of practice with respect to the internal monitoring carried out by schools. One school in particular developed rigorous systems of data collection, detailing every facet of the school nutrition environment, through which appropriate interventions were subsequently designed and implemented.

2.6.6 However, in this monitoring context, three focal concerns emerge. The first relates to the diversity of staff assigned to internal monitoring duties, ranging from HoS to tuck shop assistants. Second, in a significant number of schools, the responsibility for internal monitoring of the healthy nutrition environment was a task left unassigned. Third, the vast majority of schools indicated that no internal audits were carried out, or alternatively relied on third-party input, namely, the ‘What’s in your lunchbox?’ survey carried out by the HELP Committee.

2.6.7 On a final positive note, the majority of schools indicated close collaborative ties with a multitude of stakeholders as integral to the success of a variety of initiatives. Nonetheless, approximately one third of schools, which participated in this study did not liaise with other stakeholders.

2.7 Recommendations

2.7.1 NAO's principal recommendation is the instatement of a policy governing and regulating the school nutrition environment. NAO considers the HELP document to be the ideal platform that could serve as a basis for the subsequent development of a policy that is specific and restricted enough to be enforceable and educationally useful. The absence of an enforced and centralised policy framework with regards to the creation of a healthy nutrition environment in schools is cause for concern. Relying on the initiative of individuals or particularly motivated schools will certainly not address the present situation of childhood and adolescent obesity in schools in a comprehensive manner.

2.7.2 The conclusions relating to staff responsibility, staff level of involvement and training all converge upon one common theme, that is, the lack of an active and present coordinating body. This coordination function was intended to be the remit of the HSNAB, yet ownership of this important issue is somewhat insufficient, unclear and not of the desired standard. NAO considers this organisational gap to be a critical weakness, subordinate to the aforementioned policy gap.

2.7.3 NAO is of the opinion that only when the existent policy-related constraints and issues are resolved can the necessary coordinating body come into effect. Such an organisation would effectively streamline adopted internal school policies, initiatives and other aspects of the nutrition environment within schools, whilst being recognised as the official focal point addressing all concerns relating to the subject matter.

2.7.4 Lacunae with regards to coordination are manifested in a twofold manner. First, HoS are uncertain with respect to some key policy concerns, such as, for example, the level of staff responsibility in achieving a healthy nutrition environment within schools. Secondly, good practices are limited to the individual schools that happen to have staff driven by personal initiative. NAO strongly recommends that such good practices are capitalised upon and introduced to other schools too.

2.7.5 NAO considers the provision of teaching aids and training as central to the process of transforming schools into healthy environments, and therefore recommends that these two functions be assumed by whichever supervisory body is tasked with oversight of this aspect of student development. Whilst acknowledging Union driven limitations, NAO nonetheless urges the Directorates for Education to provide the necessary support through the delivery of more in-service courses relating to healthy nutrition. Furthermore, schools are encouraged to allocate the appropriate training sessions to the area of healthy

nutrition. NAO considers health-related training to be the ideal opportunity for raising the necessary awareness amongst teaching staff in their respective influence as role models.

2.7.6 The role of this supervisory body is in NAO's opinion, also integral to the internal monitoring of the healthy nutrition environment within schools. The lack of guidance in this regard is made conspicuous by the various interpretations manifested across all schools. Schools which do not carry out the appropriate and required internal monitoring with regards to nutrition are not subject to review or audit themselves. QAD commented on the fact that the lack of guidance on HELP and the required policy formulation is due to the reform and its subsequent impact on achieving other national priorities.

2.7.7 NAO recommends that this status quo is addressed through increased internal and external evaluation and monitoring, together with the evaluation of school compliance towards achieving a healthier nutrition environment. Systems of reinforcing and rewarding positive school performance with respect to such environments are possible tools at the disposal of the necessary coordinating body, which is envisaged to have a catalytic effect on schools. In addition, NAO considers it imperative that this proposed body should work in close liaison with the HELP Committee.

2.7.8 On a related note, NAO urges the Directorates for Education to follow up the proposed external audit that was due to be carried out during the scholastic year 2010/2011. Such an exercise would undoubtedly provide valuable insight on the current situation regarding the healthy nutrition environment within schools and serve as the ideal platform for the formulation of future interventions.

2.7.9 NAO is of the opinion that the duties previously carried out by EHS are vitally important to addressing the issue of childhood and adolescent obesity in Malta. Filling the presently vacant EHS post or reallocating the Unit's respective duties to an alternative body is considered by NAO as critical. Measurement of the extent of the problem of obesity in Malta, particularly through the BMI exercise, offers indispensable feedback on progress, registered or otherwise, and provides a reliable baseline from which designed courses of action may be embarked upon.

2.7.10 NAO recommends that the present practice regarding school and stakeholder collaboration is further extended to encompass all schools. There is certainly scope for greater organisation and synergy should such practices be centrally coordinated by the Directorates for Education, and a programme be devised in collaboration with other stakeholders targeting all schools.



Photo courtesy of HESC

Chapter 3

Food For Thought: The Curriculum Aspect

Chapter 3 – Food For Thought: The Curriculum Aspect

Chapter 3 delves into the extent of application of a flexible school curriculum, which served to highlight health, diet, nutrition, food safety and hygiene, food preparation and cookery. More specifically, the degree of involvement of the theme of nutrition with other curricular subjects is reviewed. This chapter also addresses the organisation of activities, events and initiatives undertaken by schools in their respective efforts towards promoting healthy eating and a generally healthier lifestyle.

3.1 Introduction

3.1.1 The National Minimum Curriculum (NMC) highlights the fact that integration of knowledge centring around themes is the pedagogical approach that is closest to the idea of holistic education. According to the NMC, this methodology should be the dominant feature of all schools across Malta and Gozo, and it is expected that teachers of different subjects combine their efforts to plan projects around particular themes in order to emphasise and promote a healthy lifestyle. The NMC framework, published in 1999, established parameters within which every school is empowered to design and propose an educational experience that meets its particular needs.

3.1.2 The NMC was designed with specific aims for each of the three levels in the Maltese educational system. These aims do not only promote the intellectual and physical development of students, but also their emotional and social well-being. At Kindergarten level, children develop a positive attitude towards life by directing interest in daily activities, while at Primary level, children subsequently acquire the ability to make appropriate choices in all spheres of life. Finally, at Secondary level, children refine the skills developed at Primary level and further develop their knowledge of subjects introduced during the primary years, mainly through themes that integrate different areas of knowledge.

3.1.3 Objective 11 of the NMC makes specific reference to the theme of health in a section entitled, ‘Wise Choices in the Field of Health’. Amongst others, this curricular area is intended to help students acquire basic knowledge and information about:

- The nutritional value of different food;
- Choice, preparation and preservation of food;
- The production of different food.

3.1.4 The HELP document refers to the NMC in stating that at Primary and Secondary level, the development of a healthy lifestyle is addressed through the following subjects: PE, Personal and Social Development (PSD), Science, Technology, Social Studies, Home Economics and languages.

3.1.5 PE provides students with the necessary opportunities to develop physically and to understand the importance of physical activity. This subject also incorporates other aspects of healthy eating, with part of the curriculum in Secondary Schools focusing directly on health-related fitness. During PSD sessions, students discuss how to develop a healthy lifestyle and are encouraged to assume responsibility for their health and well-being.

3.1.6 As indicated in the HELP document, Science provides the opportunity to learn about the types of food available, digestion, the function of nutrients and the way the body responds to exercise, while Technology provides for the opportunity for students to learn how food is processed and marketed. In Mathematics, learning opportunities are also created through exercises relating to measurement, weighing and costing. Moreover Social Studies provides the appropriate platform for debate on environmental and sustainable development issues, whilst in the study of languages, students have the opportunity

to discuss the role of food within the major European countries.

3.1.7 Apart from these subjects, Home Economics provides practical and theoretical opportunities for students to learn about healthy eating. The integrated approach adopted in this subject emphasizes the interdependent relationships between diet, health, resources, family and individuals in the context of the home and wider environment. In addition, Home Economics promotes the well-being of individuals and families in the context of a culturally, socially-just and ecologically-sustainable environment.

3.1.8 In the Primary sector, HESC receives feedback from schools following the yearly circular it issues explaining the range of educational and support services it offers. HESC is contacted, for advice, for the organisation of various programmes, seminars and events which also include hands-on practical interventions. However, such intervention lessons in Primary classes depend on the school's initiative. Moreover, prior to the actual practical session, and in order to safeguard the health and safety of the students, HESC ensures that the school has the appropriate facilities and equipment in order to carry out the planned practical session. The absence of such premises or food laboratories hinders the effective delivery of these sessions.

3.1.9 In addition, it must be noted that health education is taught within the Home Economics syllabus across all forms in the Secondary School sector, particularly through the Food, Nutrition and Health module. However, Home Economics at Secondary level is an optional subject and is limited to those students who express their personal preference by opting for such an area. The Food, Nutrition and Health module is divided into a theoretical and practical component.

3.1.10 The theoretical component includes topics such as:

- a) Factors which contribute to good health;
- b) The CINDI dietary guidelines and the Food Guide Pyramid;
- c) Functions of food and the definition of a balanced diet;
- d) The importance of breakfast;
- e) Simple nutritious snacks and healthy nutritious desserts;
- f) Water;

g) Factors affecting food choice;

h) Proteins, carbohydrates, fats, oils, vitamins and minerals; and

i) Food packaging and labelling.

3.1.11 On the other hand the practical component provides the following learning opportunities, amongst others:

a) Preparing a healthy breakfast;

b) Simple, healthy snacks for teenagers;

c) Simple desserts and drinks using milk and fresh fruits;

d) Preparation of pasta, rice, sweet and savoury dishes; and

e) Preparation of meals with emphasis on the basic skills, the nutrients, meal planning, food commodities and cooking methods.

3.2 The Thematic Application of Nutrition within other Curricular Subjects

3.2.1 The application of a flexible school curriculum involves a number of strategic considerations. One main approach, as alluded to earlier, was the creation of links with other curricular areas such as Science, Mathematics, Art and languages. As a means of achieving these strategic objectives, schools were to develop schemes of work and adopt a varied range of teaching styles, which focused on the promotion of health and food-related items in the context of a balanced diet, whilst helping students with how to plan, budget, prepare, and cook a meal.

3.2.2 HoS were asked if their school had undertaken innovative measures to give more practical and theoretical importance to nutrition education and healthy life skills during lessons throughout 2009/2010. Such practices were already outlined in Section 3.1, and essentially entailed the promulgation of linkages and coordination with other curricular areas. From the 142 schools that participated in this questionnaire, 111 agreed that appropriate innovative measures were introduced. On the other hand, 16 schools neither agreed nor disagreed, whilst only nine schools disagreed. The remaining, six schools did not indicate a rating, however, some of them nonetheless provided additional comments.

3.2.3 Although, the majority agreed with the statement posed by NAO, 57 out of a sub-total of 111 schools provided responses, which illustrated how they integrated healthy lifestyle teaching through other curricular areas.



PSD and PE were the main curricular areas through which initiatives to instil positive attitudes by students towards healthy living were taken. PSD incorporated discussions regarding the importance of nutritive food and physical exercise, the food pyramid, and the risks associated with unhealthy food. PE integrated healthy life skills through the provision of healthy eating tips in conjunction with the physical activities and exercises carried out.

3.2.4 Home Economics also featured amongst the main subjects through which healthy living education was provided. HoS stated that during lessons, talks and activities, Home Economics teachers consistently emphasised the importance of healthy eating. Theory lessons provided by Home Economics teachers were put into practice during practical sessions, where students were encouraged to prepare healthy meals. These specifically included cookery sessions, which involved the preparation of healthy food as part of their lessons through a direct hands-on approach. The activities and initiatives carried out by HESC are further discussed in Section 3.3.

3.2.5 According to HoS, emphasis on nutrition was also given in Science lessons, where a comprehensive topic about healthy living and information about the right food to consume was taught. Moreover, a limited number of schools offered nutritional education through other means such as: (a) presentations through Art and Information Communication Technology; (b) measuring, weighing and applying related concepts in Mathematics; (c) food in History; (d) the awareness of healthy food from different countries through different languages; (e) Social Studies; (f) Health and Safety; and (g) Biology.

3.3 Special Activities, Events and Initiatives

3.3.1 The second objective of the HELP document lists a number of strategies relating to initiatives and activities to be undertaken by schools. Thus, amongst others, schools

were to use extra-curricular activities such as breakfast clubs, sports and gardening to offer students wide-ranging opportunities for learning about food and physical exercise; and create initiatives to increase the consumption of healthy food and drinks, particularly of fruit and vegetables. In addition, schools had to provide opportunities for all students, staff and parents to participate in a broad range of extra-curricular activities that promote physical activity and healthy eating.

Organisation of Special Activities and Events

3.3.2 112 schools out of a total of 142, stated that they organised special activities and events aimed at reinforcing appropriate messages among students about healthy eating and/or the school nutrition environment, during scholastic year 2009/2010. 26 schools did not organise such events, whilst four schools did not reply to this particular question (Figure 3).

3.3.3 According to the responses gathered by NAO, healthy eating days were the most frequent activities organised, featuring a vast range of items, which were promoted in order to increase health awareness within the school community. Various healthy foods were prepared in conjunction with these activities and, in some cases, HoS stated that the students were also involved in the preparation of food for healthy eating days.

3.3.4 In addition to healthy eating days, a significant number of responses made reference to the organisation of healthy breakfasts. These healthy breakfasts were organised in class and even at HESC. In the latter case, a visit at the Centre was followed with the facilitation of various nutrition-related interventions delivered by Home Economics teachers. A considerable number of schools organised talks for parents and students alike through the participation of experts in the field of nutrition and healthy eating.



Photo courtesy of MRR

3.3.5 A significant number of responses also mentioned the organisation of healthy eating cookery sessions, during which healthy food was prepared in the designated school kitchen, and the benefits of a healthy lifestyle as well as eating habits were emphasised. These cookery sessions focused on the use of nutritious ingredients and healthy food and formed an integral part of the curriculum. Other responses included activities, such as visits to farms, where children were educated about fruit, vegetables and livestock, and in certain cases were also provided with healthy lunches.

3.3.6 NAO noted a number of good practices among the responses given by HoS. Such good practices include the case of a particular school, where teachers cooked healthy food for students at given times throughout the scholastic year. Other schools creatively adapted unhealthy food items often preferred by students to healthier versions of these same items whilst maintaining their appeal. Hence,

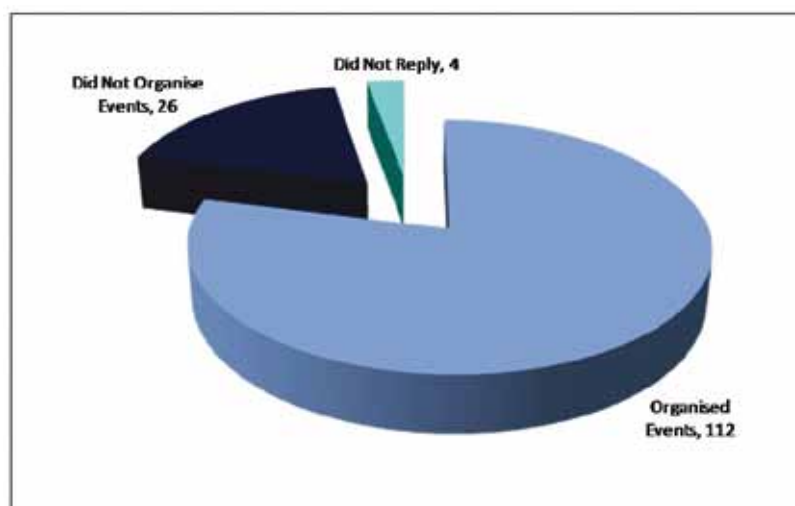
for example, students prepared burgers using healthy ingredients and cooking methods, or baked muffins using solely wholesome items.

3.3.7 Alternatively, students also prepared marmalade from oranges that grew within the school grounds and donated fresh fruit so that they could subsequently be served as fruit salads and fresh orange juice. Other noteworthy activities included the traditional San Martin bag filled with fruit and nuts, as well as the availability of healthy food at the school Christmas party, following due liaison and consultation with HESC.

Creation of Initiatives

3.3.8 NAO also requested for information to be provided by schools on the creation of initiatives aimed at increasing the consumption of healthy food and beverages during scholastic year 2009/2010. Out of the 142 schools,

Figure 3: Special Activities and Events organised by Schools



111 agreed that they had created such initiatives. On the other hand, 25 schools remarked that they did not take any such initiatives, while the remaining six schools failed to provide an answer to this question.

3.3.9 From the gathered responses, it was clearly indicated that the main initiative mentioned by HoS was the SFS, sponsored by MRRA. The SFS regularly provided and distributed fruit and vegetables to children in educational establishments. The Contractor delivered fresh fruit and vegetables to nearly all Kindergarten and Primary Schools in Malta and Gozo, ensuring that every eligible child receives one portion (of either fruit or vegetable) on a weekly basis and free of charge. It is important to note that the scheme was intended to complement, and not to replace, fruit breaks or other fruit and vegetable incentives already operating in schools.

3.3.10 A significant number of schools also mentioned that the daily provision and distribution of white milk through the SMSS was an initiative of major importance. The necessary monitoring, controls, and payments were carried out by the Paying Agency within MRRA, whilst the DES within MEEF liaised with schools regarding their respective participation. The frequency of milk distribution was held on a day-to-day basis, however, schools could opt to alter such frequency. Approximately 50 schools participated in this scheme throughout scholastic year 2009/2010.

3.3.11 A number of Heads mentioned the provision of healthy food in tuck shops as part of their respective school's initiatives. The sale of organic food items, which were introduced to encourage and expose students to natural food, is one such example. HoS also prohibited unhealthy food, which was previously sanctioned under the pretext of some school activity, such as *pastizzi* day, whilst another respondent claimed that the school closed its canteen as it was not in compliance with HELP guidelines.

3.3.12 In addition, one particular respondent stated that the school ensured that items sold through the tuck shop were low in fat and salt by assuming responsibility for the procurement of all food and beverages. Furthermore, some HoS stated that they ensured the availability of free water, with respondents commenting on the installation of a dedicated drinking water fountain or a water dispenser, which will be discussed in more detail in Section 4.5.

3.3.13 Some HoS also stated that they served healthy lunches and drinks during special activities and events. During these activities, Heads replied that the range of products available for students included items such as fresh orange juice; fresh fruit salad; and water. Another initiative mentioned by HoS was the creation of a reward system for children who get fruit with their lunch.

3.4 Conclusions

3.4.1 The results obtained from the questionnaire administered to HoS clearly illustrated that the vast majority of schools did in fact integrate the theme of nutrition education and healthy life skills across a variety of curricular subjects. This cross-curricular theme was addressed by a number of schools through PE, PSD, Home Economics, Social Studies, together with Science and languages amongst others.

3.4.2 Approximately one third of the HoS that participated in this study provided NAO with details on how the theme of healthy eating was applied to particular curriculum subjects. These respective responses incorporated and illustrated a variety of arrangements with regards to how the specific sub-themes of healthy eating are sub-divided under the recognised curriculum subjects.

3.4.3 The majority of schools engaged in a wide range of activities, events and initiatives with the strategic intent of providing a practical and tangible expression to



the promotion of a healthy lifestyle. Noteworthy good practices were prevalent in those schools with members of staff that were committed and took initiative, and organised activities including healthy eating days, healthy breakfasts, formal talks and cookery sessions, at times in collaboration with other stakeholders.

3.4.4 NAO noted that such initiatives organised by entities, other than the school itself, often resulted in significant uptake. Two initiatives of particular note were the SFS and the SMSS, which were subsidised by the EU. Such schemes complemented other initiatives undertaken by schools, ranging from the direct procurement of tuck shop stock, the installation of drinking water dispensers, to the creation of a student reward system.

3.4.5 As a general concluding note, NAO observed that schools organised and/or participated in programmes and activities out of their own initiative. It is effectively up to the school's management to further pursue their respective interest in the area of healthy nutrition, and is largely dependent on their individual set of priorities.

3.5 Recommendations

3.5.1 NAO recommends that the theme of healthy eating, and the generally healthier lifestyle, be further incorporated and elaborated upon within the curriculum, thereby reflecting current trends and concerns. This recommendation closely ties in and is more or less contingent on NAO's predominant concern regarding the lack of a clear and formal policy relating to the healthy lifestyle of students.

3.5.2 Although a number of schools provided NAO with detailed information on how the theme of healthy

nutrition and lifestyle was integrated across the curriculum, it was also apparent that schools operated independent of one another and did not follow a formal, structured programme. Hence, NAO recommends the establishment of a formalised cross-curricular programme, encompassing all aspects of this theme, with clearly delineated sub-themes assigned to specific subject areas.

3.5.3 NAO recommends that the Directorates for Education consider devising a structured, cross-curricular and event-based programme for Primary Schools targeting the basic skills associated with healthy eating, together with practical intervention sessions. The overall objective of such sessions would be the transfer of necessary skills required for students to prepare their own healthy meals.

3.5.4 NAO considers the organisation of activities, events and initiatives to be an important means through which particular strategic objectives relating to the establishment of a health nutrition environment within schools may be achieved. The achievement of such objectives should not depend solely on the individual initiative of schools or staff members, but should be centrally coordinated at College level, monitored and driven forward. NAO is of the opinion that such a system should not stifle the creativity and enthusiasm exhibited by a select group of schools, but eases the transfer of good practices to the benefit of others.

3.5.5 As a final note, NAO recommends that schools continue to capitalise on EU subsidised schemes and do not stop at that level of activity alone. Such schemes must be further complemented with other initiatives undertaken by the schools themselves or organised centrally by the Directorates for Education.



Chapter 4

Getting Through: Providing Clear and Consistent Messages

Chapter 4 – Getting Through: Providing Clear and Consistent Messages

This last chapter focuses on the importance of delivering clear and consistent messages regarding nutrition-related issues throughout the school day and across the school environment. Attention is directed at the critically important role played by parents in collaboration with schools, and how this bears influence on subsequent student behaviours and attitudes towards healthy nutrition. Finally, other pertinent issues such as the influence of school tuck shops, access to drinking water, street hawkers and school sponsorships are reviewed.

4.1 Introduction

4.1.1 Further to the formal curriculum, schools are entrusted with the role of ensuring that the environment with which children are surrounded reinforces health education messages, by promoting healthy living and encouraging appropriate extra-curricular activities. Since food consumed at school provides a significant proportion of children and adolescents' nutritional intake, schools should offer an environment adequate for the delivery of clear and consistent messages, the promotion of healthy eating through various activities and the provision of healthy nutritional options on the school premises.

4.1.2 Apart from the food and beverages brought to school by students, the provision of items on the school premises also includes items sold in tuck shops and/or through vending machines. This also includes food and beverages provided during school events and extra-curricular activities, in addition to the occasional distribution of items by commercial interests. These different sources of food and drinks in schools can provide an important foundation of nourishment, particularly for those children at risk of poor nutrition at home.

4.1.3 The challenge is to ensure that all items offered within the school environment reinforce and reflect the healthy eating messages outlined in the curriculum. Since food promotion affects food choices and influences

dietary habits, schools are tasked with the responsibility of encouraging the consumption of healthy food throughout the school day, and prohibiting the delivery of messages that encourage unhealthy dietary practices. Through the HELP document, school communities were provided with the FBS (Appendix A), in addition to the Food and Beverage Guidelines (in the 'Our Resources' booklet), which were targeted at students and their parents, providing the required assistance in taking informed choices and decisions regarding food and nutrition issues. These standards were intended to ensure that clear and consistent messages were being delivered in schools.

4.2 The Role of Parents

Information Provided to Parents

4.2.1 The delivery of clear and consistent messages towards adopting a healthy lifestyle (including such guidelines) should be targeted at parents who form part of the school community. As part of the strategies outlined in the HELP document, schools should engage parents in the debate about healthy food options. Such a strategic objective may be achieved through the promotion of healthy nutrition options, through various channels, including breakfast clubs and during parents' meetings. In addition, cookery clubs run by specialised staff were to be set up so as to increase student and family awareness and underline the importance of a balanced diet, food hygiene and safety.

4.2.2 HoS were asked if their respective school provided information to parents on policies regarding the nutrition environment and/or healthy eating in general during the scholastic year 2009/2010. The majority of schools, 102 in total, remarked that they provided information to parents. Conversely, 37 schools indicated that they did not provide any information of this nature, whilst the remaining three schools failed to reply to this particular question.

4.2.3 The responses NAO received clearly demonstrated that schools provided information to parents mainly during parents' meetings, held either at the beginning of, or intermittently throughout the scholastic year. During these meetings, schools targeted healthy eating by explaining and making parents aware of the school's healthy eating policy. Furthermore, they presented instructions to parents on providing their children with a healthy packed lunch, while stressing the importance of having a healthy breakfast. In addition, seminars for parents were organised at HESC, whilst other talks featured the participation of nutritionists. One respondent in particular noted that healthy recipes were distributed during such seminars.

4.2.4 Moreover, a significant number of schools provided information to parents through the distribution and provision of various information resources. These included the school policy and other booklets, handbooks, circulars, leaflets, school newsletters, school diaries and the school website itself. This material highlighted the important aspects of healthy food and beverages, and served to guide children and parents in abiding by the schools' policies. HoS also indicated that parents were informed about the SFS.

4.2.5 Furthermore, some respondents commented that they provided information to parents by actively involving them in events organised by the school, which targeted the promotion of a healthy eating lifestyle. Parents were encouraged to participate in the organisation of healthy breakfasts, healthy lifestyle weeks, open days, and also in cookery sessions, where they actively helped their children in preparing healthy food. Certain schools capitalised on such events by providing or serving healthy food items to parents, such as fruit, in order to further promote the benefits of healthy eating.

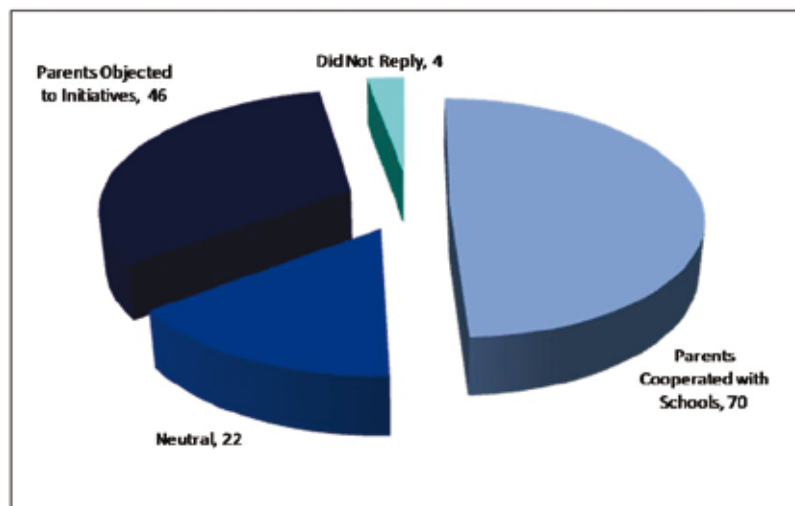
Objections by Parents

4.2.6 The participation of parents across an array of different aspects of school life was incorporated as an integral part of the strategies delineated in the HELP document. Occasions which include the interaction of parents and schools comprise of open days, prize days and school bazaars, amongst a plethora of other similarly related events. However, there were instances where parents, for various reasons, objected to healthy eating policies and/or did not participate in related initiatives and schemes undertaken by schools.

4.2.7 In replying to NAO's questionnaire, 70 HoS disagreed that parents objected to such events, effectively implying a satisfactory level of participative cooperation between the two. However, on the other hand, 46 HoS were in agreement with this statement, affirming that parents at times objected to initiatives instigated by a particular school. 22 schools submitted a neutral response, whilst the remaining four schools did not answer this question (Figure 4).

4.2.8 According to a number of Heads, parents who objected to such initiatives failed to abide by established school practices. At times, parents showed resistance in collaborating with the school's attempts at educating their children to adhere with the school's policy of maintaining a healthy lifestyle. HoS commented that some parents did not follow a healthy lifestyle themselves, and therefore avoided participating in activities organised by the school. In certain cases, parents allegedly argued that their children's nutritional preferences were not aligned with restrictions established through internal school practices, and that their child's nutrition is not the school's concern.

Figure 4: Objections by Parents to Initiatives undertaken by Schools





4.3 Food and Beverage Items brought to School by Students

4.3.1 Educating parents is an integral step in further helping students adopt a healthy eating lifestyle, particularly so when one considers that many parents opt for their children to take a packed lunch to school. This was corroborated in NAO's questionnaire, since a significant majority (117 out of 142) disagreed with the statement that few students got a packed lunch from home. On the contrary, 14 HoS agreed with this statement, ten schools remained neutral and one school did not provide information. The majority of HoS also commented that all or almost all students got a packed lunch from home as the school had no tuck shop.

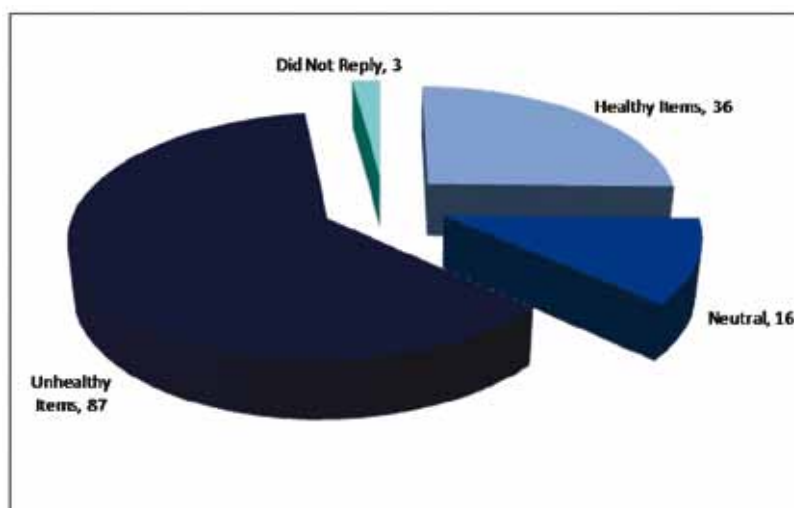
4.3.2 Hence, parents and children themselves are the ones who are determining the nutritive value of the food and drink in the students' packed lunch. By reinforcing healthy living throughout the school day, schools are in a

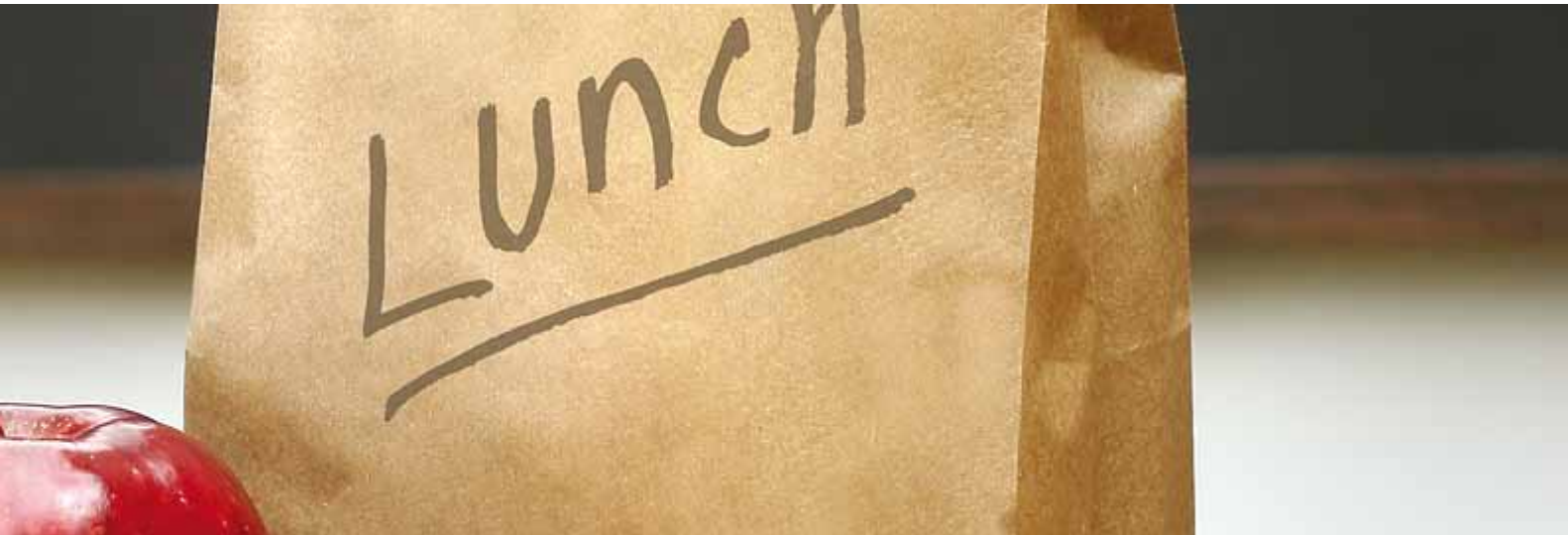
position to influence the content of packed lunches. Parents should be consistently informed about the benefits and practicalities of providing healthy packed lunches as it is imperative that these lunches are based on the standards and guidelines discussed in Section 4.1.

Items brought to School Not in Line with Standards

4.3.3 In the questionnaire distributed by NAO, HoS were asked whether the food and beverage items brought by students from home were in line with FBS. A majority of 87 schools from a total of 142, indicated that students were not bringing healthy food and beverage items to school, whilst 36 schools contended the opposite, that in general, the food and beverage items brought to school by their respective students were in fact healthy. Besides these diametrically opposing viewpoints, 16 schools maintained a neutral stance, whilst three failed to submit a response (Figure 5).

Figure 5: Items brought by Students from Home in line with FBS





4.3.4 Further comments submitted by schools focused on the considerable number of children who still got sugar laden items with them to school. Moreover, some HoS made reference to the problems they encountered with respect to parents who persistently provided their children with unhealthy food and drinks. HoS insisted that it was extremely difficult to change parents' mentality and practices. In addition, some schools commented about students who bought unhealthy items from outside the school. However, concerns regarding street hawkers and other outlets are discussed in further detail in Section 4.6.

4.3.5 In the case of HoS who responded in a positive manner regarding general student compliance with policies concerning healthy food and drinks at school, instances of non-compliance occurred nonetheless. Under such circumstances, some respondents remarked that action was taken by either drawing the student's attention or confiscating the food and subsequently referring to their respective parents.

4.4 Vending Machines and Tuck Shops

4.4.1 Apart from the food and beverages brought to school by students from home, a number of schools offer the alternative of purchasing such items from tuck shops and/or vending machines. Research conducted by TASNE (2006) showed that the most commonly sold items through such channels normally comprised food and drinks which were high in calories, fats, sugar and salt, but low in vitamin, mineral and fibre content. These items go against the dietary recommendations made by WHO and also against the contract conditions set for private operators of State School tuck shops.

4.4.2 Schools can either opt to operate the tuck shop themselves or alternatively issue a public call for tenders. The call for tenders, which is either published by the school

or by the Directorates for Education, necessitates that the winning bidder enter into a written agreement. When entering into such an agreement, the private operators of State School tuck shops are effectively agreeing to abide by nutrition-related conditions stipulated in the FBS, which incorporates the list of permissible and prohibited items, and the NBG (Appendix B).

4.4.3 The tender document, which was prepared by DES, outlines that the contractor is duty bound to support the educational campaigns against diseases caused by unhealthy diets. The contractor is obliged to offer items such as mineral water, sugar-free soft drinks, nutritional bread, as well as fresh and dry fruit. Furthermore, the contract, amongst other things, specifically prohibits the sale of sweets and junk food, whilst outlining hygienic conditions and other specificities relating to the effective administration of the tuck shop.

4.4.4 The HELP document indicates that schools had to ensure that tuck shop facilities met the required standards, particularly in line with the overall strategy of providing clear and consistent messages regarding healthy food and drinks. One such applicable standard is the aforementioned FBS. Out of the 48 HoS who confirmed that a tuck shop is operational within their school, 33 agreed that the items sold were in line with the set standards, eight adopted a neutral viewpoint, whilst six disagreed and one did not provide a rating.

4.4.5 Although the majority (of the 48 HoS) stated that only healthy food was sold, some HoS still raised doubts as they pointed out that in certain cases not all items offered were considered as healthy options. Only one respondent commented that the school tuck shop's lease specifically bound it to adhere to the nutritional standards listed in the contract.

4.4.6 In addition to information on the tuck shops operating in schools, NAO also requested information on whether the items sold through vending machines located within the school's premises were in line with the FBS. From the 142 HoS, 24 stated that they offered the services of a vending machine. Out of these, 15 asserted that they offered items in line with the FBS. A number of these 15 respondents also highlighted the fact that only water was sold from vending machines.

4.4.7 On the other hand, three schools disagreed, providing negative ratings with respect to their vending machines' conformance with the FBS. In addition to this, five schools neither agreed nor disagreed, whilst one school did not respond. In the case of one particular school, it was remarked that its vending machine was run by the tuck shop operators and that this school did not have any direct or indirect form of control. Another respondent commented that although it had previously offered the services of a vending machine, it subsequently chose to remove it due to the high prices that were being charged to students. NAO noted that, to date, there are no national guidelines, standards or policies specifically relating to vending machines within school grounds.

4.4.8 Although a considerable number of responses provided by HoS indicated that only healthy items were offered in school tuck shops, NAO maintains its reservations with regards to the interpretation of this result. NAO sought to corroborate this finding through meetings with other actively involved stakeholders, and the information provided in this regard was clearly not in accordance with the responses provided by the majority of HoS. Moreover, NAO noted that difficulties concerning unhealthy food sold through tuck shops are predominantly associated with Secondary Schools, particularly due to the fact that only a minority of Primary Schools have tuck shops, whilst the opposite holds true in the case of Secondary.

4.4.9 Furthermore, NAO is also concerned with the fact that no formally-established and centrally-coordinated monitoring mechanisms were in place in relation to the nutritional aspect of food and beverages sold within schools, thereby implying that the standards which tuck shop operators were meant to abide by were not being enforced, or enforced solely at the HoS's discretion. Attempts to corroborate the mostly positive responses provided by HoS with regards to the sale of healthy items from school tuck shops proved otherwise. Other directly involved stakeholders stated that the established health-related standards were in fact being blatantly disregarded in a good number of schools.

4.4.10 The role adopted by HoS with regards to the monitoring of tuck shop adherence to standards is mostly dependent on their own personal initiative. Despite the above, tuck shops were in fact monitored by HIS and

HSU. However, the focus of these two organisations does not crystallise around the nutritional aspect of food offered in tuck shops and vending machines. HIS have access to all schools in Malta and Gozo, and their inspections are carried out to ensure compliance with general hygienic requirements, sanitary regulations and the quality of food being supplied. On the other hand, HSU, which can only monitor State Schools, also carries out checks on tuck shops as part of a more general risk assessment exercise performed in schools. However, as stated, these assessments focus on health and safety issues and not on the nutritious dimension of food being sold from these outlets.

4.4.11 Furthermore, HESC was involved, primarily by offering guidance to interested schools in relation to issues concerning tuck shops. In addition, HESC also supported schools and tuck shop operators with the implementation of the various strategies described in the HELP document. This work was carried out through numerous initiatives, including the vetting of packed items to ensure that they fell within the NBG and the subsequent issuing of certificates of approval for vetted products. A number of importers presented food products to HESC for their vetting on conformity to the NBG, and when successful, were awarded with a certificate of approval. However, this practice was once again performed on the manufacturer or importer's own initiative.

4.4.12 HESC staff also conducted market research to keep abreast with products available on the local market and that fall within the established guidelines. Such market research was also employed by HESC so as to update its internal database concerning the nutritional information of different categories of food products and drink items, which were normally consumed at school. According to HESC, market research is crucial when offering guidance to schools and tuck shop operators with regards to the implementation of nutrition-related school policies, as outlined in the HELP document.

4.4.13 Schools were also tasked with the responsibility of providing a varied selection of healthy food in tuck shops. Out of the 142 schools interviewed, 91 stated that they did not operate a tuck shop or a vending machine within their premises. From the remaining 51 schools, 31 agreed that they offered a varied selection of healthy food and beverage items through their tuck shop and/or vending machines. Five schools neither agreed nor disagreed with this issue, whilst seven schools did not provide a response. The eight schools that disagreed commented that the limitations in terms of food sold were due to a variety of factors.

4.4.14 Finally, the HELP document states that the prices charged in tuck shops are to be monitored so as to ensure reasonableness. It was however noted that, to date, no

formal monitoring of this sort had taken place, and that it was effectively up to the tenderer or HoS to determine the establishment of prices. Out of the 51 schools that have tuck shop and/or vending machine facilities, 22 disagreed with the notion that prices for healthy food items were relatively more expensive when compared with other less healthy products. On the other hand, 12 schools agreed, whilst 13 adopted a neutral stance in this regard. Four schools did not provide a response to this question. In light of the above, certain HoS argued that healthy food items were relatively expensive and students often opted for cheaper unhealthy alternatives. At one particular school, which emerged as a good practice leader earlier in the report, prices were kept to a minimum since all food preparations were carried out by the teachers themselves.

4.5 Access to Free Drinking Water

4.5.1 Access to clean drinking water and sanitation are basic human rights, which are essential to the full enjoyment of life. As also outlined in the National Minimum Conditions Regulations for all Schools, all schools are required to have an adequate number of water taps, as well as access to drinking water outside toilet areas at all times. Water should be potable and provided from sources which supply fresh running water. Although the ultimate responsibility lies within the respective Directorates, HIS monitors the suitability of water and not the number of points or ease-of-access of such points. Hence, one of the strategies indicated in the HELP document is the provision of access to free and clean drinking water, as well as the encouragement of frequent consumption.

4.5.2 In the questionnaire distributed by NAO, 80 HoS agreed that their school needed to provide better access to free drinking water within their premises. On the other hand, 20 schools adopted a neutral standpoint, whilst 21

schools disagreed with this statement or gave lower ratings. The remaining 21 schools did not provide a rating to this particular question, although some of the respondents provided additional comments on the issue of accessibility to free drinking water (Figure 6).

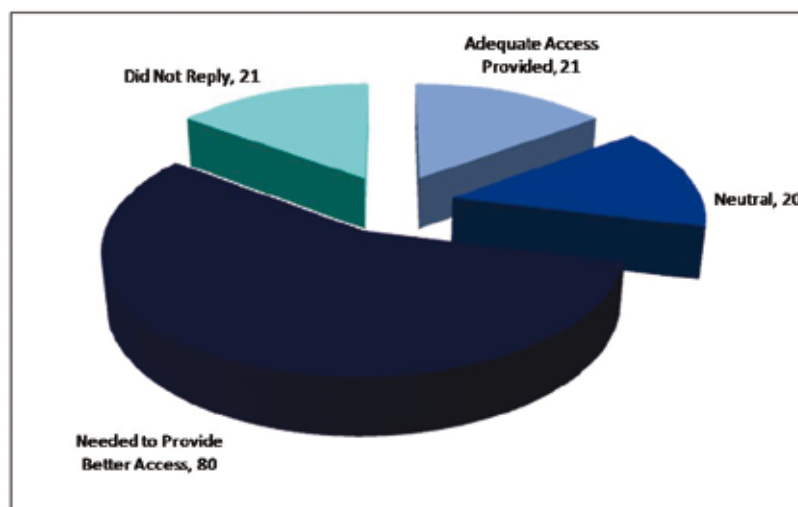
4.5.3 Although a number of respondents stated that their students had access to drinking water, the majority voiced their concerns on various aspects. A number of HoS stated that, while there was no access to drinking water in their school, most of the students either brought their own drinks from home, or were not keen on drinking water. Some HoS claimed that, although they needed more dispenser points or water fountains, they faced financial difficulties and constraints in supplying the school with such outlets. Some schools also furnished NAO with recommendations, including the possibility of the provision of guidance to schools in order to improve access to drinking water and the supply of water filters and/or dispensers by responsible authorities.

4.6 Street Hawkers and Outlets

4.6.1 Even in cases where strong efforts were made to educate parents and to regulate tuck shop operators, students nonetheless bought food and beverage items from street hawkers and other outlets around the premises on their way to or from school. These mobile food vendors, neighbourhood corner and convenience stores are frequently located near schools and provide students with easy access to unhealthy food. Hence, this circumstance raises a number of concerns.

4.6.2 Out of the 142 interviewed HoS, 68 agreed that students were buying unhealthy food and beverage items from street hawkers and other outlets close to the school. Whilst 11 schools remained neutral on the matter,

Figure 6: Access to Free Drinking Water



53 schools disagreed with this statement, implying that students did not purchase unhealthy items of food and drink from street hawkers and other outlets in the schools' vicinity. Ten schools did not reply to this question.

4.6.3 HoS further complained that children buy unhealthy food, such as junk food and ice-cream, either on their way to school or else after school, in some cases even in the presence of their parents. Moreover, Heads remarked that they cannot monitor what was being done before and after school hours.

4.6.4 On the other hand some schools replied that children did not buy from street hawkers or other vendors for two main reasons, either because there were no outlets near the school or because children were not allowed to wander outside. NAO noted that one particular school used the school diary (which contained health-related information) to promote the sale of healthy snacks from the school tuck shop, in order to deter students from buying food from street vendors close to the same school. It is important to note that one HoS mentioned that students did not buy unhealthy food from other outlets for the simple reason that children have understood the healthy eating concept.

4.7 Marketing and Sponsorships

4.7.1 As outlined in the HELP document, schools are able to acquire financial support from promotional activity, including sponsorships and advertising. Nevertheless, it is of paramount importance that such marketing activity does not interfere in any way with the school's approach to healthy eating. Hence, the HELP document explains that the promotion of activities, which go against the healthy eating strategy of the school, should be prohibited in accordance with the FBS. In addition, schools must ensure

that food and drink, equipment, materials, publications and advertisements at school premises, along with any financial sponsorships, are in accordance with relevant regulations.

4.7.2 HoS were invited by NAO to give their opinion on the invitations received from commercial organisations for their participation in activities within the school. It was further commented that some schools sought sponsorships on their own accord, often to no avail. NAO registered very few comments from schools indicating some measure of success with regards to acquiring sponsorships for mineral water, milk, yoghurt or cereals. Other instances arose where sponsorships of products of an unhealthy nature were offered. Consequently, HoS resorted to the use of the school council budget as their main source of funding for the promotion of healthy eating.

4.8 Conclusions

4.8.1 This study serves to highlight the importance of providing students with clear and consistent messages regarding healthy nutrition and the more general healthy lifestyle. Clarity and consistency in conveying the correct message is contingent on the coordinated input of a multitude of stakeholders and other related factors.

4.8.2 In this context, the most critically important stakeholders, besides the school itself, are the students' parents. The vast majority of HoS indicated that they involve, support and collaborate with parents through the organisation of various meetings, information seminars and by providing relevant tools and resources which are useful in developing a better understanding of healthy nutrition. Nonetheless, approximately one third of HoS voiced concerns with regards to the objections and resistance encountered when introducing or implementing healthy nutrition-related measures.



4.8.3 Of particular interest were the findings relating to the food and beverage items that students brought to school. Whilst a considerable majority of HoS indicated that students brought their own lunches and snacks from home, they subsequently noted that such items were often of an unhealthy nature. Although schools addressed instances of non-compliance through corrective actions, HoS once again claimed that the lack of cooperation by certain parents was hindering progress.

4.8.4 Despite the regulation of school tuck shops through their respective tender agreements, which also include provisions relating to healthy nutrition standards, there seems to be an apparent interstice with regards to the health aspect of items being sold. Although the majority of HoS whose schools have tuck shop facilities indicated that only healthy food items were being sold from such premises, NAO maintains its reservations on the matter. These reservations arise from comments made by other actively involved stakeholders, whose point of view on the current situation regarding tuck shops drastically deferred to that put forward by a significant number of HoS. This concern is particularly relevant in the case of Secondary Schools, where tuck shops are available.

4.8.5 The situation regarding the monitoring of vending machines within school grounds is similar to that of tuck shops. However, in the case of vending machines, NAO is concerned with the absence of any formal guidelines, standards or policies regulating their respective use within the school environment.

4.8.6 Furthermore, NAO noted that the monitoring of the nutritional aspect of items sold at tuck shops and through vending machines was not formally regulated, and carried out solely at the discretion of the HoS. The only monitoring and inspections in force were related to aspects of general health and safety of products and facilities.

4.8.7 In spite of the fact that the provision of free drinking water within schools is outlined in the National Minimum Conditions Regulations, a significant majority of HoS indicated that more could be done in this regard, and that the level of provision was not entirely satisfactory. According to HoS, the most salient limitations to the provision and consumption of drinking water relates to student preferences and school budgetary constraints.

4.8.8 Unfortunately, the work of schools, teachers, parents and other stakeholders was being undermined by street hawkers and other vendors located in the immediate vicinity of schools. Although the formal regulations which control such operators are presumably being adhered to, the nutritional aspect of food and beverage items being sold to school children once outside the school premises does not fall within the scope and remit of these regulations.

4.8.9 Finally, NAO noted a generally limited success rate with regards to responses on the issue of sponsorships and marketing.

4.9 Recommendations

4.9.1 NAO considers the role played by parents to be an integral part of schools' efforts at conveying clear and consistent messages regarding healthy lifestyle. The resistance and objections put forward by certain parents are a challenge that schools must seek to overcome. Although a number of schools have already devised various means by which parents were actively engaged within the school community, NAO is of the opinion that such practices should be extended further.

4.9.2 It is recommended by NAO that schools consider the implementation of monitoring systems, whereby instances of student non-compliance to internal health-related school policies are appropriately redressed through corrective action. Such a system would potentially entail the closer overseeing of students' school lunches, thereby encouraging healthy eating. NAO is aware that the input and support of parents is vitally important in achieving any degree of success with this measure and, therefore, their respective involvement and education is critical.

4.9.3 The formal monitoring of the nutritional aspect of food and beverage items sold through school tuck shops is a conspicuous absence, and a cause for concern to NAO. This lacuna may be addressed by means of an organised system of nutrition-related monitoring, possibly carried out in conjunction with the already enforced monitoring of other aspects of the tuck shops' operations. NAO recommends that this function is assumed, coordinated and supervised by a central authority within the Directorates for Education.

4.9.4 NAO's concerns regarding tuck shops also extend to vending machines, in which case guidelines, standards or policies formally regulating their use within the school environment are absent. It is recommended by NAO that the necessary measures are taken to regulate the operation of vending machines within schools, and that a similar system of monitoring afforded to tuck shops is also implemented for vending machines.

4.9.5 NAO recommends that HESC continues its work on product vetting and market research, and that such research is made available to HoS and tuck shop operators, possibly through a readily accessible website or some alternative communicable means.

4.9.6 NAO encourages the Directorates for Education, in collaboration with schools, to review the access of free drinking water afforded to students. The School Water

Audit tool (Appendix D) is a readily available instrument presented in the ‘Our Resources’ booklet, which can provide useful insight and identify possible areas for improvement. NAO considers the appropriate use of this tool as conducive to the improvement of students’ access to water within the school environment and an opportunity to initiate positive change.

4.9.7 Despite all efforts by schools at addressing healthy nutrition-related issues within their respective environments, this work is undone by street hawkers and other commercial outlets located in their immediate vicinity. NAO is of the opinion that some form of regulation is necessary in rectifying this situation, which has street hawkers and other vendors selling unhealthy food and drinks just outside the school gate. Other countries have addressed similar circumstances by adopting corrective

measures, which include distance bans and regulation by means of special permits. Whilst acknowledging that this situation cannot be directly addressed by the Directorates, Colleges or Schools, NAO nevertheless considers these organisations ideally suited and placed to apply the necessary pressure.

4.9.8 NAO recommends that schools, in possible collaboration with parents and other responsible authorities, explore initiatives similar in concept to SFS and SMSS, thereby capitalising on sponsorship opportunities driven by private enterprise. The Directorates for Education, in partnership with other entities, may consider the issuance of contracts for school snacks to local food growers as beneficial to schools and, in so doing, ensure a local market for healthy food.



Appendices

Appendix A – Food and Beverage Standards



Adapted from TASNE report (2006) and revised by the HESC staff

List of Permissible Foods - Document 1

List of Permissible Drinks - Document 2

List of Prohibited Foods - Document 3

List of Prohibited Drinks - Document 4



ALLERGIES

Common allergenic foods include eggs, milk, fish, shellfish, peanuts, soya, wheat, nuts and seeds. Allergies to certain foods such as peanuts and peanut products, other nuts, seeds and their derivatives and shellfish can be acute. People suffering from a severe food allergy need to know the exact ingredients in their food since even a small amount of the allergenic food could harm them.

Document 1

FOOD AND BEVERAGE STANDARDS

List of Permissible Foods

SAVOURY ITEMS

- A selection of fresh and toasted sliced sandwiched bread, rolls, baguettes, ftira, buns, ciabatta, pocket bread, pitas with healthy fillings¹, preferably using wholegrain breads²
- *Hobż biż-żejt* - Maltese bread with tuna, tomatoes, onions, lettuce and beans
- A selection of pizzas with healthy toppings, preferably using a wholegrain dough base
- Hot dishes, such as baked rice and pasta and vegetable lasagne
- Cold rice, couscous and pasta dishes
- Pies and quiches with healthy fillings
- Baked potatoes, plain or with healthy fillings such as ricotta, low fat cheese, tuna, vegetables, corn and pulses
- Home-made soups low in fat and salt, made with fresh or frozen ingredients

SALADS AND DIPS

- A selection of salads
- A selection of dips – vegetable, tuna, ricotta, bean, *bigilla*, hummus

Refer to the Food and Beverage Selection Guidelines (FBSG) in Our Resources

¹ Healthy fillings or toppings are defined as those which are in keeping with Malta's National Dietary Guidelines and CINDI's twelve steps to healthy eating for Children & Adolescents (WHO 2006); they can include one or more of the following: a variety of fresh or frozen vegetables, tuna, sardines, mackerel, salmon, chicken, ricotta, baked omelettes and patties, skimmed mozzarella, low fat cheese, hard boiled eggs, traditional Maltese *bigilla*, beans and lentils, kunserva, low fat spread, low fat and low salt dressings.

² Wholegrain products include those made with wholegrain flour, wholewheat flour, cracked or bulgur wheat, graham flour, wholegrain corn flour or corn meal, whole oatmeal, whole rye, spelt, triticale, quinoa, wholegrain brown rice flour. The terms 'multigrain', 'stone ground' and 'pumpernickel' do not necessarily mean that the product is wholegrain.



SAVOURY SNACKS

- *Galletti*, water crackers, crackers, rice cakes and crispbreads, preferably wholegrain and low fat, low salt varieties
- Nuts and seeds, not fried, without added salt or added sugars³
- Dried beans and chickpeas, natural or roasted, without added salt or added sugars
- Soya nuts, without added salt or added sugars
- Air-popped popcorn, without added butter

SWEET SNACKS

- *Qaghaq tal-hmira*
- Biskuttelli
- Chelsea Buns⁴
- Plain cakes, muffins and biscuits, low in fat and sugar and high in fibre⁵
- Fruit breads and currant buns, low in fat and sugar⁴
- Breakfast cereals and cereal bars, low in fat and sugar, high in fibre⁵

FRUITS AND DESSERTS

- Individual fresh fruits and fresh fruit salads
- Canned fruit in its own juice, unsweetened
- Dried fruit, plain, with no added fats
- Fresh or frozen yoghurts and soya desserts⁶
- Fruit granitas or iced lollies⁷

³ Ideally total carbohydrates would not include too many 'added sugars'. This can be determined by reading the ingredients list. Added sugars include white sugar, brown sugar, raw sugar, sucrose (referred also as table sugar), glucose, glucose syrup, corn syrup, high-fructose corn syrup, corn-syrup solids, malt syrup, maple syrup, pancake syrup, fructose sweetener, liquid fructose, honey, molasses, invert sugar, anhydrous dextrose, crystal dextrose, hydrolysed starch. The higher up in the list these ingredients occur, the higher in 'added sugars' the product would be.

⁴ containing not more than: 20% total fats; 5% saturated fat; 20% total sugars.

⁵ containing not more than: 25% total sugars if dried fruits are included.

⁶ containing not more than: 4% total fats; 15% total carbohydrates

⁷ containing not more than 10% added sugars

Document 2**FOOD AND BEVERAGE STANDARDS****List of Permissible Drinks**

- Water, still or sparkling
- 100% pure fruit/vegetable juices
- Fresh milk or UHT, preferably fresh:
 - For **Primary school pupils** – containing: 4% or less total fats and less than 15% total carbohydrates⁸
 - For **Secondary school students** – containing: 2.5% or less total fats and less than 15% total carbohydrates⁸
- Hot tea, using plain leaves
- Cold or hot milk drinks
- Drinks made from fruits, vegetables, yoghurt or milk, or from a combination of these, including smoothies⁹
- Oat, Soya or rice drinks⁹
- Low fat chocolate drinks⁹

Refer to the Food and Beverage Selection Guidelines (FBSG) in **Our Resources**

⁸ Ideally total carbohydrates would not include too many 'added sugars'. This can be determined by reading the ingredients list. Added sugars include white sugar, brown sugar, raw sugar, sucrose (referred also as table sugar), glucose, glucose syrup, corn syrup, high-fructose corn syrup, corn-syrup solids, malt syrup, maple syrup, pancake syrup, fructose sweetener, liquid fructose, honey, molasses, invert sugar, anhydrous dextrose, crystal dextrose, hydrolysed starch. The higher up in the list these ingredients occur, the higher in 'added sugars' the product would be.

⁹ Containing not more than: 4% total fats; 15 % total carbohydrates

**Document 3****FOOD AND BEVERAGE STANDARDS****List of Prohibited Foods**

- Fried foods and potato chips
- High fat, high salt processed foods, such as sausages, hot dogs, burgers, fish cakes, battered and crumb-coated fried products, salami, mortadella, luncheon meat, processed cheese
- Pizzas with high fat and high salt toppings, such as sausages, salami, pepperoni, high fat cheese
- *Pastizzi*, sausage rolls, hot dogs, savoury pastries
- Doughnuts, cream and jam cakes, iced cakes, sweet pastries
- Chocolates, sweets and confectionery¹⁰
- Ice-creams
- Yoghurts and desserts¹¹
- Breakfast cereals and cereal bars¹²
- Bagged savoury snacks, potato, maize, wheat and rice-based snacks¹³

Document 4**FOOD AND BEVERAGE STANDARDS****List of Prohibited Drinks**

- Flavoured water, soft drinks (regular and diet), iced teas and energy drinks
- Coffee and beverages containing caffeine including caffeinated water.
- Juices which are not 100% fruit/vegetable juice and/or have added sugar or additional sweeteners
- Fresh or UHT milk, and cold or hot milk drinks:
 - For **Primary school pupils** - containing: more than 4% fat content, and/or more than 15% total carbohydrates
 - For **Secondary school students** - containing more than 2.5% fat content, and/or more than 15% total carbohydrates
- Fruit nectars and fruit or juice drinks and oat, soya or rice drinks¹⁴
- Drinks made from fruit, yoghurt or milk, or from a combination of these (including smoothies)¹⁴

¹⁰ Milk chocolate, plain chocolate, white chocolate bars; chocolate flakes; chocolate buttons; chocolate eggs; filled chocolate, chocolate coated confectionery bars or biscuits; boiled, chewy, gum, liquorice, mint and other sweets; sherbet; sugared dried fruit; fudge; toffee; marshmallows; nougat; Turkish delight; cereal chewy bars; cereal crunchy bars; processed fruit bars; chewing gum.

¹¹ Containing more than: 4% total fats 15% total carbohydrates.

¹² Containing more than: 20% total fats; 5% saturated fats; 25% total sugars if dried fruits are added.

¹³ Containing more than: 20% total fats; 5% saturated fats; 1.25g salt.

¹⁴ Containing more than: 4% total fats; 15% total carbohydrates.

Appendix B – Nutrient Based Guidelines for Food and Drink Providers

Document 5





Document 5

Nutrient Based Guidelines for Food and Drink Providers

It is advisable that tuck shop operators keep to the minimum nutrient levels suggested for each nutrient.

Artificial sweeteners (aspartame and saccharine) can only be used in yoghurt and milk drinks or combinations containing yoghurt or milk.

Artificial flavours and **Artificial enhancers** (monosodium glutamate MSG) should be avoided.

Foods should be free from **Genetically Modified (GM)** ingredients.

Nutrient	Nutrient level per 100g / ml of food
Fats ¹⁵	3g - 20g
Saturated Fats	1g - 5g
Total Sugars ¹⁶	2g - 20g
Salt Sodium	0.25g - 1.25g 0.1g - 0.5g

Adapted from: Food Standards Agency Guidelines, UK and TASNE Report (2006).
Revised by the Home Economics Seminar Centre staff.

¹⁵ Food containing hydrogenated fats should be avoided. Total fats may discriminate against foods high in natural fats such as nuts and seeds. Values for total fats may be higher than the suggested levels for these foods.

¹⁶ Total sugars may discriminate against foods high in natural sugars such as: fresh fruits, dried fruit, 100% fruit juices and some vegetables. Values for total sugars may be higher than the suggested levels for the above mentioned foods and drinks. Breakfast cereals and cereal bars that are low in added sugars and contain dried fruits should not exceed 25% total sugar.

Appendix C - Methodology

C.1 Phase One: Preliminary Research

This preliminary phase of the study included various stages as presented hereunder:

- a) An extensive review of literature on obesity, nutrition, healthy eating and other related issues was carried out, in order to identify suitably adaptable research models already employed in the field. This preliminary research was complemented by the due review of the legislative framework governing the provision of education in Malta.
- b) In addition, the audit team reviewed the TASNE report and the HELP document, which were considered to be the two main sources of documentation upon which this study was based. HELP-related files were also examined, and included various relevant documents, particularly: internal correspondence between involved stakeholders; undertaken programmes and initiatives; press releases; letter circulars; minutes of meetings; speeches and presentations; and draft copies of the HELP document.
- c) NAO organised a number of meetings with key personnel within MEEF, so as to better understand the relevant strategies and policies relating to healthy nutrition within schools, as well as other limitations and future plans. In this context, key personnel included the Permanent Secretary, Directors General and other members of the senior management teams within the Directorates for Education.
- d) Further to a series of meetings held with the HELP Committee, NAO also organised similar meetings with other stakeholders involved, including:
 - i. QAD;
 - ii. PIS;

- iii. HESC;
- iv. HSU;
- v. HPU;
- vi. HIS;
- vii. MRRA;
- viii. The Director for Education Services at the Secretariat for Education of the Archbishop's Curia;
- ix. A number of individual researchers and experts within the field.

C.2 Phase Two: Development of Research Instrument

The development of the research instrument employed in this study was conducted as follows:

- a) NAO considered the use of a structured questionnaire to be the most suitable and appropriate tool for collecting data from a large number of respondents. The respondents participating in this study effectively comprised HoS, hailing from state and non-state Primary and Secondary schools.
- b) The responses gathered through the questionnaire represented information and views of HoS in scholastic year 2009/2010. This audit excludes schools for students with special needs and post-secondary level schools, as their unique circumstances require specific studies particularly tailored for their needs and contexts. A similar distinction was also made in the TASNE report.
- c) The design of the questionnaire focused on the three main objectives outlined in the HELP document, namely:
 - i. The fostering of a supportive local environment that envisages a healthy lifestyle and promotes healthy choices early in life;

- ii. The application of a flexible school curriculum that highlights health, diet, nutrition, food safety and hygiene, food preparation and cooking;
 - iii. The delivery of clear and consistent messages about food and drink and healthy living throughout the school day so as to reinforce the healthy eating lifestyle.
- d) In addressing the above objectives, the questionnaire was essentially utilised in acquiring information and additional insight provided by schools on their: individual progress, development and implementation of policies; introduction of innovative measures; organisation of activities, events and initiatives; staff's training and adequate teaching aids; and other information which was provided by schools such as SDPs.
- e) Responses to the questions that formed part of the questionnaire were based on a five point likert scale, with response categories ranging as follows: strongly agree; agree; neither agree nor disagree; disagree and strongly disagree. Questions were worded in positive and negative terms so as to correct for possible acquiescence bias.
- f) Questions that made reference to other source documents, such as for example, internal school policies, were followed up with specific instructions to the participant for provision of the said supporting documentation.

C.3 Phase Three: Fieldwork, Data Processing and Reporting

This phase of the study consisted of the following stages:

- a) Distribution of the study's questionnaires commenced in May 2010, and participating HoS were provided with the option of completing the said questionnaire electronically or in paper format.
- b) Collection of the completed questionnaires was carried out from June through to July 2010. With regards to State schools, the collection process was facilitated through the

intervention of College Principals, who acted as key contact points, liaising between NAO and the individual HoS participating in the study. In the case of Church schools, the Director for Education Services at the Secretariat for Education within the Archbishop’s Curia was the main contact point who assisted in the collection of responses.

- c) In the case of Independent schools, each school was targeted and contacted on an individual basis. NAO encountered some difficulty in contacting all Independent schools, and mostly resorted to information available on the MEEF website.
- d) Follow-up action and reminders were sent to all three categories of schools so as to encourage compliance in responding to the said questionnaire. The role of the College Principals and the Director for Education Services at the Secretariat for Education within the Archbishop’s Curia were also of critical importance in this part of the data collection. In the case of the Independent schools, the response rate was not as high as desired by NAO.
- e) The implemented approach ensured a high response rate for State schools, whilst a more moderate response rate was registered with respect to Church schools. As intimated at above, the response rate for Independent schools was somewhat poor. Out of a total of 184 distributed questionnaires, NAO received 142 duly completed returns, indicating an average response rate of 77%. Further details regarding the questionnaires received are presented hereunder:

Table 2: Response Rate by Schools

School Category	Distributed Questionnaires	Completed Questionnaires	Response Rate
State Schools	99	97	98%
Church Schools	59	36	61%
Independent Schools	26	9	35%
Overall	184	142	77%

- f) Data collected from the questionnaires was validated, processed and analysed by NAO. This analytical exercise also included the supporting documentation provided by HoS, which were rigorously reviewed and subsequently incorporated into the final report.
- g) Validity of the findings was ensured through triangulation, more specifically, through a series of follow-up meetings with key stakeholders, where such findings were further verified.
- h) The bottom-up approach of the Drawing Conclusions methodology was used to determine the full set of emerging findings, the study's main conclusions and preparation of the final report. This analytical tool led to the development of a framework of issues and sub-issues.

Appendix D – School Water Audit



SCHOOL WATER AUDIT



YEAR	
------	--

Name of school		
Head of school		
School population:	Boys	Girls
Date of Audit		
Staff: Teachers	Facilitators	KGA
Non Teaching Staff		

SCHOOL WATER AUDIT

Here is a list of statements for you to check water provision in your school. Select as appropriate to ask staff and students. You will be able to answer some by observation alone. It is, however, important to ask at least a few questions directly to staff in order to demonstrate that issues of welfare and health are important to you. In any case, just tick those to which you agree and leave the others empty. The number of empty boxes will give you a clear picture of the situation.

Drinking

How many water outlets are available and where and what type?

NUMBER OF OUTLETS					
PLACE ¹					
TYPE ²					

Tick YES (✓) only

Students have access to drinking water throughout the day.	
The water provision is hygienic.	
The water provision is according to Food and Safety Act XIV (2002) Ch. 449	
Special provision is made after playground activities.	

¹ Mark 1 for yard, 2 for toilet, 3 for corridors and 4 for a place near classes; 5 for other

² Mark 1 for tap; 2 for water fountain; 3 for water bottle; 4 for other



School culture

Tick YES (✓) only

<ul style="list-style-type: none"> Water consumption is promoted. e.g. in the school prospectus; website; notice board; posters; newsletters to parents. 	
<ul style="list-style-type: none"> Everybody in the school is aware of the importance of drinking water regularly throughout the day. 	
<ul style="list-style-type: none"> Staff who teach PE are aware of the importance of hydration before, during and after exercise. 	
<ul style="list-style-type: none"> The school has a written water policy. 	
<ul style="list-style-type: none"> Practice reflects written/unwritten policy (check with students). 	
<ul style="list-style-type: none"> The majority of teachers support the policy. 	
<ul style="list-style-type: none"> Staff are encouraged to lead by example and drink water in front of students. 	
<ul style="list-style-type: none"> Students are consulted, listened to and involved in the provision of water and codes of conduct. 	

Provision of water

<ul style="list-style-type: none"> Water outlets (including taps, fountains and water bottles) are appropriately sited (strictly not in or near toilet areas). 	
<ul style="list-style-type: none"> Drinking water is free of charge at all times. 	
<ul style="list-style-type: none"> There is an adequate number of water outlets in proportion to the number of students. 	
<ul style="list-style-type: none"> Students have access to water at all times (consider time constraints, classroom and break time policies). 	
<ul style="list-style-type: none"> Water is also freely available outside of the standard school day, e.g. breakfast clubs; extra curricular activities; school trips. 	
<ul style="list-style-type: none"> The drinking facilities are clean and safe. 	
<ul style="list-style-type: none"> Water dispensers are appealing. (e.g. water coolers) 	

Quality of water

<ul style="list-style-type: none"> Water is palatable from all the outlets. 	
<ul style="list-style-type: none"> It is chilled in summer. 	

Education Division



Lunchtime

Tick YES (✓) only

• The eating arrangements actively encourage students to drink adequate water.	
• Water is pleasant in terms of taste and temperature.	
• Water is provided in jugs which can easily be refilled.	
• The children are provided with tumblers or plastic cups.	

During lessons

• Students are actively encouraged to drink water during class.	
• Bottles of water are allowed on desks.	
• Bottles are kept out of arm's reach, such as at the side of the classroom, and away from sunlight and sources of heat.	
• Regular reminders and water breaks are scheduled.	
• If a student forgets/loses his/her bottle s/he is given a replacement.	
• If the school does not allow water bottles in class, all the children are encouraged to go and get a drink, more than once if necessary, over the course of a lesson.	

Throughout and beyond the school day

• Students are actively encouraged to drink before, during and after PE lessons, sports matches, training sessions, sports day.	
• Water is supplied even at home-and-away fixtures; clubs, societies, rehearsals etc.	
• There is evidence that there are changes in drinking habits.	
• Students are reminded to bring in (and encouraged to use) a bottle of water, a hat and high-factor sun cream (14 or more) during summer activities.	
• Adequate water and toilet breaks are scheduled for outings lasting an hour or longer.	

Education Division

**Water bottles**

Tick YES (✓) only

• Bottles are washed and refilled daily.	
• Parents are regularly advised as to correct washing and filling procedures.	
• Students can refill/refresh their bottles from a drinking fountain near their class.	
• Students are actively encouraged to take a bottle of water to sports sessions and use them.	

Modern water facilities e.g. water coolers or modern water fountains

• Water facilities are accessible to all students at all times.	
• Drinking tumblers/plastic cups are provided for all students.	
• In bottled water coolers, the bottles are changed promptly.	
• There is a tap available for filling drinking tumblers/plastic cups/bottles.	

Taps

• The water taps are specially designed for drinking only.	
• They are clearly and correctly labelled as drinking water.	
• Tumblers/plastic cups are provided for students.	
• The sinks are kept clean and empty.	

Traditional drinking fountains

• They are easy for all students to operate and drink from.	
• The water jet is strong enough.	
• Students can drink without having to touch the metal spout with their lips.	
• There are sufficient fountains (minimum one per 100 students).	
• There are additional drinking sources throughout the school day.	

Vending machines and tuck shops

• Plain still water is available.	
• It is attractively priced.	

Appendix E – NAO Questionnaire distributed to State Schools

Questionnaire on the School Nutrition Environment (May 2010)

Version to be completed by State Schools

GENERAL INFORMATION

1. The National Audit Office (NAO)¹ is carrying out a study on the school nutrition environment. This questionnaire sets out the information that NAO is seeking from Heads of State Schools to inform this study.
2. The questionnaire focuses on three main aspects, namely:²
 - The fostering of a **supportive school environment** that envisages a healthy lifestyle and promotes healthy choices early in life.
 - The application of a **flexible school curriculum** that highlights health, diet, nutrition, food safety and hygiene, food preparation and cooking.
 - The delivery of **clear and consistent messages** about food and drink and healthy living throughout the school day so as to reinforce the healthy eating lifestyle.
3. Elements of this questionnaire may require the input of other staff in your School (such as Assistant Heads or Teachers). The filled-out document should, however, be signed off by the Head / Acting Head of School before returning to NAO. We would like to remind you that NAO has the mandate,³ to carry out this study and you are therefore kindly requested to respond to data requests from the NAO.

¹ NAO is an independent institution set up by the Constitution of Malta and the Auditor General and National Audit Office Act. More information about NAO can be found at <http://www.nao.gov.mt/>


² These areas reflect the three key objectives highlighted in the Healthy Eating Lifestyle Plan (HELP) launched by the Education Authorities in 2007. HELP is available at http://www.education.gov.mt/ministry/doc/help_healthyeating.htm

³ In terms of Section 108 of the Constitution of Malta and the Auditor General and Article 8(a)(ii) of the First Schedule to the Auditor General and National Audit Office Act of 1997.

4. If you have any queries or require additional information on this study, please contact Lorna Azzopardi on telephone number 22 055 555. Communications can also be sent by e-mail to nao.malta@gov.mt, indicating in the subject caption that the communication relates to the “*NAO Survey on the School Nutrition Environment*”. You can also use these contact details to request a copy of the questionnaire in an electronic format.

 5. It would be greatly appreciated if you could complete and send the questionnaire **by Thursday, 24 June 2010**. The questionnaire should be returned to the College Principal. We have made arrangements to collect completed questionnaires from the Office of the College Principal responsible for your school.

 6. We suggest that you keep a copy of the sent documentation in case we would need to contact you again to clarify or expand on the information contained in the questionnaire.

 7. **We very much value your opinion and we would like to thank you in advance for your time and efforts in supporting this study.**
-
- 

QUESTIONNAIRE

Most of the questions are in the form of statements and you are being asked to indicate your level of agreement to each statement. Supplementary questions are also being asked to collect information and supporting documentation on related measures and initiatives being undertaken in your school, as well as to gather your opinion and experiences, supported by examples where possible.

Please tick as appropriate

You can add information or clarifications in the space provided below or on additional sheets

<p>1) Our school has developed a comprehensive Healthy Eating Lifestyle Plan that covers this scholastic year (2009/2010) and/or a related policy document on all aspects of food and beverage in our school community.</p>				
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><i>If your school has a Healthy Eating Lifestyle Plan and/or policy document covering 2009/2010 please enclose copies with the questionnaire. You can also add comments or clarifications in the space below.</i></p> <hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> <hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> <hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> <hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> <hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> <hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> <hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> <hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> <hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> <hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> <hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/>				
<i>(Continue on a separate sheet if necessary)</i>				

2) Our school has incorporated in the 2009/2010 School Development Plan (SDP) a list of commitments and targets related to the provision and consumption of food and beverage at school and/or the organisation of educational and promotional actions/activities to be taken by the school (including those in partnership with stakeholders).

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If your school has incorporated commitments and targets related to the nutrition environment in the SDP for 2009/2010, please enclose copies of the relevant sections. You can also add comments or clarifications in the space below.

(Continue on a separate sheet if necessary)

3) During 2009/2010, did your school assign to a staff member responsibility to oversee aspects of the school nutrition environment?

Yes No

If yes:

- What is the grade/position of the designated person? _____
- What are the assigned officer’s main duties and responsibilities related to the oversight of the school nutrition environment?

(Continue on a separate sheet if necessary)

4) Has your school carried out in recent years an internal audit on aspects of the school nutrition environment?

Yes No

If yes, please enclose a copy of the audit findings. You can also add comments or clarifications in the space below.

(Continue on a separate sheet if necessary)

5) In 2009/2010, our school has undertaken innovative measures to give more practical and theoretical importance to nutrition education and healthy life skills during lessons.

This can be achieved through links and coordination with other curriculum areas (e.g. Physical Education and Sport, Home Economics, Personal and Social Development, Science, Social Studies, Languages, Mathematics and Art).

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If so, please describe below the initiatives that were taken by your school during 2009/2010 to enhance nutrition education and healthy life skills through e.g. links with other curriculum areas, specific schemes of work or a range of innovative teaching styles, etc.

(Continue on a separate sheet if necessary)

6) Students

- a) During 2009/2010, has your school organised special activities and events aimed at reinforcing appropriate messages among students about healthy eating and/or the school nutrition environment?**

Yes

No

If yes, please list below the special activities and events that your school has organised during 2009/2010?

(Continue on a separate sheet if necessary)

- b) During 2009/2010, has your school created initiatives to increase consumption of healthy food and beverage? These can include e.g. improved availability of fresh fruit and vegetables, milk and water; as well as the organisation of breakfast clubs, cookery clubs, and/or initiatives to ensure healthy food at the school's canteen.**

Yes

No

If yes, please list below the initiatives that your school has undertaken during 2009/2010?

(Continue on a separate sheet if necessary)

7) Staff

a) During 2009/2010, was staff in your school involved in the development and implementation of policies on different aspects of the school nutrition environment and on healthy eating in general?

Yes No

If yes, please explain below in what ways staff has been involved in these initiatives during 2009/2010?

(Continue on a separate sheet if necessary)

b) In 2009/2010, staff was given adequate teaching aids/material on nutrition and healthy eating.

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

You can also add comments or clarifications in the space below.

(Continue on a separate sheet if necessary)

c) In 2009/2010, staff received adequate in-service training on nutrition on healthy eating.

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

You can also add comments or clarifications in the space below.

(Continue on a separate sheet if necessary)

8)

Parents

During 2009/2010, did your school provide information to parents on your school's policies regarding the nutrition environment and/or healthy eating in general?

Yes No

If yes, please explain below in what ways parents were informed or engaged on the school nutrition environment and healthy eating during 2009/2010?

(Continue on a separate sheet if necessary)

9)

Other Stakeholders

During 2009/2010, did your school work with other partners (apart from students, staff and parents) to encourage healthy lifestyle habits among the school community.

Yes No

If yes, please list the initiatives and the partners with whom your school worked during 2009/2010 (e.g. the Home Economics Seminar Centre; the Education Health Services; Education Ministry's Health and Safety Unit; Student Support Services; the Health Promotion and Disease Prevention Directorate; the Ministry for Resources and Rural Affairs; and Local Councils)

(Continue on a separate sheet if necessary)

10) During 2009/2010, our school faced the following situations when seeking to ensure that healthy eating messages are consistently promoted and reinforced:

a) Some of the **food and beverage items brought by students** from home are not in line with the Food and Beverage Standards listed in the Healthy Eating Lifestyle Plan (HELP) document published by the Education Authorities in 2007.⁴

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

You can also add comments or clarifications in the space below.

(Continue on a separate sheet if necessary)

b) Few students get a **packed lunch** from home.

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

You can also add comments or clarifications in the space below.

(Continue on a separate sheet if necessary)

c) Students do not have **time to eat lunch** properly.

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

You can also add comments or clarifications in the space below.

(Continue on a separate sheet if necessary)

⁴ Available at http://www.education.gov.mt/ministry/doc/help_healthyeating.htm

d) All food and beverage items sold through vending machines located within our school's premises are in line with the Food and Beverage Standards listed in the Healthy Eating Lifestyle Plan (HELP) document. ⁵				
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><i>Our school does not have vending machines</i> <input type="checkbox"/></p> <p><i>You can also add comments or clarifications in the space below.</i></p> <hr/> <p style="text-align: right;"><i>(Continue on a separate sheet if necessary)</i></p>				
e) All food and beverage items sold in our school's tuck shop are in line with the Food and Beverage Standards listed in the Healthy Eating Lifestyle Plan (HELP) document. ⁵				
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><i>Our school does not have a tuck shop</i> <input type="checkbox"/></p> <p><i>You can also add comments or clarifications in the space below.</i></p> <hr/> <p style="text-align: right;"><i>(Continue on a separate sheet if necessary)</i></p>				
f) Our school offers a varied selection of healthy food and beverage items through its tuck shop and/or vending machines. <i>(tick only if applicable)</i>				
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><i>You can also add comments or clarifications in the space below.</i></p> <hr/> <p style="text-align: right;"><i>(Continue on a separate sheet if necessary)</i></p>				

⁵ Available at http://www.education.gov.mt/ministry/doc/help_healthyeating.htm

<p>g) Prices for healthy food items in our school’s tuck shop and/or vending machines are expensive when compared with other less healthy options.</p>				
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p style="text-align: center;"><i>You can also add comments or clarifications in the space below.</i></p> <hr style="border: 0.5px solid black; margin: 5px 0;"/> <p style="text-align: right; font-size: small;"><i>(Continue on a separate sheet if necessary)</i></p>				
<p>h) Our school needs to improve access to free drinking water (including increasing the number of points around the school).</p>				
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p style="text-align: center;"><i>You can also add comments or clarifications in the space below.</i></p> <hr style="border: 0.5px solid black; margin: 5px 0;"/> <p style="text-align: right; font-size: small;"><i>(Continue on a separate sheet if necessary)</i></p>				
<p>i) Food preparation and handling in our school always meets the national food safety standards.⁶</p>				
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p style="text-align: center;"><i>You can also add comments or clarifications in the space below.</i></p> <hr style="border: 0.5px solid black; margin: 5px 0;"/> <p style="text-align: right; font-size: small;"><i>(Continue on a separate sheet if necessary)</i></p>				

⁶ Available at http://www.health.gov.mt/fsc/fsc_foodeureg.htm

j) Some parents , for various reasons, object to healthy eating policies and/or do not participate in related initiatives and schemes taken by our school (e.g. promoting consumption of milk as well as fruit and vegetables).				
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p style="text-align: center;"><i>You can also add comments or clarifications in the space below.</i></p> <hr style="border: 0.5px solid black; margin: 5px 0;"/> <p style="text-align: right; font-size: small;"><i>(Continue on a separate sheet if necessary)</i></p>				
k) Students are buying unhealthy food and beverage items from street hawkers and outlets near our school.				
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p style="text-align: center;"><i>You can also add comments or clarifications in the space below.</i></p> <hr style="border: 0.5px solid black; margin: 5px 0;"/> <p style="text-align: right; font-size: small;"><i>(Continue on a separate sheet if necessary)</i></p>				
l) Our school receives few proposals from commercial organisations to promote, through sponsorships and advertising , healthy food and beverage options.				
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p style="text-align: center;"><i>You can also add comments or clarifications in the space below.</i></p> <hr style="border: 0.5px solid black; margin: 5px 0;"/> <p style="text-align: right; font-size: small;"><i>(Continue on a separate sheet if necessary)</i></p>				

- 11) **If there are additional issues that you would like to raise about the school nutrition environment and which have not been covered elsewhere in this questionnaire, it would be appreciated if you could outline these in the space below:**

(Continue on a separate sheet if necessary)

- 12) **If you have examples of innovative measures or good practices to develop a healthier school nutrition environment, and/or further educate and promote healthy eating habits in the school community, please tell us about them below:**

(Continue on a separate sheet if necessary)

! Together with the questionnaire, we also would like to receive copies of relevant documentation as indicated in the individual questions above. We are summarizing below the documentation required.

- Healthy Eating Lifestyle Plan and/or related policy document covering 2009/2010. *(refer to question 1)*
- A copy any relevant sections of the SDP for 2009/2010. *(refer to question 2)*
- A copy of any audit findings on aspects of the school nutrition environment. *(refer to question 4)*
- Other supporting documentation which you consider as valuable for our study.

DETAILS OF HEAD/ACTING HEAD COMPLETING THE QUESTIONNAIRE

Name of Head of School / Acting Head of School completing this questionnaire: _____

Name of School: _____

Date when questionnaire was completed: dd mm yy
 ___ / ___ / ___

Signature of Head/Acting Head of School: _____

Thank you for completing this questionnaire.

The questionnaire should be sent by **Thursday, 24 June 2010** to the Office of the College Principal responsible for your school.

In analysing questionnaire responses, we may need to contact you again to clarify or expand on the information contained in the questionnaire.



Appendix F – Selected Bibliography

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