FOOD IN SCHOOL
AND THE
TEACHING OF FOOD

A REPORT BY THE ALL-PARTY PARLIAMENTARY GROUP ON A FIT AND HEALTHY CHILDHOOD
Please note that this is not an official publication of the House of Commons or the House of Lords. It has not been approved by either House or its Committees. All-Party Groups are informal groups of members of both Houses with a common interest in particular issues. The views expressed in this Report are those of the Group. This Report seeks to influence the views of Parliament and of Government to better address ‘Food in school and the teaching of food’ and to make recommendations for improved performance.

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The purpose of the APPG is to develop practical policies to reduce the scale of childhood obesity and promote health and fitness by engaging with a wide variety of interests and experts in the sector and encouraging them to act together to find solutions. Group details are recorded on the Parliamentary website at: http://www.publications.parliament.uk/pa/cm/cmallparty/register/fit-and-healthy-childhood.htm

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The Working Group that produced this report is a sub-group of the All-Party Parliamentary Group on a Fit and Healthy Childhood. The Working Group is Chaired by Helen Clark, a member of the APPG Secretariat. Working Group members are volunteers. Those who have contributed to the work of the Working Group are listed on the front page.

The Report is divided into themed subject chapters with recommendations and an overall conclusion that we hope will influence active Government policy.
EXECUTIVE SUMMARY

‘I call on the next government to listen to the facts and listen to the public – make child health a priority. Not only does it make strong moral sense, it makes economic and political sense too.’
(Dr Hilary Cass; Royal College of Paediatrics and Child Health, 2nd March 2015).

‘Food in School and the Teaching of Food’ is the third in a suite of reports published by the All Party Parliamentary Group on A Fit and Healthy Childhood.

Read in conjunction with its predecessors, ‘Healthy Patterns for Healthy Families’ and ‘The Early Years’, it advocates a governmental policy focus on childhood as a time to spend wisely and well, thus avoiding burgeoning costs to health, social services and the criminal justice system over the life course.

The 2007 Foresight Report cites the obesity crisis as a prime example of what lies in store for the Exchequer if action is not taken and estimates that, if current trends continue, treatment of the population for obesity–related disease will total £50 billion by 2050.


In a survey collecting over 1 million body measurements, over a fifth of children in school Reception Class (aged 4-5 years) presented as either overweight or obese. Far from lessening over time, the problem appeared to get worse. By the time the children reached Year 6 this proportion was 1 in 3, powerful evidence that far from improving eating behaviours, sustained exposure to the school environment served to entrench an approach to food in direct contradiction to all commonly held principles of good health, fitness and wellbeing.

Yet ‘Food in School and the Teaching of Food’ will argue that instead of adding to the problem, schools are ideally placed to drive the solution (‘Schools influence the lives of most children in all countries’ WHO, 2004). No other public institution has such uninterrupted and intensive contact with children during their first two decades of life. Schools have the potential to provide children with new food experiences, the knowledge to develop, sustain and cascade healthy eating patterns and the ability to collaborate with family, voluntary and business concerns in the interests of community health and wellbeing.
Schools can, in fact, become hubs of opportunity where a commitment to health is the engine of educational attainment and the recommendations within our report enshrine a ‘whole school approach’, both acknowledging the fundamental link between good nutrition and academic achievement and offering ways in which government can effect change.

‘Health, education and nutrition support and enhance each other. For instance, healthy nutritional status improves educational potential by positively affecting attention span, learning capacity and ability to engage fully in educational experiences’ (Del Rosso and Marek, 1996; Levinger, 1996; Pollitt, 1990).

‘Schools are ideal settings for nutrition programmes and services, because nutrition and education are closely linked, and because dietary, hygienic and exercise habits that affect nutritional status are formed during the school-age years’ (WHO FAO, 1998).

Embedding healthy eating habits through co-ordinated school policy and practice can help instil efficacious eating patterns for life. This will require consistent and proportionate financial resourcing but only determined advocates of long-term pain would fail to concur that such an outlay ‘will cost a whole lot less than dealing with the costs associated with healthcare for a generation of obese, type two diabetes-sufferers with heart disease.’ (Jenny Tschiesche ‘The Lunchbox Doctor’ 2015 www.lunchboxdoctor)

It is to be hoped that the new Government will ‘do the maths.’ Meanwhile, a nation lies in wait and the health of the population hangs in the balance...
There are many recommendations flowing from this Report. This is a reflection of the massive amount of work required to address this issue to improve outcomes. The new Government has a significant opportunity to help schools and families to give their children a better start in life to the economic and social benefit of the entire community. The recommendations also appear at the end of each relevant section.

**THE IMPORTANCE OF GOOD NUTRITION TO CHILDREN: AN ASSESSMENT OF THE CHALLENGES AND BARRIERS WITHIN THE SCHOOL ENVIRONMENT**

1. National audit of Universal Infant Free School Meal (UIFSM) scheme and measures taken to ensure parity of funding, nutritional quality of food served and equipment for food preparation

2. A single competence framework to set standards, quality assure learning and assess competency in nutrition for both professionals and non-professionals within the health, education, fitness and catering workforce

3. New inclusion of the consideration of a school’s food culture in Ofsted Inspection Frameworks must go hand in hand with the proper training of inspectors in this field

4. Review and broadening of the primary curriculum to incorporate statutory provision of health and wellbeing education

5. Return to a mandatory and nationally-recognised Healthy School Programme

6. Updating of the ‘Eat Well Plate’ guidance incorporating both teaching it and serving it

7. National initiative to encourage role models (i.e. sporting professionals) to promote healthy eating/nutritional education

8. National drive to recruit more school nurses and a greater concentration upon nutrition as a part of their training

9. School nurses to be incorporated into the Healthy Schools programme to ensure that a whole school approach is promoted and clear messages delivered

10. Refreshment of the national curriculum throughout the school age range to embed more recent nutritional advances along with practical experiences that children can relate to real life situations and the foods that they eat

11. Health and education agencies to coordinate a sustainable health programme in schools in the UK

12. Nationally accredited training model for teachers and Head teachers around the food in schools agenda and its impact upon health and attainment

13. Build upon the LAC (Lead Association for Catering in Education) Awards for Excellence and the new Department for Education School Food Achievement Award by establishing local, regional and national models with combined sector sponsorship

14. Exploration of ‘Water only’ school programmes

15. Revision of the national curriculum throughout the school age range to include growing food so that pupils establish that food comes from practical experience.
THE EDUCATION AND TRAINING NEEDS OF EDUCATION PROFESSIONALS, GOVERNING BODIES AND SCHOOL FOOD PROVIDERS

1. Departments of Education and Health to promote a co-ordinated ‘whole school’ strategy with tailored guidance for implementation in early years settings, primary and secondary schools

2. Department of Education to require schools to make the achievement of a National Catering Award a contractual requirement

3. National audit of the school environment to include equipment and kitchen facilities and required upgrade

4. Review and update of training requirements for all school catering staff with a commitment to make onsite ‘e learning’ nationally accessible

5. Development and accreditation of new Standard, Proficiency and Advanced qualifications for ‘Chefs in School’ containing a mix of practical and theoretical content and aimed to enhance the status of school food practitioners

6. Contractual requirement for all who take responsibility for food in the classroom (i.e. breakfast/cookery clubs) to undertake accredited training in food hygiene

7. New post of ‘Play and Activity Co-ordinator’ for early years settings (where feasible) and primary schools to take responsibility for working with and assessing the training needs of teaching and supervisory staff in enabling and creating a healthy and playful school environment

8. Joint training for school medical and therapeutic practitioners (school nurses and counsellors) in physical/emotional support programmes for pupils

9. Establishment of school health councils led by a school health co-ordinator to oversee the roll out of a ‘whole school’ approach and assess training needs holistically

FOOD IN EARLY YEARS SETTINGS AND THE IMPORTANCE OF EARLY EATING PATTERNS

1. Ofsted to inspect food and nutrition in early years’ settings at regular intervals; the inspection process to be supported by registered public health nutritionists or dieticians

2. A new specific nutritional standard for the Early Years Teacher qualification

3. Early childhood nutrition indicators to be embedded into key developmental checks

4. A holistic approach to be adopted in educating all early years’ workers and health professionals on childhood nutrition

5. Enhanced interventions to promote the initiation and continuation of breastfeeding to reduce the prevalence of childhood obesity and prevent long term chronic diseases

6. Gather more national evidence about the provision of food and drink in early years settings as an integral component of EYFS learning and development

7. Early years’ workers to be given training (integral to all Early Years qualifications and degree courses) enabling them to support families in providing children with appropriate evidence-based food and nutrition advice

8. Nutritional advice to extend from the onset of a pregnancy throughout the early years period
FROM PRIMARY TO TEENAGE YEARS; NUTRITIONAL UNDERSTANDING, PRACTICAL SKILLS AND CURRICULAR DEVELOPMENT

1. Roll out of school/community Parenting Support Programmes (led by school nurses, counsellors and parenting support advisors) updated to include nutritional healthy meal plans and offering accessible child health improvement advice on a case by case basis
2. Publication and dissemination of collated evidence-based findings from the operation of the National Healthy Schools Programme (NHSP)
3. Development of a new English National Curriculum specification ‘Health and Wellbeing’ to include healthy eating, nutrition, physical activity, body image and emotional literacy
4. A free, national and mandatory Healthy Schools Programme to be updated and reinstated across primary and secondary schools

THE ROLE OF NATIONAL, EUROPEAN AND LOCAL GOVERNMENT LEGISLATION, REGULATION AND GUIDANCE AND CONSIDERATION OF THE DRAFT SCHOOL FOOD STANDARDS

1. School Food Standards to be mandatory across all types of school
2. Atmosphere of the school canteen and assessment of the school food culture to be embedded into the national school inspection processes with certainty that they will contribute to the overall grade awarded
3. Nationally funded mandatory system to enforce compliance with School Food Plan aims, accompanied by performance-based incentives/sanctions
4. Nationally funded evaluation and audit of the operation of the School Food Plan
5. National training fund to enable teachers to update their skills to meet the new curriculum requirements
6. National audit of school kitchen environment with money supplied to make good gaps in provision/equipment
7. Review and update of The School Food Plan
8. Introduction of universal free school meals for children throughout their school life

THE IMPACT OF SOCIO-ECONOMIC INEQUALITIES AND CULTURAL DIVERSITY ON UK NUTRITION AND FOOD SCIENCE EDUCATION AND THE ACHIEVEMENT OF BEHAVIOUR CHANGE

1. Government to commission a national ethnic recipe database to inform the content and preparation of responsive school food menus
2. Government stated commitment to offer all children of school age a nutritious and healthy meal
3. Government to support ‘year round’ child meal provision and enrichment programmes targeted to areas of high economic and social deprivation
4. National programme of holiday meal/activity schemes using existing resources and staff with Government to provide resources to cover shortfall
5. National audit and evaluation of all existing projects/programmes
6. Community projects currently delivering summer education programmes/childcare/sports activities to extend their remit to the provision of a holiday meal, in partnership with existing school meals providers
7. Extension of summer holiday meal provision to include opportunities for training and skills development
8. Funding for the above programmes to come from across government policy areas including Health, Education, Department of Work and Pensions, Poverty Alleviation; Department for Education to lead, channel and co-ordinate
9. Health visitors/school nurses to include ‘the healthy lunchbox’ in delivery of nutrition advice to all parents; thus taking lunchbox content into universal family/child welfare programmes and away from head teachers’/lunchtime supervisors’ disciplinary remit
FAST FOOD OUTLETS AND THE PLANNING SYSTEM; GUIDANCE, PRESENT MODELS AND FUTURE PRACTICE

1. A strengthened evidence base for policy action concerning the community food environment via a Government-funded national research programme concentrating upon the nature and location of obesogenic environments around UK schools.

2. Closer liaison between public health and environmental planning concerns; creation of local strategic leadership bodies consisting of representatives from education, local authorities, wellbeing boards, planners, public health and environmental health.

3. As part of the above, public health teams to establish programmes of health impact assessment and training.

4. Local authorities to work with fast food outlets on improving food quality and choice following the guidelines of the Responsibility Deal, including calorie labelling and reducing levels of sugar and saturated fat.

5. National research programme to investigate children’s food and beverage purchasing patterns area by area.

6. Development of more tools to draw together different aspects influencing children’s eating and food purchase near the school gate.

A PARTNERSHIP BETWEEN INDUSTRY AND SCHOOLS IN PROMOTING INSIGHT AND AWARENESS OF HEALTHY EATING

1. Government to produce a national model of partnership working in promoting insight and awareness of healthy eating based on existing examples of good practice.

2. Suppliers to school caterers to widen their support of the educational needs of catering teams and pupils to include governors, parents and therefore the local community.

3. Extended training tools for school healthy eating co-ordinators enabling them to educate the school and wider communities in the benefits of adopting a healthier lifestyle.

4. Government to partner with the food industry in funding scientific research programmes to generate nutritious foods.

5. Government, academia and the medical community to work with education professionals and the media to strengthen nutrition information, inform consumers and thus equip them to make healthier food choices.

6. Schools to develop and publish their policy with regard to any relationship between their institution and a commercial enterprise, thus increasing teacher/pupil/parental awareness.

7. Schools to be encouraged to work only with companies/brands clearly associated with products that promote healthy lifestyle messages, thus avoiding promoting or advertising products to children under the age of 16 that are high in sugar, fat and saturated fat.

NUTRITION, MOVEMENT AND PLAY - THE VIRTUOUS CIRCLE

1. Learning about play to be a core part of qualification training for all education professionals working with children in pre and primary school settings.

2. National requirement for all pre and primary school settings to undertake ‘whole school’ training in play, to be regularly repeated and updated.

3. Play to be embedded in the National Curriculum at Key Stages 1 and 2.

4. Re-structuring of the school day for children at Key Stage 1 in line with the Finnish model.

5. PE/sporting activities to be embedded and taught in modules combining knowledge of health and nutrition throughout the school life of a child.
The health and welfare of children is reliant upon the adults responsible for their care reflecting in turn the health of society (BMA 2013, ‘growing up in the UK ensuring a healthy future for our children: file:///C:/Users/emsi/Downloads/growingupinuk_may2013%20(2).pdf.).

Unfortunately if viewed through such a prism – today’s society is in poor shape. Overweight and obesity now ranks as the fifth leading global risk for mortality (WHO, 2013. ‘Obesity and overweight. Factsheet no. 311 http://www.who.int/mediacentre/) and the rise in worldwide childhood obesity over the same time span is dramatic. In the UK, an intense media focus is increasingly matched by name-checks in Government policy documents; most notably in ‘Healthy Lives, Healthy People: a call to action on obesity in England’ Department of Health 2011, where the stated aim is to achieve a sustained downward trend in the level of excess weight in children by 2020.

The current medical scenario suggests that such ambition needs stiffening by policy. Obese children are likely to become obese adults presenting with chronic illnesses such as heart disease and diabetes at a younger age and an 8 year study of over half a million UK children showed that insulin use increased markedly amongst the 12-18 age group indicating that the prevalence of childhood diabetes is rising (Hsia Y et al. 2009, ‘An increase in the prevalence of type 1 and 2 diabetes in children and adolescents: results from prescription data from a UK general practice database. Br J Clin Parmacol 67(2):242-9).

In turn, the growing number of children living with chronic disease has a direct and substantial impact upon cost, availability and delivery of health services.

THE IMPORTANCE OF GOOD NUTRITION TO CHILDREN: AN ASSESSMENT OF THE CHALLENGES AND BARRIERS WITHIN THE SCHOOL ENVIRONMENT

Children are not being well-served by their diets and obese children are likely to become obese adults with the attendant illnesses of heart disease and diabetes associated with unhealthy eating.
The picture is complemented by the latest UK National Diet and Nutrition Survey findings (Bates B et al. 2014 National Diet and Nutrition Survey Results from Years 1, 2, 3 and 4 (combined) of the Rolling Programme, 2008/09 – 2011/012. Public Health England) demonstrating that children are not being well-served by their diets. For example:

- Children aged 4-10 and 11-18 had non-milk extrinsic sugar (NMES) intakes substantially higher than guidelines. Intakes were 14.7% and 15.6% of food energy, respectively, compared with guidelines advocating no more than 11%

- Children in the above age brackets also had saturated fat intakes higher than guidelines. Average intakes were 13.3% and 12.5% of food energy respectively, compared with guidelines that these should be no more than 11%.

- Fibre (non-starch polysaccharide; NSP) intakes were substantially lower than guidelines. Average intakes were 11.1 – 11.8 grams per day for children aged 4-18. The latest Scientific Advisory Committee on Nutrition (SACN) report, 2014 ‘Draft Carbohydrates and Health’ (https://www.gov.uk/government/uploads/system/uploads/attachment_datafile/333971/Draft_SACN-Carbohydrates_and_Health_report_consultation.pdf) on carbohydrates proposes that guidelines of 15g per day for children aged 2-5, 20g per day for 5-11 year olds and 25g per day for 11-16 year-olds should be set. Intakes are significantly lower than these

- Intakes of oily fish were below the recommendation of at least one portion (140 grams) per week.

These outcomes, however, need not be constants and are largely preventable. Schools have a central role to play in improving the nutrient content of children’s daily diet, not least because of the amount of time that they spend there.

Primary school children in English state schools spend around 635 hours in the classroom per annum whilst in the secondary sector the amount is approximately 714 hours. Such a timeframe has great potential to influence what they eat and (most importantly), what they learn about food.

The food that children eat in school from day one can influence their mental and physical wellbeing for good or ill – both now and later in life. It is thus logical to ensure that they are adequately nourished and educated about food in order to derive most benefit from their education as well as ameliorating the burgeoning childhood obesity epidemic and its related catalogue of heath ills.

Studies are emerging to support these arguments whether from Public Health England (The Link between pupil health and wellbeing and attainment. A briefing for head teachers, governors and staff in education settings: https://www.gov.uk/government/publications/the-link-between-pupil-health-and-wellbeing-and-attainment (2014) or academic sources such as a 2012 study (‘Eating Breakfast enhances the efficiency of neural networks engaged during mental arithmetic in school-aged children. Physiol behav 016(4):548-55 Pivik RT et al) showing that breakfast consumption improved the efficiency of school children’s brain nerve networks when they were engaged with mental arithmetic, as compared with children who had skipped breakfast.

Equally, fresh evidence has emerged about the health benefits of adequate and balanced diets for schoolchildren.

Girls now start puberty earlier than their grandmothers and this has been linked with the over-eating of processed, high-fat foods. The onset of puberty also triggers growth spurts and the body’s increased need for additional calories, proteins, calcium, iron and folates. Rising obesity rates coupled with malnutrition can consequently impair pubertal development (Soliman A et al, 2014 ‘Nutrition and pubertal development. Indian J Endocrinol Metab. 2014 Nov; 18(Suppl 1):539-47).
Public policies around food–related agendas in schools are therefore not optional but essential and are increasingly regarded as such beyond UK boundaries. A comprehensive mapping of national school food policies across the EU countries plus Norway and Switzerland (Storckdieck genannt Bonsmann et al, ‘Mapping of national School Food Policies across the EU28 plus Norway and Switzerland. JRC SCIENCE AND POLICY REPORTS (https://ec.europa.eu/jrc/sites/default/files/libn/6651enn.pdf) demonstrated that 4 of the 8 Areas for Action in the 2014-2020 EU Action Plan on Childhood Obesity related to observed policy content across all 30 countries. The specific areas covered were:

- Support a healthy start in life
- Promote healthier environments, particularly in pre-schools and schools
- Make the healthy option the easier option
- Restrict marketing and advertising to children.

The UK Government has engaged with current thinking by devising policies concerning food provision in school that are more dynamic, innovative and comprehensive than those of other European countries. Evidence that the school food standards have made improvements to food provision and consumption may be found by referring to the following studies:


The School Food Plan (Dimbleby H and Vincent J, 2013 (http://www.schoolfoodplan.com/wp-content/uploads/2013/07/School_Food_Plan_2013.pdf) aims to kick-start increased up-take of school food via the Universal Infant Free School Meal (UIFSM) scheme which gives a legal entitlement to all Reception, Year 1 and Year 2 children to a healthy school lunch; establishing financially self-sufficient breakfast clubs in schools across England and setting up two flagship London boroughs to demonstrate the impact of the large-scale improvement of school food.
The Plan has widespread support but the Government’s ambitious target of an 87% take-up of the free school meal offer has not been met. Answers to Freedom of Information requests posed by ‘The Daily Mail’ and Local Authority responses to a Labour Party survey (‘Shambles as up to 30% of pupils say no to Clegg’s free school meals’, ‘The Daily Mail’ 31 December 2014) reveal that:

- 300,000 4-7 year olds are not claiming the meal
- From the 146 Local Authorities replying to the survey, 46 schools said that they could not offer free meals and of those, 15% had no plans to achieve the aim
- One third of councils said they had been forced to use existing funds to finance the policy because Whitehall money was inadequate
- About £2.5 million was spent by 15 councils on kitchens to make up the shortfall in funding
- Some schools without kitchens were supplying cold desk-bound packed lunches
- Parents were concerned about food quality; one Birmingham school rationed the amount of chicken nuggets supplied to children on an age-related basis

These findings were corroborated by a more recent report in The Guardian (Adams R, 2015, ‘Schools face disruption as a result of universal infant free school meals policy’) in which it was reported that some schools still await money from Government to fund the policy and others were having to use special needs pupils’ facilities for food preparation.

Consideration should also be given to the importance of the beverage provision within the school environment. Recognition of this is being led by Australian schools. On April 14th 2015, Goulburn Valley Water in partnership with Goulburn Valley Health, launched a new education programme ‘Water only Schools’ at Merrigum Primary School. The initiative focuses on improving the health of children in the Goulburn Valley to inform their staff, students and community of lifestyle choices which have the potential to achieve better outcomes in child health and performance. By signing up to become a ‘Water only School, staff and students commit to only allowing tap water to be consumed on school grounds.

‘The availability of sugary drinks at school either in lunch boxes, the school canteen, lunch orders or vending machines, sends a message to children that these are suitable everyday drinks. By banning them at school, we hope to convey a healthy message to children, with potential also to change the community attitudes.’ Kristy Elrington; Education Officer at GV Water, 2015).
Paediatric Endocrinologist. Robert Lustig has said that consuming just one sugary drink per day increases the risk of type two diabetes by 29% and further states that fructose is the primary cause of chronic metabolic disease. In ‘The Best Drink for Children – and How to Avoid Dental Decay’, Babycup.co.uk 2015 warns of the dental health dangers of regular juice consumption amongst children.

Yet, as always, major change in the food/beverage offer within schools must be introduced with the aim of building consent rather than stoking grievance or negativity.

In the field of nutrition education in schools, England trails Scotland and Wales which supply holistic nutrition, health and wellbeing programmes. In England, nutrition has been the traditional remit of science teachers and, in primary schools, the class teacher. Their training has been variable. Many schools lack access to the best advice about what a child really needs and teachers are often equipped with neither knowledge nor confidence to combat powerful parental opposition if certain foods are restricted or banned. This was evident when some parents were captured on television in the act of passing crisps and chocolate through playground railings in reaction to Jamie Oliver’s initial healthy school food pilots.

Robust evidence demonstrates that a ‘whole school’ approach has a positive impact on children’s health outcomes by improving their diets and food choices (Brooks 2013). However, in schools where teachers are time-poor, there is little incentive to adopt such a health strategy unless external monitoring is embedded within the process. In September 2013, Ofsted amended its subsidiary guidance for school inspectors, stating that the inspectorate was now required to ‘consider the food on offer at the school and atmosphere of the school canteen.’ However, during the Consultation for the new Inspection Framework for Schools in 2014, the requirement was dropped and was omitted from the guidance. There is little doubt about the detrimental potential of this omission upon a school’s commitment to the Food in Schools agenda. Head teachers and their staff, battling with overflowing workloads and ever-increasing targets to meet, need a combination of support and regulation to help them to engage. Following an intervention from the All-Party Parliamentary Group for School Food, Sean Hartford, National Director for Schools has stated that from September 2015, healthy eating will be given a more prominent place in the Common Inspection Framework. The move has been welcomed but work remains to be done:

‘We look forward to working with Ofsted over the next couple of months to ensure that the training and support for inspectors captures the importance of strong leadership, taking a ‘whole school’ approach and seeing through the eyes of the child.’ (Myles Bremner, Director of the School Food Plan).

One of the ways in which teaching staff could be assisted in implementing change is by enhancing the role of the school nurse.

In September 2014, the figure for full time equivalent qualified school nurses stood at 1,209 and this has been stable for 5 years. As specialist public health professionals, school nurses support children and young people aged 5-19 to have the best possible health and educational outcomes (Department of Health, 2012, ‘Getting it right for children, young people and families; maximising the contribution of the school nurse’).
They deliver the Healthy Child Programme (HCP) for the 5-19 age group in which a requirement for schools to meet food and nutrient standards is outlined: ‘All schools should follow statutory nutritional standards and schools should be providing good quality, healthy food that children want to eat, in pleasant dining areas.’

By intensifying their nutritional training, raising their profile and increasing the school nurse work force, Government can embed this professional role into the Healthy Schools programme with a remit for practitioners to foster a ‘whole school’ approach to food, promote the benefits of good nutrition and healthy school meals and support eligible families in their free school meals applications.

Getting the school curriculum right must be central to the promotion of good nutrition in schools. In primary schools, it is a required component of the Design and Technology and PSHE specifications. Cooking returned to the English National Curriculum as an entitlement in Key Stage 1-3 following sustained campaigning by organisations working on children’s food over many years and latterly as a recommendation of the School Food Plan. In secondary schools, the relentless decline of ‘Home Economics’ from 1970 onwards is well known and well documented, as detailed below: ‘during the Thatcher years the Education Ministry decided that what the country needed were not cooks who could feed themselves and their families; but food technologists who could work in the nation’s food factories: people who could design a theoretical frozen pizza, but who’d not the first idea of how to make a pizza. And so we created that generation of children we saw in ‘Jamie’s School Dinners’ who don’t know a carrot from an onion and whose parents also don’t know a stick of celery from a cauliflower.’ Sheila Dillon, BBC Food Blog 8 February, (2011).

Recently, food has been delivered to secondary school pupils via Design and Technology (healthy eating, equipment, food ingredients and cooking) and Science (nutrition) and hopes are high for a newly designed GCSE subject - but a change in title from ‘Cooking and Nutrition’ to ‘Food Preparation’ combined with Department of Education attempts at justification that have received a mixed reception: ‘The title of the new food preparation and nutrition GCSE was chosen to reflect the inclusion of more scientific knowledge underpinning cooking as well as a clear focus on health and nutrition. Many respondents to our consultation felt that using the word ‘cookery’ would downgrade the subject’ (‘The Daily Mail’ March 1st 2015) have clouded its arrival.

Meanwhile, there is scope for the PSHE syllabus to develop strong content about good nutrition in pregnancy and for PE teachers to deliver nutrition-related messages (GOVUK, 2014, ‘Schools, colleges and children’s services – curriculum and qualifications’ https://www.gov.uk/schools-colleges-childrens-services/curriculum-qualifications)
As has been shown, schools can do much to improve the nutritional intake of children but it is equally important to address the impediments to successful outcomes.

One study (Boddy LM et al, 2012 ‘Using formative research to develop the healthy eating component of the CHANGE! School-based curriculum intervention’ BMC PUBLIC health 12:710) in a review of barriers to healthy eating in children which involved talking to children, teachers and parents, concludes that while the children surveyed knew about healthy eating, they needed help in transforming their knowledge into every day actions. The theme is augmented by an examination of dietary choices in children aged 11-16 showing that the pupils attending schools with the highest number of actions in place to promote healthy eating were the likeliest to make healthy food choices (Townsend N et al, 2011 ‘The more schools do to promote healthy eating, the healthier the dietary choices by students’ J Epidemiol Community Health 65(10):889-95).


To all of the above can be added the pervasive influence of ‘the fringe’ as a barrier to what children eat during school hours. ‘The fringe’ refers to food that is available outside schools in adjacent shops that children can access during lunch breaks or on the way home (Sinclair S & Winkler JT (2008) ‘The School Fringe: What Pupils Buy and Eat from Shops and Surrounding Secondary School. Key Findings. http://www.fhf.org.uk/meetings/2008-07-08_School_Fringe.pdf)

The Sinclair/Winkler project surveyed 322 pupils from two large comprehensive schools and found that foods bought from fringe shops provided school-aged children with at least 23% of the recommended energy intake. Purchases made were usually high in fat and sugars with takeaway choices supplying on average 45% of calories from fat while those offering meat provided about 70% of children’s daily protein needs.

The authors added that the research findings were almost certainly an underestimate of the pernicious effect of the fringe.

In conclusion, whilst much can be achieved in school to instigate healthy eating habits, policies must be devised and co-ordinated in a holistic manner, supported by statutory action where necessary and a multidisciplinary methodology.

Initiatives taken must also centre upon the ‘whole child’ because each child belongs to a family and children’s eating habits as with their other behaviours are shaped by observation, the majority of which will take place within the home.

Parents following a healthy lifestyle pattern are more likely to pass this over to their children. Working with the child must also necessitate working with the parents.

Overall, some of the most common factors that tend to act as barriers to healthy eating in school include:

- Being unaware of how food affects health
- Denial that food marketing influences food choices
- Following the latest trends
- Limited exposure to healthy eating at school/home
- Limited exposure to different food choices
- Living for the moment
- Mimicking friends
- Not understanding how to use/apply healthy eating advice.
• National audit of Universal Infant Free School Meal (UIFSM) scheme and measures taken to ensure parity of funding, nutritional quality of food served and equipment for food preparation
• A single competence framework to set standards, quality assure learning and assess competency in nutrition for both professionals and non-professionals within the health, education, fitness and catering workforce
• New inclusion of the consideration of a school’s food culture in Ofsted Inspection Frameworks must go hand in hand with the proper training of inspectors in this field
• Review and broadening of the primary curriculum to incorporate statutory provision of health and wellbeing education
• Return to a mandatory and nationally-recognised Healthy School Programme
• Updating of the ‘Eat Well Plate’ guidance incorporating both teaching it and serving it
• National initiative to encourage role models (i.e. sporting professionals) to promote healthy eating/nutritional education
• National drive to recruit more school nurses and a greater concentration upon nutrition as a part of their training

Recommendations

• School nurses to be incorporated into the Healthy Schools programme to ensure that a whole school approach is promoted and clear messages delivered
• Refreshment of the national curriculum throughout the school age range to embed more recent nutritional advances along with practical experiences that children can relate to real life situations and the foods that they eat
• Health and education agencies to coordinate a sustainable health programme in schools in the UK
• Nationally accredited training model for teachers and Head teachers around the food in schools agenda and its impact upon health and attainment
• Build upon the LAC (Lead Association for Catering in Education) Awards for Excellence and the new Department for Education School Food Achievement Award by establishing local, regional and national models with combined sector sponsorship
• Exploration of ‘Water only’ school programmes
• Revision of the national curriculum throughout the school age range to include growing food so that pupils establish that food comes from practical experience.
All school-based professionals from the Head teacher, educational and office staff to Governors, the catering workforce and part-time midday supervisors need specialist training and support if they are to promote the wellbeing and improved physical and mental health of the children in their care. This is best achieved by the adoption of a ‘whole school’ policy in which co-ordinated food, drink and beneficial play strategies further the health and wellbeing of everybody in the school. Teachers, pupils, catering and supervisory staff, parents and community partners are thereby empowered to build and sustain a healthy school. If the school culture is to reflect this ideal, all practitioners must have access to specialised ongoing training, but current provision is patchy.

The School Food Plan (2015) highlights some shortfalls in catering provision:

‘The emphasis tends to be on hygiene and safety training, which are required by law rather than on cooking. The most recent Children’s Food Trust annual survey found that the vast majority (90%) of local authorities offered their catering staff training in Food Hygiene, Basic Induction and Food Safety, but only 19% offered the level 2 Kitchen Skills Diploma, which actually teaches cooking’, (School Food Plan, 2015).

The Plan also cites a 2010 study by the Association for Public Service Excellence (APSE) concerning the operation of school kitchens:

‘productivity rates in some primary kitchens were as high as 13.3 meals per staff member, per hour. In other kitchens, that rate was as low as 4.8%.’
The disparity is attributed to a variety of factors, including poor equipment and inferior kitchen facilities, but the overriding constant is a perceived inadequacy in the skill set of the school catering workforce. A range of initiatives designed to raise standards include The Soil Association’s Food for Life Catering Mark; an independent verification that schools are offering fresh, sustainably sourced meals which meet the School Food Standards. When delivered in tandem with the school award framework, The Food for Life Partnership, lunchtime experiences have improved and school members and the wider community have acquired a holistic knowledge of nutrition from growing food to meal planning and practical cookery.

A network of regional training centres (Food Excellence and Skills Training or FEAST) established by The Children’s Food Trust has been underused by local authorities largely because of inevitable practical difficulties involved in staff being off site and there is general agreement that ‘e’ learning models to accommodate both employee and employer are likely to have higher take-up.

However, the introduction of a specific practical qualification for school cooks has stalled due to an ongoing absence of formal accreditation from an examining body.
For teaching staff, a ‘whole school’ strategy will necessitate a programme of continuing professional development (CPD) so that skills, knowledge and understanding in food-related issues can be deepened and updated.

Those responsible for delivering the national curriculum nutrition content will require intensive guidance, but staff without formal training in the area who are teaching aspects of food that occur across subject boundaries will also need support and training in order to ensure that messages about nutrition are consistent and co-ordinated.

CPD is also crucial if staff are to identify children who are at risk; e.g. failing to thrive, presenting with allergies, eating disorders, those who are overweight or obese and pupils with dietary-related conditions.

Equally, the increasing number of breakfast and cookery clubs and extra-curricular food growing activities in schools make the case for all who take responsibility for food in the classroom to receive the benefit of food hygiene training.

A ‘whole school’ strategy will also incorporate the role of play and physical activity in the promotion and maintenance of pupil health and wellbeing.

Here too, training needs are many and complex.

A ‘whole school’ approach would also be more readily enabled by co-ordination of medical (school nurses) and therapeutic (school counsellors) services and joint training programmes to enable these professionals to support children and young people with weight and self-esteem issues. Team working could also involve parenting support advisors and family support or liaison co-ordinators who work with families in the community to improve children’s health and these programmes should be aligned with initiatives taking place within school. Strategies might include support plans and behavioural change programmes to address the emotional issues underpinning destructive eating patterns and in order to deliver assistance that is sensitive and respectful, practitioners will require appropriate and specialised training.

The establishment of school health councils, led by a school health co-ordinator, would be a way in which schools could implement and audit all of the above strategies and ensure that training needs are assessed holistically. Such bodies should include representatives from different segments of the school including health, nutrition and physical education teachers, catering service staff members, school nurses and counsellors, pupil and family members, supervisory staff and community representatives.

High quality training for all its practitioners is an essential component of the ‘whole school’ approach. It is of equal importance that such programmes should be subject to regular revision and audit and properly resourced.
• Departments of Education and Health to promote a co-ordinated ‘whole school’ strategy with tailored guidance for implementation in early years settings, primary and secondary schools
• Department of Education to require schools to make the achievement of a National Catering Award a contractual requirement
• National audit of the school environment to include equipment and kitchen facilities and required upgrade
• Review and update of training requirements for all school catering staff with a commitment to make onsite ‘e learning’ nationally accessible
• Development and accreditation of new Standard, Proficiency and Advanced qualifications for ‘Chefs in School’ containing a mix of practical and theoretical content and aimed to enhance the status of school food practitioners
• Contractual requirement for all who take responsibility for food in the classroom (i.e. breakfast/cookery clubs) to undertake accredited training in food hygiene
• New post of ‘Play and Activity Co-ordinator’ for early years settings (where feasible) and primary schools to take responsibility for working with and assessing the training needs of teaching and supervisory staff in enabling and creating a healthy and playful school environment
• Joint training for school medical and therapeutic practitioners (school nurses and counsellors) in physical/emotional support programmes for pupils
• Establishment of school health councils led by a school health co-ordinator to oversee the roll out of a ‘whole school’ approach and assess training needs holistically
Good nutrition and healthy eating in the years before school are of vital importance because of their impact upon growth, development and achievement (J. Epidemiol Community Health 2008 Aug;62(8):734-9; Dietary patterns related to attainment in school: the importance of early eating patterns’, Feinstein L1, Sabates R, Sorhaindo A, Rogers I, Herrick D, Northstone K, Emmet P).

‘The first 1000 days of life i.e. the period from conception to age two is regarded as a critical window of opportunity to save a life and a child’s future, by providing the right density of nutrients’ (Eur J Clin Nutr. 2013 May;67(5):501-6. doi: 10.1038/ejcn.2013.46. Epub 2013 Feb 27. ‘Nutrient density in complementary feeding of infants and toddlers’ Solomons NW1, Vossenaar M.)

Encouraging mothers to breastfeed and ensuring that children eat well in their early years are key to their optimal life outcomes. The Children’s Food Trust (formerly School Food Trust’s) ‘Eat Better, Start Better’ programme (2013) states that good nutrition is important for children under five to:

- Ensure that they get the right amount of energy (calories) and nutrients needed while they are growing rapidly
- Ensure that they do not consume too much energy, which may lead them to become overweight or obese
- Encourage them to eat a wide variety of foods and develop good dietary habits to sustain them throughout the life course.

Better eating habits for children during the early years period will also lead to better eating and enjoyment of eating at primary school.

The Early Years Foundation Stage (EYFS) framework includes standards relating to the wellbeing of children from birth to five. The legal requirement on food and drink in the EYFS (2012) specifies that where children are provided with meals, snacks and drinks, these must be healthy, balanced and nutritious. The statutory guidance also states that providers should be aware of children’s dietary requirements; that those responsible for the preparation and handling of food must be competent to do so and that fresh drinking water must be available at all times.

Establishing good eating patterns for children in the early years will provide them with a foundation for their future health and wellbeing.

Additional references:
The Advisory Panel on Food and Nutrition in Early Years ‘Laying the Table’ Recommendations for National Food and Nutrition guidance for Early Years Settings in England (2011) www.childrensfoodtrust.org.uk/pre-school/eat-better-start-better/advisory-panel

The Caroline Walker Trust: ‘Eating well for under 5s in childcare’ (2006)

Recommendations

- Ofsted to inspect food and nutrition in early years’ settings at regular intervals; the inspection process to be supported by registered public health nutritionists or dieticians
- A new specific nutritional standard for the Early Years Teacher qualification
- Early childhood nutrition indicators to be embedded into key developmental checks
- A holistic approach to be adopted in educating all early years’ workers and health professionals on childhood nutrition
- Enhanced interventions to promote the initiation and continuation of breastfeeding to reduce the prevalence of childhood obesity and prevent long term chronic diseases
- Gather more national evidence about the provision of food and drink in early years settings as an integral component of EYFS learning and development
- Early years’ workers to be given training (integral to all Early Years qualifications and degree courses) enabling them to support families in providing children with appropriate evidence-based food and nutrition advice
- Nutritional advice to extend from the onset of a pregnancy throughout the early years period
Once children become obese, it is difficult for them to lose weight despite efforts to turn the tide by boosting physical activity and making changes to the diet. Experts worldwide consider that more fruitful strategies should be initiated early in the life of the child and concentrate upon preventing excessive weight gain (‘Population-based prevention strategies for childhood obesity: report from a WHO forum and technical meeting, 15-17 December 2009’ World Health Organisation (WHO) 2010).

However, the determinants of obesity are intrinsically complex and in the absence of a single solution, experience in several countries has shown that preventative action should take place in multiple settings and incorporate a variety of behaviour-change techniques (‘Population-based approaches to childhood obesity prevention, World Health Organisation (WHO), 2012). This is best achieved via a mix of population measures implemented nationally and ‘settings-based’ approaches; in particular those rolled out in school and the wider community.

School-based interventions aimed at manipulating single dietary behaviours (such as increasing fruit and vegetable intakes) have shown variable outcomes with impact on associated behaviours that can best be described as extremely limited (Bourke M, Whittaker P& Verma A, 2014 ‘Are dietary interventions effective at increasing fruit and vegetable consumption among overweight children? A systematic review’ Journal of Epidemiology & Community Health, 68:485-490, Evans CEL, Christian MS, Cleghorn CL, Greenwood DC& Cade JE, 2012 ‘Systematic review and meta-analysis of school-based interventions to improve daily fruit and vegetable intake in children aged 5 to 12 y.’ The American Journal of Clinical Nutrition, 96:889-901).

A recent review concludes that ‘in order to tackle obesity, narrow interventions focusing on single aspects of behaviour are unlikely to achieve long-term change’ (Bourke 2014). The author argues that successful interventions will have multiple components, including nutritional education, parental support and physical activity.


Outcomes for strategies targeted to children in the 6–12 years age group have been most effective and previous reviews have identified some of the major productive programme components (although this has not always been possible).

From the evidence available, studies advocate:
- A school curriculum that includes healthy eating, physical activity and consideration of body image
- Increased sessions for physical activity and the development of fundamental movement skills throughout the school week
- Improvement in the nutritional quality of the food supply in schools
- Environments and cultural practices that support eating healthier foods and being active throughout each day (‘whole school’ approach)
- Support for teachers and other school staff to implement health promotion strategies and activities (e.g. continual professional development; capacity building activities).
- Parental support and home-centred strategies that encourage children to be more active eat more nutritious foods and spend less time in front of a screen.

A holistic approach in school unites nutritional learning with PHSE and emotional literacy so that healthy and unhealthy patterns of eating and lifestyle are associated with feelings, thoughts and behaviours.

Similarly, analysis of the reasoning behind individual food choices is aligned to a study of behaviour and motivation in relation to food. The European Food Framework (May 2012) contains a progressive set of competencies and resources for the 5–16 age group.
Areas worthy of consideration include:

- Identification of personal, cultural and social lifestyle choices in relation to diet and nutrition
- The benefits of physical activity and emotional wellbeing
- Increasing individual/group awareness of behavioural responses to food and drink and resultant emotional impact
- Consideration of energy balances and boosters, motivation and mental health
It is also important that programmes are presented as part of the normal school pattern rather than ‘one-off’ special events such as school health weeks. Interventions delivered regularly, either as curriculum content or during after-school clubs are more likely to have positive impacts upon pupil knowledge and awareness of health messages. (National Foundation for Education Research, 2008. ‘Evaluation of the PhunkyFoods Programme: Final Report’ [Link to report])

Cooking has been returned to the English National Curriculum as part of the School Food Plan and with food, is now an entitlement for pupils at Key Stages 1-3. This is a most welcome move and will enable children to learn a life skill that has been absent for successive generations:

‘Home Economics was never something deemed important enough to study in the long term. School was about Maths and English and preparing you for the next stage in your academic career. For me, despite loving food, I only knew how to eat it, not prepare it.’ (Jenny Tschiesche, 2015 Founder of www.lunchboxdoctor.com)

Yet the food/cookery content of the National Curriculum is still very much a work in progress. It lacks detail and is difficult for non-specialist teachers to deliver with confidence and authority. Other countries have gone further with the production of far more comprehensive and detailed nutrition, health and wellbeing curriculums.

The curriculum in Scotland was substantially overhauled in 2009, resulting in the subsequent publication of a Curriculum for Excellence, 2009 (www.educationscotland.gov.uk/thecurriculum).

The children’s curriculum from 3–18 years in age therefore shows progression for different aspects of food education known as ‘lines of development’. Food aspects are most explicitly highlighted for teaching through three curriculum areas: Health and Wellbeing, Sciences and Technologies. However, with a strong emphasis on interdisciplinary (cross-curricular) learning, connections can be made (and are actively encouraged) with other curriculum areas. The Scottish curriculum distinctly highlights food education learning for both primary and secondary schools – all of which is subject to statute. For example, health and wellbeing includes the study of energy and energy balance (physical activity and health), as well as nutrition, safe and hygienic practices and food and the consumer (food and health).

In Sciences, links to body systems and cells (biological systems) are made and also to the properties and uses of substances (materials). Lastly, Technologies contains the food contexts for furthering and developing technological skills and understanding.

The Welsh curriculum was revised and updated in 2008. It ensures that primary and secondary school children experience learning about food. The three areas of the curriculum where food is mainly featured are: D&T: food; Science; and Personal and Social Education. Children mainly derive their food learning (particularly undertaking and linking practical cooking work to elements of nutrition) in D&T: food. This compulsory component of the 7-14 years age range curriculum covers aspects of cooking skills, food hygiene and safety and application of healthy eating in addition to a study of issues relating to sustainability and food science.
In Ireland, health/wellbeing and food/cooking are most closely aligned in primary school settings: ‘The primary school setting offers an ideal environment for educating children with regard to healthy eating. Information pertaining to food and nutrition is a compulsory element of the primary school curriculum across Ireland, within both the Personal Development and Mutual Understanding (PDMU) curriculum in Northern Ireland (NI) and the Social, Personal and Health Education (SPHE) curriculum in the Republic of Ireland (RoI).’ A Report for the Standing Conference on Teacher Education North & South, July 2011.)

In 2014, the British Nutrition Foundation (BNF0), Public Health England (PHE), Food Standards Agency (FSA) Scotland, FSA Northern Ireland and the Welsh Government launched the Updated Core Food Competencies for children aged 5-16 years (www.nutrition.org.uk/foodinschools/competences/competences.html).

The Competences aim to help children and young people develop the skills and knowledge to enable them to make and implement healthy food choices, representing core skills and knowledge around the themes of Diet (food and drink), Consumer Awareness, Cooking (Food Preparation and Handling skills), Food Safety and Active Lifestyles (physical activity). One practical application of these agreed Competences would be to inform the much-needed development of a more detailed health and wellbeing curriculum in England. Such a curriculum would support and enable schools to cover the evidence-based recommendations including physical activity, healthy eating and body image.

The 1999 National Healthy Schools Programme (NHSP) enshrined a ‘whole school’ approach and was launched across England in 1999. The aim was to support schools in promoting the health and wellbeing of children and young people and the resultant evidentially-based assessment of the programme associates it with improvements in health-promoting school environments; demonstrable increases in health knowledge, choices and activities and improved pupil achievement and general behaviour. However, it is not known if the improvements in environment, knowledge, choices and behaviours resulted in improved health. (National Centre for Social Research (Nat Cen). 2011. ‘Evaluation of the National Healthy Schools Programme. Final Report.’ http://www.natcen.ac.uk/media/28170/evaluation-national-healthy-schools.pdf.) As a result, the initiative was largely abandoned – but allowing the NHSP to wither on the vine was perhaps misguided. It was cited as influencing school practice in four key ways:

- Instigating changes to practice in order for the school to meet the NHSS criteria directly
- Providing a justification for change amongst management teams
- Acting as a tool to re-evaluate existing practice
- Raising the profile of health and wellbeing amongst staff

It might even be argued that the achievements of over 10 years of the NHSP have been jeopardised following the downfall of the programme, with a de-prioritisation of the ‘whole school’ approach in schools since the NHSP’s central co-ordination and reporting activities ceased in 2011.

If children today are to derive benefit from the advances in thinking about health and well being and the intrinsic connection with food and nutrition, it is therefore essential that a free, national healthy schools programme is reinstated across primary and secondary schools. This would provide real incentive and justification for change in schools and would once again raise the profile and status of substantial and holistic health improvement activities (as opposed to the provision of school food alone) across English schools.

Through a renewed and revitalised NHSP, it is also possible to align the school setting with the family in the community so that strategies to promote a fit and healthy childhood are not confined within the hours of a school day and lasting health improvements may be seen.

The importance of such an approach cannot be underestimated because successive policies have short-changed earlier generations: ‘Mine is not an isolated story, many children have missed out on an education in life skills’ (Jenny Tschiesche 2015, Founder of www.lunchboxdoctor.com)

For children today and tomorrow, it is time to reverse the trend. A knowledge of healthy eating and good nutrition gained during their schooldays is the important and beneficial legacy that they will leave to their own children in due course. It is incumbent upon government at all levels to develop policies that enable them to do this.
• Roll out of school/community Parenting Support Programmes (led by school nurses, counsellors and parenting support advisors) updated to include nutritional healthy meal plans and offering accessible child health improvement advice on a case by case basis
• Publication and dissemination of collated evidence-based findings from the operation of the National Healthy Schools Programme (NHSP)
• Development of a new English National Curriculum specification ‘Health and Wellbeing’ to include healthy eating, nutrition, physical activity, body image and emotional literacy
• A free, national and mandatory Healthy Schools Programme to be updated and reinstated across primary and secondary schools

Recommendations
In Europe, one child in three aged 6–9 years was found to be overweight or obese in 2010 compared to one in four children of the same age in 2008. Additionally, there remains an ongoing and persistent issue of micronutrient deficiencies among many children throughout the 28 Member States of the European Union (EU) and other European countries.

'School lunch makes a substantial contribution to children’s total energy and nutritional intake. This has seen a reinvigoration of efforts amongst governments and international organisations to improve the nutritional values of school lunches' (Nelson M. The School Food Trust: transforming school lunches in England. Nutrition Bulletin, 2011, 36,381-389)


Furthermore, in February 2014, EU Member States adopted an EU Action plan on Childhood Obesity for the time span 2014–2020 (http://ec.europa.eu/health/nutrition_physical_activity/doc/childhoodobesity-actionplan_2014_2020_en.pdf) and in May 2014, the Director General of the WHO established a high-level Commission on Ending Childhood Obesity (http://www.who.int/dirtphysicalactivity/end-childhood-obesity/en/).

Many Member States have also devised national action plans on food, nutrition and physical activity. The formation and entrenchment of eating and physical activity habits occurs during the early years of life and therefore various national and EU level policy documents have identified the school setting as a potentially promising target for positive interventions. In 2006, the WHO Europe published a guidance paper to support the development of school nutrition programmes in the European Region.

Additionally, a newly drafted EU Action Plan on Childhood Obesity (2014–2020) has been adopted. This document offers a particular focus upon:

- Promoting healthier environments, especially in schools and pre schools
- Making the healthy option the easier option
- Restricting marketing and advertising to children

It widens the responsibility remit from the parent for consumption habits to choices made by the food industry and thence encompasses the wider food environment.

Many European countries have devised policies to assist schools in the provision of meals that are nutritious whilst also reflecting the particular eating culture of the nation (Storcksdieck S., Gennant Bonsmann, Kardakis T., Wollgast J., Nelson M., Caldeira S., 2014 ‘Mapping of National School Food Policies across the EU28 plus Norway and Switzerland. European Commission Joint Research Centre https://ec.europa.eu/jrc/sites/default/files/lbna26651enn.pdf).

Lunch is often eaten in a cafeteria-type setting where children receive food from a central service point as is the case in Finland, Sweden and Italy (School Food Trust, 2008 ‘The provision of school food in 18 countries’, http://wwwl.childrensffoodtrust.org.uk/assets/research-reports/school_food_in18countries.pdf).
School meals in Sweden and Finland are fully funded by government and lunches are designed to follow national dietary guidelines including the ‘plate model’. An ‘example meal’ is presented to guide children’s self-service.

Swedish schoolchildren are allocated a web-based evaluation tool and in France, each school lunch must include a main dish (based on meat, fish, eggs, offal or cheese), a side dish, a dairy product and either a starter or dessert. Nutritional standards are in place to regulate how frequently dishes are served in a 20-meal cycle. For example, at least 10 meals in the cycle must be accompanied by cooked vegetables, 10 meals with pulses, starchy foods or cereals, 8 meals with a fresh fruit dessert. The nature of the dish and recipient age group are the determinants of portion sizes (http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000024614763).

The devolved nations of the UK have standards which aim to guarantee that lunch menus are varied and include the range of different foods required to supply all the essential nutrients plus restrictions to curtail the amount of fat, saturated fat, sugar and salt. Each country has also published practical guidance to encourage the inclusion of a variety of foods such as different vegetables and fruit as well as wholegrain carbohydrates with meat, fish and other sources of protein such as pulses and some dairy products each day. Advice is also provided on healthy catering practices and typical portion sizes to ensure that children are offered food that is commensurate with their nutritional requirements. Food high in fat, saturated fat, sugar and salt such as starchy food cooked in oil, deep fried foods, meat products and cakes and biscuits are restricted. In all the UK’s schools, confectionery, chocolate, snacks such as crisps and sugary drinks must not be supplied. Children are also encouraged to drink water for hydration, low fat milk or fruit juice.
The School Food Standards were re-introduced to general acclaim in 2001 after a 21 year gap (Adamson, A. et al., 2013 ‘School food standards in the UK: implementation and evaluation.’ Public Health Nutrition, http://www.ncbi.nlm.nih.gov/pubmed/23578662.) However, despite a content that is robust, they have since been shrouded in controversy. The Government exempts some academies and free schools from the compulsory principles of nutrition. The standards do not apply to academies opened between September 2010 and June 2014 – which account for nearly 50% of schools in England. As the majority of secondary schools and many primary schools are moving towards academy status (Adamson et al 2013) this has been considered in some quarters to be nothing less that an entire deregulation of all school food. The ‘Save our School Food Standards’ campaign has been pressuring the Government to recognise the importance of school food standards for all on the grounds that they provide an essential starting point for schools and a safety net to ensure that healthy and nutritious meals are delivered to pupils (Save Our School Food Standards!, S.O.S., 2012. ‘School Food Standards: A submission to the School Food Plan’).

Government critics fear that the omission of some academies from the legislation (and thereby removing legal constraints on what is served in them) may nudge schools into bad habits. They contend that mandatory standards should cover all schools, regardless of status in order to protect over a million children who already attend academies – and many more whose schools will soon embrace this status.

The Children’s Food Trust was commissioned by the School Food Plan Standards Expert Panel to pilot test the new standards for school food and develop practical guidance to support implementation. The findings from the pilot study suggested that caterers found the new standards easier to understand and more intuitive to use to plan interesting and creative menus. The new standards for school food in England came into force on 1 January 2015. The Children’s Food Trust has also helped to draft practice guidance and recommended typical portion sizes to help schools and their caterers implement these new standards (School Food Plan, 2014, ‘School Food Standards: A practical guide for schools, their cooks and caterers,’ http://www.schoolfoodplan.com/wp-content/uploads2015/01/School-Food-Standards-Guidance-FINAL-V3.pdf).
The Secretary of State for Education has agreed to make the standards mandatory if they pass the twin tests of being deemed both ‘nutritious’ and ‘practical.’

In the short term, ‘practical’ is usually considered to be a political euphemism for ‘affordable’. Advocates of long term planning would suggest by contrast, that whatever the financial burden of implementing rigorous mandatory food standards, the overall expense would be dwarfed by the burgeoning costs of treating obesity and chronic diseases occasioned by the large-scale consumption of unhealthy diets.

The School Food Plan, written by the CEO of Leon’s restaurant and supported by the Secretary of State for Education, was introduced by the Government on 12th July 2013. Its core aims seek to increase the number of children in England eating a nutritious school meal, improve their health and wellbeing and build a financially sustainable system. The Plan also focuses on establishing a good food culture within an environment where staff and children are happy, skilled and knowledgeable in nutrition and cooking.

Much expertise and energy has been expended upon these objectives and since September 2014 every child in Reception and Years 1 and 2 in state-funded schools has been entitled to a free school lunch. School meals are increasingly acknowledged as an important investment in child health and wellbeing and the new initiative marks a sea change in previous UK policy whereby:

‘For too long, (this) chronic underinvestment has been ignored in favour of an approach seeking efficiencies in the system, essentially a lowering of investment and costs.’ (Caraher, M., 2013 ‘The independent School Food Plan tastes of Alice in Wonderland.’ ‘The Guardian’: http://www.guardian.com/comm entsfree/2013/jul/12/independent -school-food-plan/print).

In addition, a DfE time-bound project grants additional funding to schools with over 35% of pupils eligible for free school meals to help them to set up a breakfast club if they do not already have one. Members of the SFP expert panel have been industrious and energetic advocates for these changes, but the School Food Plan itself lacks the vital legislative underpinning and financial backing to make sure that its programme succeeds in reducing childhood obesity and associated health problems, whilst also increasing the uptake of school meals to make the venture self-sustaining.

The Plan’s goal is to achieve a balance of regulation and voluntary guidelines, but in current form, voluntary characteristics are predominant. Rather than introduce new legislation, for example to compel academies and free school founded between 2010 and the present day to adopt national School Food Standards, these bodies are encouraged to sign up voluntarily.

However, studies suggest that voluntary standards or guidelines are not sufficient to effect the desired changes in children’s eating habits (Bryden, A., Petticrew, M., Mays, N., Eastmure, E., and Knai, C,2013 ‘Voluntary agreements between government and business – A scoping review of literature with specific reference to the Public Health Responsibility Deal.’ Health Policy 110: 186-197). In the absence of enforcement criteria to achieve compliance and reach targets, monitoring and evaluation systems when conducted will only uncover uneven results.

The School Food Plan states:

‘The current school inspections carried out by Ofsted do not currently consider the aspects required to measure successful food cultures. However, Chief Inspector of Schools, Sir Michael Wilshaw, is planning to take positive steps to ensure inspectors are considering diet and the atmosphere of the school canteen each time they visit a school.’

From the start of the autumn term (September 2015) areas such as wellbeing, health and healthy eating will have more prominence: ‘The new Common Inspection Framework will look at how schools help children gain a good knowledge of how to keep themselves healthy, including eating well’ (Ofsted spokesperson).

In addition, Sir Michael Wilshaw has provided assurance that: ‘To monitor the impact of the School Food Plan and ensure that progress is being made, the government has agreed to collect data regularly.’

Nevertheless, due to financial imperatives and despite the fact that the School Food Plan expert panel does not regard Ofsted to be sufficiently qualified in this area to implement rigorous inspection of the way in which schools are operating the Plan, Government has offered no independent system of monitoring and evaluation.
Neither is there certainty that the roll-out of the Plan will of necessity influence Ofsted’s overall grading of a school. Providing continuous motivation and inspiration to Head teachers is an opportunity not to be missed and cannot be compensated by placing ‘trust’ in school practitioners who, in the absence of enforcement, may find that they have neither the interest, will, resources nor time to conform.

The ‘trust’ agenda is most notably uncertain in the food growing part of the Plan. There is an absence of information about how it is to be conducted, financed and what the desired outcomes might be. In practice, the gardening projects are vulnerable to the circumstances of the staff members in charge of delivery and may be abandoned if there is a change in personnel. Once again, the emphasis is upon putting trust in individuals for the delivery of programmes that are unclear rather than embedding a base for minimum requirements and incentives/disincentives for reaching or missing specific targets.

Perhaps the greatest causes for concern stem from what is also the School Food Plan’s greatest achievement to date – the free school meal for children in Reception class and Years 1 and 2 and the cookery curriculum requirement. Author Janet Poppendieck maintains that ‘There is no such thing as a free lunch make-over’ (Poppendieck, J., 2010 ‘Free for all: Fixing school food in America’) and problems persist because of a lack of finance.

Government funding was provided to pay for the meals, but not to train teachers in new curriculum content nor finance pupils training materials and cooking ingredients. Teachers need to access training to update their skills, such as learning how to teach kitchen hygiene and safety. Some schools no longer have kitchens, making the provision of a school meal or teaching children to cook more difficult. The Plan’s avowed aim of boosting school meal take-up, is also encountering obstacles. Just 43% of school children are taking up school meals and 57% of children are not eating school lunches at all. Many schools have a ‘packed lunch policy’ of their own devising but there are no uniform standards even of a voluntary type in place to monitor the nutritional value of a packed lunch and such an enterprise would be virtually impossible to operate.

The School Food Plan acknowledges that its admirable goals are unlikely to be achieved without full support of central government and advocates an important legislative reform programme to promote the provision and take up of healthy school food; eradicating social and food inequalities within schools by introducing universal school meals into primary schools. Universality now operates in both Rome and Brazil and is considered to be the right of a child (Mikkelsen, B.E. & Ohri-Vachaspati, P., 2013 ‘Hunger, overconsumption and youth: future direction for research in school-based public health nutrition strategies.’ Public Health Nutrition, 16(6), pp.953-955).

The perception that such a measure equals financial recklessness does not chime with reality. Recent analysis has shown that in the UK it would cost just £141 per student to take a school meal between 2007 - 2011 (Nelson, M., 2013 ‘School food cost-benefits: England. Public Health Nutrition, http://www.ncbi.nlm.nih.gov/pubmed/23009758) The report demonstrates that: ‘While the long-term impact of taking a school lunch is not fully known, from a public health perspective, £147 represents a small cost in relation to a change in eating habits in keeping with Government guidelines and with the potential to affect lifetime eating habits (and concomitant improvements in health) that may accrue from an introduction to healthier eating in school.’

The economics of diet-related disease show that a bold legislative framework, and substantial financial investment now will improve the future health of society and save billions as opposed to the current scenario whereby a reliance on voluntary agreements and cutting financial corners will do little to avert the combined medical costs associated with treatment of preventable diseases due to poor diet – at a projected cost of £1.9–2 billion per year by 2030 (Wang, Y.C., McPherson K, Marsh T, Gortmaker C, Brown M., 2011 ‘Health and Economic Burden of The Projected Obesity Trends in the USA and the UK overweight and Obesity: A Worldwide Phenomenon.’ The Lancet, 378(9793), 815-825, 27).

Unfortunately, despite evidence-based findings to the contrary, Government in the UK does not appear to be on course to change the direction of policy in this respect any time soon.
Recommendations

- School Food Standards to be mandatory across all types of school
- Atmosphere of the school canteen and assessment of the school food culture to be embedded into the national school inspection processes with certainty that they will contribute to the overall grade awarded
- Nationally funded mandatory system to enforce compliance with School Food Plan aims, accompanied by performance-based incentives/sanctions
- Nationally funded evaluation and audit of the operation of the School Food Plan
- National training fund to enable teachers to update their skills to meet the new curriculum requirements
- National audit of school kitchen environment with money supplied to make good gaps in provision/equipment
- Review and update of The School Food Plan
- Introduction of universal free school meals for children throughout their school life
‘It is blindingly obvious to a teacher that a (primary) school cannot erode or undo the negative effects that being hungry has on a child’s ability to learn. A child with pressing housing concerns or very overworked parents may find it difficult to concentrate’ (Zoe Williams, ‘The Guardian’, 16th March 2015).

‘Food poverty is caused by low incomes, poor availability of healthy and affordable food, and a challenging combination of benefit cuts and spiralling non-negotiable costs in other areas of household expenditure. For low-income households, food is often the only flexible budget item, so when money is tight, diet and health suffer.’


The likelihood that a child’s health and educational achievement will be impacted by the factors mentioned above is supported by studies including a Europe-wide review (Robertson A et al; ‘Obesity and socio-economic groups in Europe: Evidence review and implications for action’ 2007) to data from the National Child Measurement Programme (Public Health England. National Child Measurement Programme. ‘changes in children’s BMI between 2006/7 and 2012/12. 2014).

Demonstrable links are made between obesity and deprivation and whilst research conducted at Leeds Metropolitan University (Griffiths C, Gately P, Marchant PR et al ‘Area-level deprivation and adiposity in children: is the relationship linear?’ Int J Obes. 2013 April; 37(4):486-92) suggests that local factors may also be definitive there is consensus around the assumption that children in the highest deprivation decile are more likely to be obese or overweight than those in the lowest deprivation decile.

The food they eat in school and what they learn about it is therefore a significant determinant of the life course. Socioeconomic variation in family background increases the importance of providing children with a healthy school meal. The educational performance at Key Stage 2 of primary school children in Greenwich after a switch from school meals consisting mainly of low-budget processed food towards healthier options showed significant improvement, especially in English and Science subject areas (‘Healthy school meals and educational outcomes’ Belot M, James J J Health Econ 2011 May;30(3):489-504. doi: 10.1016/j.jhealeco.2011.02.003. Epub 2011 Mar 1. http://www.ncbi.nlm.nih.gov/pubmed/21458872)

However, although the interventions and programmes of The Children’s Food Trust in particular have helped to increase free school meal registration; the persistence of perceived stigma means that some children will continue to go hungry. For this reason alone, the case for the provision of universal free school meals is persuasive.

The ethnic and cultural diversity of communities today should be factored into the provision of school meals. In the UK, South Asian adults run an increased risk of CHD, type 2 diabetes and central obesity and black African-Caribbeans are susceptible to type 2 diabetes and general obesity. Risk differences are thought to present in early life, impacted by nutrition. A comparative study of cardiovascular health, analysing the nutritional composition of the diets of South Asian, black African-Caribbean and white European children in 85 primary schools in London, Birmingham and Leicester found that:

• South Asian children had higher intakes of total fat, polyunsaturated fat and protein than white Europeans
• Their intakes of carbohydrates as a proportion of energy (especially sugars), vitamin C and D, Ca and haem Fe were lower
• Differences were particularly marked for Bangladeshi children
• Black African-Caribbean children had lower intakes of total and saturated fat, NSP, vitamin D and Ca.
• Lower total and saturated fat intakes were especially marked amongst black African children
• Significant ethnic differences exist in the nutritional composition of children’s diets which may contribute to future disparity in chronic disease risk.
• The diets of South Asian children are higher in energy and fat; lower in key micronutrients and may impact adversely upon their short and long term health

THE IMPACT OF SOCIO-ECONOMIC INEQUALITIES AND CULTURAL DIVERSITY ON UK NUTRITION AND FOOD SCIENCE EDUCATION AND THE ACHIEVEMENT OF BEHAVIOUR CHANGE
In order to devise meal choices high in nutritional content that are also compatible with diverse community eating preferences, comprehensive information is needed about food composition data, portion sizes and recipe information for ethnic foods. A relevant study (Food Chem. 2013 Oct 1; 140(3):436-42. doi:10.1016/j.foodchem.2012.10.034. Epub 2012 Nov 5. ‘Application of ethnic food composition data for understanding the diet and nutrition of South Asians in the UK’ Khokar S, Ashkanani F, Garduno-Diaz SD, Husain W.) of the South Asian diet cites lamb balti (3mg/100g iron), lamb kebab (3.2mg/100g zinc), mixed dhal (62ug/100g folate), fish curry (1.4ug/100g vitamin D), ghee (968ug/100g retinol) and toor dhal (9.1g/100g dietary fibre) as the five ethnic foods containing the highest levels of selected nutrients.

An ethnic food composition database would enable school caterers to improve the nutritional content of the meals offered to multi ethnic school communities.

School lunch take-up is widely acknowledged as a method of ‘ensuring that your child has a healthy meal which may impact upon their behaviour and concentration in the classroom’ (Children’s Food Trust 2010) and the importance of campaigns to improve the nutritional quality of food offered to children in school was stressed by former UK Prime Minister, Tony Blair: ‘Amongst children obesity is growing at a rapid, indeed alarming rate. This is the reason why campaigns like those run by Jamie Oliver on School Dinners are not a passing fad, they are central to the nation’s future health.’ (Blair, T, 2006. ‘Our Nation’s Future,’ http://www.guardian.co.uk/society/2006/jul/26/health.politics)

However, many children do not eat a school lunch (a significant number precluded by perceived stigma from taking up free school meals) and are reliant instead upon packed lunchboxes, the contents of which are not governed by national food standards.
In March 2010, The School Food Trust (now The Children’s Food Trust) produced a letter for parents containing a three-weekly menu guide, designed to improve the nutritional quality of the lunchbox, and other assistance has been supplied by ‘Change for Life’ (http://www.nhs.uk/Livewell/childhealth6-15/Pages/Lighterlunchboxes.aspx) as well as magazine and daytime television content.

Teacher professional development courses have advocated lunchbox surveillance in the cause of improving child health and a comparative discussion of the practice in Australia and England (‘School food and the pedagogies of parenting’, Pike J, University of Leeds United Kingdom, Deana Leahy, Southern Cross University, Australia, Australian Journal of Adult Learning, Vol 52, No3, November 2012) has noted the prevalence of a ‘blame and shame’ culture:

‘Certain types of mothers were regarded as repeat offenders and these were generally felt to be those mothers that failed to adhere to expectations around the nutritional content and aesthetic quality of food. The assumption was that lunchboxes reflected parents’ diets and attitudes to food. In areas of deprivation this meant that parents’ diets, food repertoires and nutritional knowledge were poor.’

The authors instance public singling-out of children: ‘Mrs C (head teacher) gets up to leave the dining room. She leaves through the door nearest to the pack-up table. She stops abruptly near the door and shouts loudly and slowly, ‘I don’t want to see crisps in pack ups. They are not healthy! Don’t bring them anymore!’ Her voice is loud and booming and quite intimidating. She stares at the children on the pack up table with her hands on her hips.’

and reprimanding mothers after confiscating an offending object: ‘I had to speak to the mum. I just said that they’re not allowed chocolate.’

The emphasis on ‘good’ and ‘bad’ food (and by inference, ‘good’ and ‘bad’ parenting) rather than a positive concentration upon nutrition and performance is divisive and even conducive to bullying:

‘A primary school has appointed 10 year olds as ‘packed lunch police’ with the power to inspect the food younger pupils bring to school – and even issue warnings if it is unhealthy.’ (The Daily Mail 20 September 2014).

It is difficult to see how applying a moral code to the parental preparation of a lunchbox could possibly succeed in improving its nutritional content – or skill the family in the production of affordable, healthy food at home. The ‘blame’ culture has perhaps been most strikingly displayed in the near-universal derogatory media portrayal of mothers who delivered fast-food through the school railings to their children at lunchtime when some students at Rawmarsh Comprehensive School in Rotherham resisted the implementation of a healthier school lunch menu.

Pike and Leahy (2012) state that: ‘such caricatures serve to reinforce the distinction between rational, educated, affective middleclass motherhood and the irrational, badly dressed, poorly educated, unhealthy working class mothers who are notable because of their deficiencies. By imbuing these women with such a range of reprehensible attributes, the moral work that accompanies attempts to govern is performed. Equating particular kinds of subjects with opposition to school food reforms shapes the field of possible responses that subjects can choose.’
Whilst such polarisation exists, it is difficult to see how the work of initiatives intended to further an equalities agenda in nutrition such as the Let’s Get Cooking Cookery club programme and free school meals registration drives promoted by The Children’s Food Trust and programmes at Children’s Centres can fail to be undermined. The Rawmarsh coverage neglected to mention other contributory factors to the women’s action (such as a poorly-organised canteen and unmanageable queues) or the fact that their intransigent attitudes were equally matched by a ‘stand-off’ mentality from school staff. The overriding and pervasive images from ‘the battle of Rawmarsh’ are encapsulated by newspaper cartoons depicting the women (quite inaccurately) as grotesquely overweight and sporting cheap jewellery and tattoos: ‘The portrayal of these mothers invokes an affective response of disgust through the use of recognisable cultural signs that mark these women out as working class.’ (Pike and Leahy, 2012).

The stigma was even extended to the entire town, portrayed in one article as: ‘a place where fat stupid mothers fight for the right to raise fat, stupid children.’ (Hattersley, ‘The Times’ 24th September 2006) and such stereotyping was not conducive to winning parental support for the new healthy food pilot in school. In short, with blame goes shame.

The need for measures to ensure that all children have regular access to healthy and nutritious food remains urgent. The United Nations Convention on The Rights of the Child article 24 states: ‘Every child has the right to the best possible health. Governments must provide good quality health care, clean water, nutritious food, and a clean environment and education on health and well-being so that children can stay healthy.’

However, in Britain, according to the Social Mobility and Child Poverty Commission: ‘Child poverty is set to rise not fall in the next five years. The Institute for Fiscal Studies predicts that 3.5 million children – one in four - will be in absolute poverty by the end of the next Parliament.’ (‘Bridging the Social Divide’, March 2015).

Despite the increasing number of studies and growing opinion that the Government has a duty of care under the welfare state (Caraher, 2013, Mikkelsen & Ohri-Vachaspati, 2013, Nestle, 2002, Dowler & Jones-Finer, 2003, Winne, 2008, Shanbacher, 2010), the SFP expert panel members are struggling to get the Government to commit to universal free school meals for all school children. Evidential studies have shown (Kitchen et al, 2010) that such a provision would help to reduce inequalities and increase educational attainment. Two small research pieces also conclude that improved lunchtime environments and more nutritious school meals had a beneficial effect upon classroom behaviour. (Golley et al., 2010, Story et al., 2011). Nevertheless the official Government position is still that of ‘wait and see.’
For some children a free school meal is the only regular hot food available to them in term time – leaving approximately 170 non-school days per annum when they will experience ‘holiday hunger’. The financial burden of feeding children is especially onerous to low income families during the long summer break and community projects and food banks (now over 1,100 existing in the UK) are reporting increased attendance by families seeking food during non-term time.

Increased pressure on families to feed children during school holidays impacts upon already stretched household budgets, forcing choices of food or play/leisure opportunities and food or childcare costs so that parents can continue to work. Research and anecdotal evidence from teachers also indicates that children who go hungry during the holidays return to school in a poor state of school readiness with adverse outcomes for educational performance. Despite the fact that holiday hunger has been acknowledged by governments over the past century, there remains a lack of co-ordinated action to address the problem:

‘There seems to be no attempt to compile clear evidence to show the depth of the problem of child holiday hunger or how it might link to the use of food banks by families in need. There is also neither an obvious line of responsibility for this issue nor any apparent government willingness to support research or positive actions to address growing concerns,’ (The All Party Parliamentary Group on School Food, March 2014).

If children are to become the productive citizens of tomorrow, their wellbeing and health must be protected and fostered in the here and now.
A lack of national action is to some extent countered by the existence of some very effective local projects, but most, such as the ‘Make Lunch’ or ‘Ashram Housing Association’s Holiday Kitchen’ project are reliant upon intermittent funding. A particularly well-established UK scheme is a programme in East Renfrewshire that has commitment from a range of partners, utilising existing staff, venues and resources for summer activity camps and coupling them with meal provision via the council school meals service. The Activity clubs are run throughout the year in all holiday periods and, in 2014, 1134 children took part. 44% of attendees were registered for free school meals.

Another Scottish Local Authority to address this policy gap is North Ayrshire. In 2014, summer meals and activities each Monday, Wednesday and Friday were provided to 80 free school meal pupils in addition to supplying paid meals and meals for local church groups working with children in the area. The council has committed to continue this non-term time model in all holiday periods for the foreseeable future but without the political will of central government, such excellent schemes remain few and far between and help just a tiny minority of hungry children.

A welcome shift in central policy would see the state offering children of school age a nutritious free meal rather than sloughing off this responsibility during the 170 days when school gates are closed. If children are to become the productive citizens of tomorrow, their wellbeing and health must be protected and fostered in the here and now. The children of today are tomorrow’s parents and what they learn about nutrition in the classroom is as important as the quality of food they eat from the canteen or their lunchbox. It has been claimed that children in the USA may be receiving less than an average of 4 hours of nutrition instruction per year and that a way of surmounting this deficiency in the curriculum is to integrate nutrition with other subject areas such as mathematics or science modules (J Sch Health. 2015 Apr;85(4):231-40. doi: 10.1111/josh.12243. ‘Food-based science curriculum yields gains in nutrition knowledge’ Carraway-Stage V, Hovland J, Showers C, Diaz S, Duffrin MW).

Researchers implemented the Food, Math and Science Teaching Enhancement Resource (FoodMASTER) Intermediate (FMI) curriculum in 18 fourth-grade classrooms whereas 16 classrooms served as comparison. FMI is a hands-on, integrative curriculum for children in grades 3-5 that uses food as a tool to teach mathematics and science. Researchers developed a 28-item multiple choice questionnaire to assess students’ nutrition knowledge in 6 content areas. Students were evaluated at baseline and post-intervention. Data were analysed using independent tests. Analysis of covariance was employed to control for differences at baseline when assessing the effectiveness of the FMI curriculum to increase nutrition knowledge. A significant improvement was observed in total nutrition knowledge at post-intervention (adjusting for baseline) in all content areas post-intervention. Findings from this study suggest teachers were successfully able to integrate science and nutrition to meet multiple academic standards. More specifically, results showed implementation of the integrative FMI curriculum effectively improved fourth-graders’ nutrition knowledge compared with students not exposed to FMI’http://www.ncbi.nlm.nih.gov/pubmed/25731197).

This US initiative might be a useful model to explore as a way of integrating nutrition into the regular school curriculum of UK children and thereby increasing specialist knowledge whilst meeting multiple academic standards.

The food that children eat and learn about during their school years has potential to be a powerful tool in establishing a launching pad from which all children are enabled to fulfil their potential now and cascade good practice to their present and future families. Alternatively, it can be a divisive weapon throwing entrenched differences of income, culture and opportunity into sharp relief. If ‘Every child has the right to the best possible health’ (UN Convention on the Rights of the Child article 24) it is imperative that the policies the Government adopts around food in school champion inclusion, promote engagement and above all, proclaim a root and branch commitment to equality.
• Government to commission a national ethnic recipe database to inform the content and preparation of responsive school food menus
• Government stated commitment to offer all children of school age a nutritious and healthy meal
• Government to support ‘year round’ child meal provision and enrichment programmes targeted to areas of high economic and social deprivation
• National programme of holiday meal/activity schemes using existing resources and staff with Government to provide resources to cover shortfall
• National audit and evaluation of all existing projects/programmes
• Community projects currently delivering summer education programmes/childcare/sports activities to extend their remit to the provision of a holiday meal, in partnership with existing school meals providers

Recommendations

• Extension of summer holiday meal provision to include opportunities for training and skills development
• Funding for the above programmes to come from across government policy areas including Health, Education, Department of Work and Pensions, Poverty Alleviation; Department for Education to lead, channel and co-ordinate
• Health visitors/school nurses to include ‘the healthy lunchbox’ in delivery of nutrition advice to all parents; thus taking lunchbox content into universal family/child welfare programmes and away from head teachers’/lunchtime supervisors’ disciplinary remit
In recent years, there has been emerging consensus around the importance of offering children a healthy meal in school and much has been done to improve the nutritional quality and appeal of school food. There is less agreement about the impact of the wider environment outside the school gate or the presence of a perceived link between the prevalence of fast food outlets and child obesity.

The Government’s Public Health Strategy, ‘Healthy Lives, Healthy People: a Call to Action on Obesity in England (2011)’ contains explicit recognition of health considerations in planning policy and is supported by a recommendation from the Academy of Royal Medical Colleges (‘Measuring Up. The medical profession’s prescription for the nation’s obesity crisis,’ 2013) that local authority planning should be subject to a health impact assessment.

Jamie Oliver has added his voice to the argument: ‘we do all this hard work in one part of government while at the same time you’ve got other parts of government, locally, and nationally, still allowing any old junk food operator to open up within spitting distance of a school’ (‘The Guardian’, 25th April 2014) and councils across the country have looked to shift the direction of their planning policy away from enabling the creeping encroachment of ‘clusters’ of fast food restaurants and outlets.

Some authorities have succeeded in a stated aim of regulating street traders near schools and have developed food partnerships, including Leicester City, Guildford, Glasgow, Kirklees, Belfast, Richmond, St Helens, Sandwell, Wigan, the London Boroughs of Hillingdon and Waltham Forest. In March 2012, West Midlands Council barred almost half of all new takeaways from opening in Birmingham. However, despite a clarification in The National Planning Policy Framework (Department for Communities and Local Government, 2012) that local planning authorities have a responsibility to promote healthy communities, the status classification of hot-food takeaway premises remains unclear and subject to dispute. Substantial planning decisions regarding the proximity of fast food outlets to schools have been subjected to appeals.

Whilst Medway Council’s additional guidance to new planning applications (new hot food takeaways to open between noon-2pm within 400m of a secondary school, or between 3-5pm within 400m of a primary or a secondary school; new takeaways to be subject to a £100 per 10m sq developer contribution to be used for public health initiatives to tackle obesity) appears to have been introduced smoothly, this is by no means a guaranteed norm. In Tower Hamlets, permission was granted to open a ‘Fried and Fabulous’ outlet in close proximity to a school. The resultant appeal found that there was a lack of evidence that ‘a single takeaway within walking distance of the school has a direct correlation with childhood obesity or would undermine healthier eating policies,’ (Public Health England, 2014 ‘Obesity and the environment: regulating the growth of fast food outlets.’). The appeal system would appear to require a more evidence-based research. This is certainly true when applied to potential consensus around the effect of clusters of fast food outlets in proximity to the school gate.

Quite simply, there is none.

The National Child Measurement Programme (‘Child Obesity Statistics for PCT clusters’, 2011, National Obesity Observatory) compared two years of weight data on children in 2007-08 and 2009–10 with the availability of fast food outlets. The study found that children living near fish and chip shops, burger bars, pizza restaurants and sweet shops were more likely than their counterparts to be overweight, particularly at secondary school. However, other studies such as ‘Childhood obesity in the UK: is fast food a factor?’ (Dolton P, 2010) have concluded that living close to fast food takeaways is not always associated with obesity.
Sinclair and Winkler (‘The School Fringe: what pupils buy and eat from shops surrounding secondary schools’ Nutrition Policy Unit, London Metropolitan University 2008) would heartily disagree. Their research centred upon a survey of two secondary schools in Waltham Forest and recorded pupils’ food purchases from the local area, food outlets surrounding the school and the contribution these purchases made to the pupils’ diet.

The ‘fringe’ food purchases supplied 23% of the children’s daily energy requirements due to the high levels of sugar and fat in the carbonated drinks, chocolate, sweets, crisps, cakes, biscuits and chips. These foods were frequently purchased more than once a day by many pupils. In supermarkets, the research found that children were buying popular food products that may be prohibited in school and then re-selling them to friends.

Further studies suggest that availability of nutritious food in school is no guarantee that children will have a healthier diet (Poppendieck, J., 2012 ‘Free for all: Fixing school food in America,’ University of California Press). The author concluded that the availability and close proximity of unhealthy foods saw children ‘Shun(ning) the healthier meal and select(ing) their favourite heavily advertised foods’, Poppendieck, 2010, p.5).

There is UK research to support this in ‘Consumption of takeaway and fast food in a deprived inner London Borough: are they associated with childhood obesity?’ (Patterson, Risby A, Chan M-Y, 2012).

The contributors argue that school lunch is often spurned in favour of ‘grazing’ foods such as crisps, sweets and energy drinks, citing a contribution to the mix of price, taste, quick access and peer influence.

‘Takeaways toolkit. A London Food Boards and Chartered Institute of Environmental Health publication based on a consultancy report by Food Matters’ (2012) further contends that fast food takeaways, supermarkets, newsagents and bakeries may target pupils with unhealthy ‘student’ offers of bumper portions at ‘child sized’ prices. These shops supply a speedy service and many increase staff numbers at lunchtime to ensure that children buy, eat and make a return visit. In addition, mobile fast food and ice cream vans are often strategically positioned in the vicinity of many UK schools at lunch time and at the end of the school day to stimulate purchases and perforce provide further disincentive to partake of the healthy food that may be provided on school premises.

However, other contemporary UK research complicates the picture. ‘As well as the link between obesity and deprivation, there has been much talk about the relationships between where children live, where they go to school, the journey between school and home and the availability of food within these environments. There has been much discussion recently about the need to consider planning regulations of certain ‘energy dense’ food outlets. There have been many calls for bans to fast food restaurants in close proximity to schools. However, much of the research to date shows that the evidence does not support this link.’ (Professor Paul Gately, Leeds Beckett University, March 2015).
Professor Gately relies upon a substantial review of research studies on the ‘link’ (Williamson J, Scarborough P, Matthews A, Cowburn G, Foster C, Roberts N, Rayner M: ‘A systematic review of the influence of the retail food environment around schools on obesity-related outcomes’ Obes Rev 2014, 15:359-374) containing findings that supply little evidence of a relationship between obesity risk and the location of food outlets. An additional study (Griffiths C, Frearson A, Taylor A, Radley D and Cooke C: ‘A cross sectional study investigating the association between exposure to food outlets and childhood obesity in Leeds, UK’, International Journal of Behavioural Nutrition and Physical Activity 2014, 11:138) analysed the link between a number of food outlets (takeaway, retail food and food-related, such as petrol stations, corner shops and supermarkets), the risks of obesity, density and proximity of outlets and the likely commute between the two locations in a large sample of children within the Leeds area. No evidence of a connection between any of the food outlets and the risks of obesity was discovered and the findings would suggest that policy proposals to limit the ‘food environment’ should be considered across all food outlets and not just those with the ‘bad food halo’.

‘There is clearly much work to do in this area as we are in the early stages of our understanding about the food environment and how it interacts with issues such as deprivation to increase the risk of obesity in children and young people,’ (Paul Gately, March 2015).

There are, of course, other reasons why a proliferation of fast food outlets in close proximity to schools may be undesirable from a public health and planning perspective. These include litter issues, discarded food waste, noise, and traffic congestion caused by sixth formers parking and the general poor visual appeal within the community. They are additional powerful drivers that can be employed in the planning process to improve the school food environment (Dr Foster Intelligence and Land Use Consultants (2011) ‘Tackling the takeaways: a new policy to address fast food outlets in Tower Hamlets.’

Measures advocated in The London Food Board’s ‘Takeaway Toolkit’ to further collaboration between the takeaway business and food industry in the interests of making the food healthier also make sound sense and should be promoted – yet overall progress remains patchy and subject to local variation.

School food as offered to today’s children is certainly healthier but this is only half of the equation because schools exist within the wider food environment of the community. What is needed as of urgency is a Government-sponsored national research programme (not confined to a study of fast food outlets) to explore the effect of the complete community food environment on children’s consumption and their consequent health and bodily weight levels.

Children should be encouraged to eat healthily in school. Whether or not they avail themselves of the opportunity is impacted as much by the nature of what is outside the school gates as what will await them in the school canteen.

There have been many calls for bans to fast food restaurants in close proximity to schools. However, much of the research to date shows that the evidence does not support this link.’ (Professor Paul Gately, Leeds Beckett University, March 2015).
Recommendations

- A strengthened evidence base for policy action concerning the community food environment via a Government-funded national research programme concentrating upon the nature and location of obesogenic environments around UK schools.
- Closer liaison between public health and environmental planning concerns; creation of local strategic leadership bodies consisting of representatives from education, local authorities, wellbeing boards, planners, public health and environmental health.
- As part of the above, public health teams to establish programmes of health impact assessment and training.
- Local authorities to work with fast food outlets on improving food quality and choice following the guidelines of the Responsibility Deal, including calorie labelling and reducing levels of sugar and saturated fat.
- National research programme to investigate children’s food and beverage purchasing patterns area by area.
- Development of more tools to draw together different aspects influencing children’s eating and food purchase near the school gate.
‘Although consumers indicate that healthy eating and good nutrition are increasingly important to them, sales and surveys show that they are more concerned with taste, convenience and price. There exists a gap between consumer attitude and behaviour that the food industry must consider. The hope is that industry can develop healthier products by partnering with science-based communities and the government.’


Taste, convenience and price are most likely to influence children’s food preferences and if lunch provided in school is to beat off competition from the dubious enticement of the fringe, a partnership approach involving industry, suppliers, school caterers and the local community is most likely to be successful.

The School Food Plan supports such a strategy both to improve the quality of food in school and also to promote insight and awareness of healthy eating to local communities. It aims to encourage best practice to be shared by asking schools and suppliers to compare case studies, ranging from how schools have implemented the new food standards; how they have met the demand for Universal Infant Free School Meals and how they have made their eating environments more engaging with the support of suppliers and manufacturers. In addition, The Children’s Food Trust and The School Food Plan are working with The Craft Guild of Chefs, industry experts (including Elygra, FCSI and the Food for Life Partnership) and suppliers to offer advice on best practice to school caterers via a series of road shows in combination with a number of cooking workshops for families. Some schools are also aiming to remove barriers between the ‘norms’ for food at home and food in school by encouraging parents to volunteer in school kitchens and inviting them to join their children for school lunch one day a week.

A partnership approach is also at the heart of the initiatives taken by London Boroughs and epitomised by the Healthier Catering Commitment as part of The Mayor’s Food Strategy. It unites a range of organisations including the London Food Board, the Chartered Institute of Environmental Health, the Association of London Environmental Health Managers and the environmental and public health teams in London Boroughs with the aim of supporting caterers and food businesses to make beneficial changes: ‘Simple and affordable steps include changing the cooking oil to a healthier product, using more fruit and vegetables in a recipe and reducing salt content.’

(‘Good Food for London’ 2014).
Wholesalers such as Thomas Ridley Foodservice (info@thomasridley.co.uk) are also working to help schools deliver The School Food Plan and the Universal Infant Free School Meal requirement by producing a booklet containing information on allergens, organic products, food science and food catering for ethnic/religious diversity. They also offer a range of recipes and can broker on-site visits from suppliers who will assist school catering teams with tailored advice. Thomas Ridley will also work with schools to help them achieve the Food for Life Catering Marks; the Bronze, Silver and Gold Standards of independent endorsement that caterers are improving their service, spreading the word about the importance of healthy eating and serving freshly prepared, sustainably sourced food which meets national nutritional standards. Catering services in local authority schools are also benefiting from the decision of some councils to adopt Sustainable Food Procurement policies which include a range of commitments on health and sustainability matters such as those supplied in template form by Sustain (www.sustainweb.org/goodfood_publicplate/write_sustainable_food_policy).

Brakes is the largest supplier of wholesale food to food services including a great number of school catering teams who are trying to meet the food standards for schools. The business is supported by a dedicated team of nutritionists working to ensure that food designed and sourced for the school meals sector is of the best possible nutritional quality. In addition to their many initiatives supporting local community charitable and social causes, they also have a range of products that meet animal welfare standards with which caterers must comply. ‘Red Tractor’ is the minimum standard in this field and Brakes was the first food service company to have Red Tractor as the minimum standards for the majority of its products. Brakes also has the largest range of Marine Stewardship Council (MSC) fish and was one of the first food service companies to implement this standard. Brakes’ eggs are Lion quality i.e. they meet EU standards for enriched cages. This is true for all Brakes’ egg products including ready poached eggs and pasteurised liquid eggs. It has a range of organic products and lower saturated fat products; all clearly labelled so that caterers can understand what they are selecting and make informed choices. The business also has a seasonality colour chart which tells clients when it will be buying British produce. For school caterers, the benefit of buying seasonal food is that it can act to strengthen the links between school and community as much seasonal food will be locally produced.

The role of the food industry in improving the quality of school lunches is crucial and companies are becoming increasingly conscious of their role in promoting nutrition education and improving consumer choice. Companies like Quorn Foods Ltd have taken their responsibility to the school meals industry seriously by supporting Government plans and school caterers by offering help and technical advice in the provision of nutritious food that is fit for purpose. They work closely with education providers to engage children in the classroom with healthy eating demonstrations and workshops.

In the US, an interest in the healthy food agenda is shared by ConAgra which has developed new food products and improved old favourites under ‘The Healthy Choice’ line, also establishing a Healthy Choice website (www.healthychoice.com) and a ‘Feeding Children Better’ foundation funding over 160 Kids Cafes providing logistics assistance and food donations for millions of ‘food insecure’ American children. These are surely models that could be adapted and built upon by like-minded companies. Kitchen equipment firms based in UK such as Rational are similarly prepared to offer an advice package to school caterers as well as a sales pitch. In literature promoting the nutritional gains of its ‘combi steamer’, the company states: ‘Before making a big investment in new equipment, arrange with the manufacturer to see it in action. Rational runs free demonstrations and training sessions at venues throughout the UK and Ireland, where school caterers can learn about the latest combi cooking techniques.’ (www.rational-UK.com)

The industry/school partnership in the interests of healthier eating must also include participation of the media if the progress already made is going to be maintained and increased. Awareness of the long term health risks associated with poor diet and inadequate nutritional knowledge has already been well documented in certain sections of the media, via a mix of ‘human interest’ stories and factual articles. It is important that the focus is sustained but also enlarged by inspirational stories of good practice such as those provided by the BBC Radio 4 Food and Farming Awards.

No doubt school chefs nationwide would be encouraged to make still greater efforts to improve school lunchtimes by accessing information about the example of one of their number, Tony Mulgrew, winner of the 2014 prestigious title ‘Cook of the Year’. 
‘Mr Mulgrew, a former army chef who took charge of catering at Ravenscliffe (school) two years ago, cooks 150 lunches a day for pupils and staff. He is supported by a team of four kitchen staff. He starts work at 7.30am and prepares three-course school dinners from scratch for between 80p and £1 a head, using fresh ingredients and locally sourced organic meat….As well as dishing up mouth-watering food to pupils at the 11 to 19 secondary special school, Mr Mulgrew and his four-strong team have set up a training kitchen to give youngsters the opportunity to learn catering and hospitality skills.’ (www.sec-ed.co.uk/news/school-chef-is-cook-of-the-year).

Many collaborative partnerships are already working well with sectors of the food industry to produce awareness of healthy eating and improvements in food quality within school and the home. As can be seen, some local authorities are established supporters of community initiatives, working with suppliers and championing schools in growing their own vegetables. However, the role of national government in underpinning these initiatives is essential. School/community initiatives must not flounder because of inadequate resources and similarly, money must be found for scientific research programmes to work with the food industry in generating nutritious foods and promoting reliable, science-based nutrition information.

Offering healthy meals in school will not limit the availability or attraction of less healthy meals and snacks. The Government needs to work alongside industry in order to create an environment that can support individual choices for a healthier lifestyle, thus normalising healthful behaviours.
Recommendations

• Government to produce a national model of partnership working in promoting insight and awareness of healthy eating based on existing examples of good practice
• Suppliers to school caterers to widen their support of the educational needs of catering teams and pupils to include governors, parents and therefore the local community
• Extended training tools for school healthy eating co-ordinators enabling them to educate the school and wider communities in the benefits of adopting a healthier lifestyle
• Government to partner with the food industry in funding scientific research programmes to generate nutritious foods

• Government, academia and the medical community to work with education professionals and the media to strengthen nutrition information, inform consumers and thus equip them to make healthier food choices
• Schools to develop and publish their policy with regard to any relationship between their institution and a commercial enterprise, thus increasing teacher/pupil/parental awareness
• Schools to be encouraged to work only with companies/brands clearly associated with products that promote healthy lifestyle messages, thus avoiding promoting or advertising products to children under the age of 16 that are high in sugar, fat and saturated fat
With a holistic, annual programme of training for staff in place, covering:

• nutrition knowledge
• school sports and PE
• the very different (and consistent) adult approach which is essential for success in playtimes

any school can make dramatic improvements to the mental and physical health and wellbeing of the children in their care. Good nutrition, movement and play are central to a ‘whole child’ health approach.

Play exists for its own reasons. Major benefits for schools of providing a rich and varied play environment will include improved learning, better social and emotional development and the elimination of predominantly sedentary behaviour.

‘What young children do when they are not eating or sleeping, or complying with the wishes of adults. Play occupies most of their waking hours and may literally be viewed as the child’s equivalent of work. Children’s play is the primary mode by which they learn about their bodies and movement capabilities. It serves as an important facilitator of cognitive and affective growth in the young child as well as an important means of developing both fine and gross motor skills.’ (Gallahue, D.L & Ozmun J.C. 2006 ‘Understanding Motor Development.’)

Or as Albert Einstein put it: ‘Play is the highest form of research.’

NUTRITION, MOVEMENT AND PLAY - THE VIRTUOUS CIRCLE
Unfortunately, inadequate training, advice and guidance for primary school staff on many ‘active child’ related issues, are barriers to healthy, developmentally beneficial play and include the following:

- Lack of information on the provision of current best practice information on risk/safety in the playground
- Lack of advice on the enablement of positive play experiences of benefit to children
- Lack of knowledge of good play environment design and management
- Lack of guidance on ‘what works’
- Lack of a clear school policy for all staff to follow
- Lack of guidance on how to address aggressive playtime behaviour/bullying
- Lack of inter-school support and sharing of experiences

The knock-on effect of the training shortfall results for children in poor attendance and classroom disruption, a lack of social and emotional skills, a resistance to teamwork and authority, poor cognitive development and a lack of creativity.

For their part, teachers and supervisory staff are likely to experience increased levels of stress, insecurity, fear and hesitation during crises, low job satisfaction and low status. Challenges for schools are also generated because most part-time midday supervisors are paid and trained poorly and held in low esteem within the school community and are thus less likely to be engaged in helping to make playtimes positive for children.

There is also the matter of space.

Many schools lack playing fields on site, resulting in the ‘kettling’ effects of overcrowding and ball-game dominance in the playground. Due to a lack of knowledge about what types of provision offer the best value, there is a tendency for schools to ‘invest’ in expensive and easily mastered equipment that soon loses its lustre. A better (and less financially burdensome) solution is to address the play training needs of the education professionals in the school. Everyone; the Head teacher, office and teaching staff, governors, caretakers and part-time midday supervisors will require training and support if they are to comprehend and therefore promote, the wellbeing and physical and mental health of the children in their care.

However, an abundance of space in itself is no guarantee of playtimes that will promote the health and wellbeing of children. Some schools are ‘playing fields rich’ but restrict access and offer very limited play experiences whereas many schools with tiny playgrounds will offer playtimes that are truly flexible, varied and inspirational. Even in the smallest site, it is possible to provide everything that children need, but this can only happen with willingness, permission, understanding and resourcefulness.

Through a structured programme of INSET and developmental training sessions for all staff, supported by a library of information and a series of bespoke sessions with a core team from the school, it is possible to make lasting ‘cultural’ changes to the play environment. Studies in Australia (http://ro.ecu.edu.au/jatel/vol139/iss1/69), the UK (http://outdoorplayandlearning.org.uk/uploads/2/8/9/1/2891140/supporting-school-improvement-though-play.pdf) and elsewhere have shown that a combination of properly trained staff and a rich and varied play environment can produce dramatic improvements in the health, wellbeing and activity levels of children.

The Australian study shows a definitive change in physical activity levels. In the sample school, 47.2% of children originally experienced largely static, disengaged playtimes (roughly the same level as in the UK) but within just seven weeks, following the introduction of a limited range of ‘loose-parts’ play items, 52.8% of children were seen to be completely physically and mentally engaged by the amount and variety of different loose-parts play activities now on offer, which resulted in just 7.2% of pupils being left still disengaged and sedentary during playtimes after only 7 weeks.

At the same time, the numbers of children who would only play football was reduced by more than half after the new features appeared, demonstrating the appeal of the varied play opportunities and further suggesting that children only played with a ball each day because that is all that was available to them. Loose-parts play can become a constantly evolving and renewing source of playtime opportunities, thereby ensuring that levels of engagement are maintained for the long term. The term was coined by architect Simon Nicholson in the 1970s and it is helpful to think of loose parts as items that will inspire a child to be creative, curious and imaginative. The materials, whether natural or synthetic are capable of being moved, carried, re-designed, taken apart and put together in multiple ways. The child provides the direction although adults do play important and intentional roles in preparing, guiding and documenting such open-ended play experiences. Loose play is just one of the options that can be provided when staff share the commitment that comes from proper training and shared goals.
For training to succeed it must be truly wanted by the school, led by the Head teacher (if this is not the case it will surely fail) and supported by all staff and governors. Programmes should ideally consist of targeted sessions according to need; lasting a year or longer and regularly renewed and re-emphasised due to staff turnover. Above all, the motivation should be ‘in house’ rather than courtesy of a ‘one off’ session delivered by an external contractor as this approach has been seen to produce only transient outcomes.

The importance of play was recognised by the National Union of Teachers (NUT) at its Spring Conference in April 2015. Praising the Finnish model whereby children are taught in 45 minute lesson blocks followed by 15 minutes assigned to play, the Union has called for the Government to include play in the national curriculum at Key Stage 1 (five to seven year olds) ‘to reflect the needs of children’. The motion states that play is a vital learning tool for children, particularly in the development of social and communication skills and adds ‘over-formalising of learning can lead to disaffection with school.’

Physical literacy has been defined as: ‘the motivation, confidence, physical competence, knowledge and understanding to maintain physical activity throughout the lifecourse.’ (Whitead, M. ‘Physical Literacy throughout the Life course’, 2010). However, ‘there is movement and there is good movement’ (Dr Mark Bellamy. CPsychol, AFBPsS. March 2015).

An example of the latter can be found at Cardigan School where the old school gym has been transformed into an inspirational new physical education space for pupils. This, in tandem with a fitness and wellbeing programme has had extremely positive outcomes for pupils. The gym is open at lunchtimes and many pupils who previously had no interest PE are visiting of their own volition and devising personal activity programmes. The new arrangements are characterised by the principles of inclusion and enable some pupils to get involved in gym for the first time including disabled children who are choosing to come to Cardigan School because of School Gym and the benefits they can derive from it. Praise has come in the form of the highly regarded award of Active Mark Cymru which recognises the quality of PE in the school and there has been wider recognition. Pupils and teachers have made presentations to parliamentarians at Westminster; the link between good nutrition and active lifestyles has been acknowledged by a visit from the head chef of Rick Stein’s flagship restaurant in Padstow and preparation and training in the gym was a key factor in a highly successful pupil multi-sports tour of Canada.

Head teacher Nicola James has analysed the wider benefits of the project: ‘Learning and exercise should always be enjoyable and at Ysgol Uwchradd Aberteifi we understand that exercise helps young people develop not only their physical fitness, but also their self confidence and mental wellbeing. We know that a lifelong habit of physical activity has serious health benefits; there are also clearly great learning benefits to be had from regular and sustained physical activity such as developing concentration skills and a feeling of achievement. Our school gym will ensure that this aspect of the school’s work continues to go from strength to strength and it is a great example of how PE can change in schools.’ (March 2015)

The trinity of nutrition, movement and play when properly combined and enshrined in school life will improve the health and wellbeing of every child. It is also an essential tool in the realisation of their academic learning goals.
Recommendations

• Learning about play to be a core part of qualification training for all education professionals working with children in pre and primary school settings

• National requirement for all pre and primary school settings to undertake ‘whole school’ training in play, to be regularly repeated and updated

• Play to be embedded in the National Curriculum at Key Stages 1 and 2

• Re-structuring of the school day for children at Key Stage 1 in line with the Finnish model

• PE/sporting activities to be embedded and taught in modules combining knowledge of health and nutrition throughout the school life of a child
CONCLUSION

Getting food in school and the teaching of food right should not be considered in the light of an ‘add on’ to the primary academic purposes of school life. It is central to the wellbeing of our present and future society and, indeed, furthers each child’s likelihood of attaining their potential academic goals. The ‘whole school’ approach involving a pro-active and beneficent approach to food in school in all its aspects, formal physical activity (PE, sports) and informal physical activity (play) is a virtuous circle that in combination will provide all that is necessary for children’s health, wellbeing and development. However, the fact that these ideas are acquiring the status of common currency in academic, political and media circles does not mean that they are capable of realisation any time soon. Progress is not linear and examples of good practice in one school, geographical area, or professional sector, give no guarantee of consistent and effective replication elsewhere.

There are many recommendations flowing from this report; all essential and all capable of contributing in a positive way to the health, wellbeing and productivity agenda, but they will take time and require realistic resourcing and commitment from government at all levels to achieve lasting change.

A good number of the recommendations in ‘Food in School and the Teaching of Food’ centre upon professional training - whether updating the skill-set of the school catering team, the knowledge-base of a whole staff in play and nutrition, or advising families on healthy eating models. The message about child obesity has been heard loud and clear, but the fact that child healthy eating is not as yet universally understood can be seen by a recent newspaper article ‘Our school’s obsession with healthy eating is driving girls as young as seven to diet’, ‘The Daily Mail’, April 8th 2015):

‘In a bid to tackle obesity, primary schools across Britain are now giving pupils lessons in healthy eating. But it seems the message that many youngsters are taking away from such classes is not just to eat ‘good’ foods and avoid ‘bad’ ones but that it might often be safer not to eat at all ....This is a brutal world in which girls feel entitled to chide others for eating ‘fattening foods’ – and one eight-year-old I know was sagely advised by a classmate that she should cut her cheese intake if she wanted to keep her figure.’

It is evident that teacher-knowledge of the principles of good nutrition and healthy eating is at fault here if children of primary age are left with the impression that cheese is somehow a ‘bad’ food – but high level national training programmes will incur financial outlay and require commitment from Government.

A lack of financial resources is also threatening to scupper the Universal Infant School Meal requirement. Kitchens need updating (in some cases, creating), catering staff need re-skilling and provision is of variable quality because some schools are finding the government money inadequate to fund these essential needs or are having to short-change elsewhere to comply (such as raiding the special needs budget). Take-up of the UFSM was initially slower than had been anticipated but then showed pleasing improvement. However, school food take-up for older pupils remains disappointing and governmental reluctance to follow the example of Sweden and Finland by providing universal free school meals appears to be based upon a knee-jerk financial caution that is not supported by an accurate assessment of start-up costs or evaluation of medium to long term wins.

There are, however, some excellent examples of partnership working taking place in many parts of the country, notably the London Mayor’s Food Strategy and admirable community/industry/school partnerships with the support of local authorities. Successive national Governments have also introduced some excellent initiatives, to include the Change4Life programme, the Responsibility Deal, Healthy School Programme and School Food Standards. Ongoing work by The Children’s Food Trust and The School Food Plan continues to break new ground.

Yet all too often, Government action has been voluntary rather than mandatory or applicable to only certain sectors/schools and without the right blend of support and regulation it is difficult to see that hard-pressed Head teachers will feel obliged to comply when there are so many compulsory responsibilities that they must attend to.

Again, the impression is of a glass ‘half empty’ rather than ‘half full’ and a culture of legislators who are happy to ‘talk the talk’ without ‘walking the walk’. A failure of resolution and commitment from Government at the highest level will ensure that the UK child and, therefore, future adult population is neither as fit, healthy and ultimately economically productive as it could be. The task of reversing this trend is a ‘responsibility deal’ that the new Government owes to the nation it governs.

Or in other words, if we are what we eat, it is in the best interests of a thriving United Kingdom that government embraces and resources our schools as hubs from which to further that aim.
‘Getting food in school and the teaching of food right should not be considered in the light of an ‘add on’ to the primary academic purposes of school life. It is central to the wellbeing of our present and future society and, indeed, furthers each child’s likelihood of attaining their potential academic goals.’
We are what we eat!
A report of the All-Party Parliamentary Group on a Fit and Healthy Childhood
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