

# School food research: building the evidence base for policy

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## Abstract

*Objective:* Following an international workshop on developing the evidence base for policy relating to school food held in London, UK, in January 2012, the objectives of the present paper were (i) to outline a rationale for school food research, monitoring and evaluation in relation to policy and (ii) to identify ways forward for future working.

*Design:* The authors analysed presentations, summaries of evidence, and notes from discussions held at the international workshop in London in 2012 to distil common themes and make recommendations for the development of coherent research programmes relating to food and nutrition in schools.

*Setting:* International, with an emphasis on middle- and high-income countries.

*Results:* Overviews of existing school food and nutrition programmes from the UK, Hungary, Sweden, the USA, Australia, Brazil, China, Mexico and other countries were presented, along with information on monitoring, evaluation and other research to demonstrate the impact of school feeding on health, attainment, food sourcing, procurement and finances, in the context of interactions between the evidence base and policy decisions. This provided the material which, together with summaries and notes of discussions, was used to develop recommendations for the development and dissemination of robust approaches to sustainable and effective school food and nutrition programmes in middle- and high-income countries, including policy guidelines, standards, cost-effectiveness measures and the terms of political engagement.

*Conclusions:* School food and nutrition can provide a cohesive core for health, education and agricultural improvement provided: (i) policy is appropriately framed and includes robust monitoring and evaluation; and (ii) all stakeholders are adequately engaged in the process. International exchange of information will be used to develop a comprehensive guide to the assessment of the impact of school food and nutrition policy and supporting infrastructure.

**Keywords**  
School food  
Nutrition  
School food policy  
Evidence base

Across the world, schools are used not only to educate children but also to promote their health and well-being. Schools also play roles that reach into their communities, through agriculture and social infrastructure, and contribute to social cohesion and prosperity. The synergy between these elements is widely recognized.

Of course, the relationships between these components are complex. Governments and communities invest heavily in educational infrastructures and seek to maximize return. A vital role for researchers is to provide the evidence that describes the impact of this investment in terms of children's learning outcomes, health and well-being, and its cost-effectiveness in terms of community benefits. Communicating this evidence to decision makers and linking it to policy development is essential to the research agenda.

Increasingly, food in schools is being recognized for the multiple roles it plays in every country, rich or poor<sup>(1)</sup>.

But the development of the evidence base for the effectiveness of food-based interventions or interactions with schools, and its communication to decision makers, often lags behind the need to develop strategies and inform the practical implementation of programmes. Development of the evidence base is often serendipitous and attempted in retrospect, rather than an integral part of the planning process relating to children's education, health and well-being. And the development of effective research programmes and strategies in themselves can suffer from lack of continuity and political whim, in that the timetable for research is usually longer than a single government's lifetime.

Developing a strategic approach to the production of a strong evidence base relating to the impact and cost-effectiveness of school food and nutrition and school feeding programmes was the subject of a workshop held

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in London, UK, in January 2012 (see Appendix). The workshop focused in part on the types of evidence that have been produced in a number of middle- and high-income countries, but more importantly on describing the practical and political settings in which decisions about school food and nutrition were made, and the mechanisms whereby research evidence was communicated and policy developed.

The objectives of the present paper are (i) to outline a rationale for school food research, monitoring and evaluation in relation to policy and (ii) to identify ways forward for future working. It is based on an analysis by the authors of the presentations, summaries of evidence, and notes from discussions held at the workshop, with a view to distil common themes and make recommendations for the development of coherent research programmes relating to food and nutrition in schools.

We start by setting the scene. This provides a brief summary of the key themes that informed the development of school food programmes across the world, especially the need for a strong evidence base and links with policy development (the focus of the agenda for the workshop). The section on methods briefly describes the approaches to summarizing the workshop papers. The results summarize the findings and conclusions from the extensive discussions that took place (many of the papers in this issue were presented at the workshop). Finally, we make recommendations and suggest an agenda for further actions.

### **Setting the scene**

Young people who develop healthy eating habits early in life are more likely to maintain these and so have lower risk of developing chronic diseases such as CVD, cancer, diabetes and osteoporosis. An appropriate diet during childhood is likely to reduce the risk of short-term health problems, such as dental caries, anaemia, delayed growth, overweight and obesity.

The alarming worldwide increase in the prevalence of overweight and obesity among children has created a serious public health problem. Obesity is an important contributory factor in the development of various chronic diseases and its impact is expected to increase, therefore exerting an enormous pressure on society to deal with the issue of overweight and obesity. Moreover, there is evidence that the prevalence rates of obesity are rising most rapidly among those with a lower socio-economic status. Poverty and inequalities are not expected to decrease in the short term throughout Europe and in many middle- and high-income countries. Low income, unemployment and reduced social benefits all contribute to the fact that vulnerable population groups cannot afford a healthy variety of safe food, despite the fact that access to a safe and varied healthy diet is a fundamental human right and policies address this. In many instances a

meal at school is not only potentially the best healthy option, but also the only complete meal many children have access to. Appropriate school nutrition policies are therefore critical pillars for success in combating malnutrition in all its aspects and should be included in all public health nutrition policy development<sup>(2)</sup>.

### **School nutrition and health promotion**

Governments often put greater emphasis on short-term approaches that seek to alleviate acute problems in school nutrition policies rather than on comprehensive and concerted action related to educational attainment, human capital and development. Interventions targeted at healthy nutrition need to occur especially at two time points, early in childhood and in adolescence, in order to prevent or reverse the potential adverse health effects of overweight and poor eating habits later in life. While these problems will not be overcome by the efforts of the education system alone, schools can provide an important opportunity for prevention. Additionally, schools provide the most effective way to reach large numbers, including young people, school staff, families and community members. School nutrition strategies can help empower children and their families as consumers to be involved in consuming and promoting healthy and sustainable diets. School-based programmes must also be consistent with wider health programmes and agricultural programmes aimed at developing healthy, sustainable and financially viable food systems.

In some instances, the food offered at school gives inconsistent and contradictory messages compared with the school lessons on food and nutrition. Schools must not only teach healthy eating and living but also help children to implement the recommendations. A whole-school policy on healthy eating can provide children and adolescents not only with opportunities to learn food and nutrition skills and how to put them into practice, but also with exemplars of healthy eating through the application of school food standards and feeding programmes that reflect the teaching on healthy lifestyles. Pupils can learn how to choose a healthy diet through the meals and snacks provided at school and develop skills in food growing, handling, preparation, cooking and consumer competencies. In order to support pupils, teachers must be given the opportunity to improve their knowledge and skills in food education. Where schools fail to provide such structures and practices, opportunities to improve both educational and health outcomes are lost.

### **Governance**

For many human beings, it is good governance that makes the difference between life and death – it provides access to nutrition, education, health care, social protection, the rule of law and participation in the economy<sup>(3)</sup>. Coherent governance structures are therefore needed at both high level and local level for implementing school nutrition programmes, and to ensure that intersectoral

action is established to sustain efforts and to utilize existing organizations where possible. Legislation, institutions and mandatory reporting are among the tools to strengthen governance for intersectoral action. The education and health sectors, in particular, need to work closely themselves, as well as promote the early involvement of other sectors in the school nutrition policy-making process while recognizing the existence of potentially irreconcilable interests between stakeholders that may influence the policies<sup>(3)</sup>. Using the Millennium Development Goals<sup>(4)</sup> helps to reconcile potential differences, increase the accountability of different actors and incorporates the concepts of the right to food and equity when defining school nutrition policies.

Across countries at all levels of wealth, school nutrition policies need to take into account the dimensions of the food system, which encompasses agriculture, food transport and distribution, food processing and marketing, food retail and food services, and finally food waste. In many countries, gaps have emerged in public policy with all of these dimensions, as well as in relation to food standards, food safety and information for consumers, with particular reference to protecting and promoting public health.

Finally, school nutrition policies are dependent on governance at the local level and on the emergence of local food policies. These must be complemented by and integrated with central level governance at the higher levels of administration, however, as complete delegation of responsibilities may lead to patchy and uneven services.

Thus, the responsibilities are spread across actors. Health promotion in schools and school food policies emerge as one of the areas where good practices can be easily identified (and lip service paid), but they are often poorly monitored, and their impact is more often than not left unevaluated.

### ***Intersectoral action***

Because of the complex nature of the policy environment and systems and the multifaceted onset of nutrition-related problems, the policy process is often incremental or even opportunistic. Clear guidance for school nutrition is needed in order to inspire and drive action, so strengthening partnerships and intersectoral working and supporting a developmental process that engages the public health community and all health-generating forces and which includes systematic evaluation. There needs to be readiness to take advantage of opportunities to scale up school nutrition as an important element for health, human capital and well-being.

### **Methods**

The authors of the present paper worked closely with the authors of the workshop presentations for a period of three months (October–December 2011) to generate a

coherent set of papers designed to illustrate and critically comment on the development of a policy-relevant evidence base and the relationship between evidence and policy development and implementation. Towards the end of the second day of the workshop, these presentations, together with notes by rapporteurs from general discussion sessions and the smaller themed discussion groups, were scrutinized by the authors and rapporteurs for key themes and actions. A summary of these was presented in the final session of the workshop for comment and further discussion. The summary was then modified to take into account the feedback from the workshop attendees and recommendations for further actions. The content of the modified summary provided the basis for the present paper and recommendations.

### **Results**

The first subsection below provides an overview of the principles that informed the development of the workshop agenda (see Appendix) and that emerged from the scrutiny of the presentations and discussions. The following subsections go on, session by session, to summarize the presentations themselves and the themes and ideas that emerged from the general and small group discussions following each set of presentations.

#### ***A summary of principles***

For policy, intersectoral working and governance to be effective, every school nutrition policy needs a link with accountability mechanisms, and hence evaluation. There are two key issues: (i) commitment across government (national, local and, where appropriate, international) to ensure that the outcomes of policies and interventions can be properly evaluated for their impact on school food provision, child education, health, growth and well-being; and (ii) the content, timing and funding of the research, monitoring and evaluation programmes. In addition, the nature of the problem being addressed, the social, political and cultural context of the policy, the need for stakeholders to have research findings available that help them understand the impact of policy from their particular perspectives, and a willingness to assess both the strengths and limitations of policy (including barriers to implementation) are crucial.

Where possible, existing data should be used for creating and reporting information, to raise awareness and responsibility of the different sectors and to highlight the role of school food and feeding programmes to protect children and promote their well-being by means of healthy sustainable food provision and education. Monitoring and evaluation systems must be interconnected and created if not existing. Because school nutrition interventions take place in complex systems, multifaceted, tailored, sector-specific measures are needed. Traditional evidence based

on randomized controlled trials is not appropriate to measure school processes or provides only partial perspectives on the value of interventions. Evaluation needs to focus on determinants as well as outcomes, and should be used for steering purposes and proper analysis of why interventions have or have not worked. This implies the need for qualitative research to understand the process of policy development and implementation and the factors that enhance or inhibit that process.

### ***Policy, guidelines and standards***

The first workshop evidence session (see Appendix) included presentations from the USA<sup>(5)</sup>, the UK<sup>(6)</sup> and Brazil<sup>(7)</sup>, describing briefly the differing scope of school policies in the three countries and the associated approaches to evaluation, measurements and research undertaken to assess policy impact. Holistic approaches to policy, implementation and monitoring and evaluation were seen as the ideal, in that the evidence available suggested that they were the most effective in bringing about the changes that helped to fulfil the policy objectives. The discussions that followed, however, cast light on the limitations of existing programmes to monitor and evaluate the full impact of the school food policies described.\*

In every country, the scope of evaluations needed to be broadened: (i) to encompass the full spectrum of policy objectives and relevant outcomes – nutritional (provision, take up, consumption of school food and packed lunches, compliance with standards or guidelines, impact of changes in school food on overall diet), educational (enrolment, attendance, cognitive function, attainment, socialization), health (growth, obesity, well-being) and economic (local food production, share of organic produce, viability of school catering systems); and (ii) to understand the potentially adverse impact of environments both inside and outside the school, including vending, food advertising (in broadcast, published and non-broadcast (e.g. Internet media), fast-food outlets and the home. Moreover, it was seen as essential to understand school food policy implementation in the context of multisectoral actions (e.g. in relation to obesity) including broader issues such as food marketing and urbanization. Topics suggested for research *per se* but meaningful in relation to school food included: the impact of early influences (fetal, infant and early childhood) on later food choices; the development of taste preferences; and more pragmatic issues, such as the impact of nutrition education on food choices and dietary behaviour or the adverse impact of free school meal provision on parental behaviours and responsibilities.

Also highlighted in discussion was the need for: advocacy for the integration of sound scientific principles into policy

planning as well as evaluation; secure financial resources; an understanding of policy makers' motivations and prioritization; and whether targets for improvement (as well as evaluation against standards) are appropriate. This would help to ensure that relevant baseline measures were made prior to policy implementation and avoid a reliance on adventitious data collection subsequently bent to serve the purposes of political decision making or justification.

A repeated theme was the need to have international consensus on approaches to the development of school food policy evaluation and on good research practice. This would underpin data sharing and enhance the ability to learn lessons between countries. It also has significant implications for training, both nationally and internationally.

### ***Political engagement***

The second evidence session explored the process of engagement with policy makers in four geographical areas: Sweden and the USA<sup>(8)</sup>, sub-Saharan Africa<sup>(9)</sup> and China<sup>(10)</sup>. It was evident from the presentations that the process of political engagement varied hugely from country to country, dependent on: (i) the political will to use schools as a vehicle for nutrition and health improvement and/or a social safety net (regardless of the potential collateral benefits relating to educational or financial outcomes); (ii) the importance accorded to the need for evidence relating to political decisions; and (iii) the willingness of government to engage in a meaningful and timely dialogue about the scope of evidence needed and its financing.

Again, the discussions raised important dimensions. It could not be taken for granted that there was political will supporting a research and evaluation agenda relating to school food. Discussion therefore encompassed fundamental issues regarding political engagement with the school food agenda overall as well as building an evidence base.

There is clearly no single or simple path to political engagement. Some countries see school food as a means to support health, education and social welfare, but the agenda may be set at any level – from central government down to individual communities or even schools. Engagement with those who define the school food agenda will vary accordingly. Other countries have little or no agenda around school food, so engaging policy makers regarding the potential benefits is much harder. The ability for political figures to be popular with colleagues, the public and the media, however, will almost always carry weight.

Where political engagement with the school food and nutrition agenda already exists, a first step is to explore with policy makers their objectives and the types of information and evidence that would be of greatest use to them. Quantitative and qualitative evidence (e.g. surveys and case studies) may be of equal importance, as is a well-structured argument that takes into account opposing evidence and views. Cultural and ideological drivers guide action in different ways: where school food is seen as a commercial service, for example, arguments

\* It should be noted that in England, academies are no longer required by law to follow school food standards. The Department of Education is currently supporting the development of a School Food Plan to further improve the quality of food provided in schools in England and indicate how school food will be monitored in the future.

should link to cost–benefits; where it is seen as a welfare provision or entitlement, issues relating to health and social equity are likely to prevail. Political and commercial allies must also be convinced and supportive (e.g. catering providers, local councillors). The right pieces of information need to be communicated in the formats and channels that link with existing political agendas. Arguments for the benefits of timely and sustained investment in research, monitoring and evaluation need making and reinforcing, and may be more convincing if the time lines coincide with political terms of office.

Where political leadership is weaker and access to policy makers is more difficult, a broader, culturally specific understanding of political motivation is required and ‘influencers’ deployed accordingly. These could include so-called champions, campaigning organizations, advocacy and lobby groups, trade unions, parents, teachers, health workers, political allies, and eventually private stakeholders. Strategic communication plans mean evidence from research is translated into a wide variety of formats and via numerous channels towards policy makers and opinion formers, including the media and the general public. Simple language and clear messages are essential. ‘Healthy eating’ may have a different meaning for different groups or individuals, and messages must be tailored accordingly. Policy briefings and commercial white papers have a role to play. Evidence of impact in other regions or countries with similar issues and infrastructure may be of value.

### **Wider evidence base and cost-effectiveness**

The final two evidence sessions focused on the wider evidence base and determining the cost-effectiveness of school food interventions. The wider evidence base includes an understanding of both the impact of improved school food on relevant outcomes (e.g. cognitive function, learning behaviour and attainment)<sup>(11)</sup> and the ways in which social, psychological and media-based approaches to behaviour change can influence food choice and dietary behaviour<sup>(12,13)</sup>. Findings on cost-effectiveness were couched in terms of possible health benefits from school food over the life course<sup>(14)</sup>, the cost *per se* of implementing a programme to promote changes in school food provision and consumption<sup>(15)</sup>, and the way in which school food programmes were integrated into wider health and social programmes, enhancing the overall package<sup>(16)</sup>.

It is an enormous challenge to communicate often complex messages to many different stakeholders (parents and parents’ associations, education authorities, health authorities, caterers, cooks and kitchen staff, head teachers and principals, teachers and teachers’ unions, pupils, ancillary staff (e.g. cleaners, dining room assistants) and local government). Their buy-in is essential. While some governments have been acting centrally, the responsibility for healthy living is increasingly being devolved to local level, often without central funding to support local activity. Evidence closer to outcomes (e.g. ‘healthy eating in school

improves attainment’) was seen as more convincing than outcomes more distant (e.g. ‘a taste for less salty foods in adolescence will benefit blood pressure in adulthood’). It was also recognized that the standards of proof would always be less strong than those related to medical models (e.g. randomized controlled trials), and the subtleties of interpretation of current evidence make it difficult to convince head teachers or parents of the value of changes to school food. Interventions are in themselves complex: for example, extending and rearranging lunch times typically requires changes to teaching timetables and other lunch-time activities, which in turn may have an impact on pupils’ attention and learning independent of food provision and consumption. While schools want to do the best for their pupils, and local governments want to see their schools being effective and their children healthy, food is not always seen as central to doing well. This again raised issues relating to the most effective way to convey evidence to particular stakeholders (e.g. head teachers or local councillors). An arsenal of messages was needed that could be deployed as circumstances warranted, with children seen as important conveyors and implementers of those messages.

One way to strengthen the messages is to have consistent messages that are widely distributed (often through central government supporting programmes for schools and local authorities), but not to over-sell the value of interventions (e.g. healthier eating in school by itself will not solve the obesity crisis, but can contribute to healthier weight gain in children). Another is to have a strong mechanism for personal accountability at school and local levels, using visible social marketing techniques to support engagement (e.g. reinforce messages about food cost and quality by taking pupils to supermarkets to evaluate labels, assess nutritional quality and compute value for money). Children themselves are powerful peer leaders. Engaging children as agents for change has been shown to be highly effective, but depends on the relevant evidence being presented in a convincing format and on social market training. Teacher training in nutrition is also key, and not just for those involved in food and cookery in schools. The rationale must be present for teachers to be convinced of the need to set an example by eating more healthily and helping to embed healthy eating practices soundly in schools.

All of these activities cost money. Calculations presented in the evidence session showed that school-based interventions (including many of the elements relating to dissemination of appropriate messages to key stakeholders) are cost-effective (best buys), particularly if a time variable is appropriately inserted in the models used and correct assumptions are made about the transmission of changed behaviours within and between groups and over time (e.g. the collateral benefits of healthier behaviours learned by children being transmitted to their families, or the synergistic effect of improved school food and teaching cookery skills to both parents and children).

Attention needs to be paid, however, to the differential impact on different groups within the population, including schools located in deprived geographical areas/regions or in socially disadvantaged groups within affluent environments. School food provision at different times of the day (breakfast or lunch, for example) will also have different routes to impact which must be taken into account not only in the process of evaluation but also in communicating appropriate messages to parents.

## Conclusions

The workshop provided exceptional opportunities for a group of experts deeply versed in their subject to share learning and experience. More important, it provided an opportunity to consider jointly how best to take forward the agenda on school food research and the development and dissemination of the evidence base on the impact of school food in a diversity of settings, for a diversity of audiences (including politicians and local decision makers), and to make it relevant to policy development and evaluation at central and local level.

Unsurprisingly, one of the conclusions of the discussions is that we need more and better data to support the understanding of how to establish robust and effective school food programmes; how to communicate messages to all stakeholder groups effectively; and how to improve the implementation and understand the impact of school nutrition policies according to socio-economic factors such as level of education, employment status or family income. This differential analysis is key to bolstering impact at population level.

Efforts to improve the quality of food available in schools have been supported in some countries with compulsory standards for school food (not just guidelines), with robust monitoring and with compulsory nutrition education and cookery classes for both boys and girls, taught by specialized teachers. This approach, robustly implemented, is critical to minimize conflicting or confusing information on healthy eating within and outside the school environment. Messages given in school, from the dining room to the classroom and throughout the school, must be consistent and mutually reinforcing both of school food policy and wider health policies in the general population.

The evidence base is good in some regions and for some topics, and patchy or non-existent in others. Appropriate school nutrition policies have proven to be effective. A key finding is that introduction of a balanced school lunch was associated with overall healthier eating patterns outside school, especially in younger children<sup>(17)</sup>. It has been shown that children who ate a balanced school lunch had higher likelihood of having more regular meal times and of consuming healthier snacks. Along the same lines, their eating patterns at home tended to be healthier, with higher prevalence of vegetables and fruit, whereas soft drinks were seldom offered<sup>(18–21)</sup>.

## Ways forward

Countries in Europe and beyond are different in terms of culture, history and development, and face a wide variety of challenges in their school nutrition policy and capacity. As such, universal guidance would be inappropriate. There are, however, core components that are missing in many programmes, in relation to implementation, delivery, and monitoring and evaluation. Moreover, the role and potential of school nutrition policy, including appropriate school feeding policies within the overall health promotion movement, seems to be underestimated, in particular the capacity of these policies to help address inequalities and reduce the socio-economic gradient, especially in the most developed countries.

A balanced portfolio of actions seems to be the appropriate way forward. For example, the health promotion dimensions where prevention, education and persuasion are provided together with the safer nutritional environments, and where school feeding provides a cohesive element, have proven to be the most effective approaches to improved child nutrition and growth. Single strategies undertaken in isolation, as the evidence indicates, by themselves are unlikely to achieve sustained change, particularly among disadvantaged children and populations.

To achieve sustained and equitable change in school nutrition, a balance is needed in terms of: (i) strategies that have short-, medium- and longer-term results; and (ii) strategies that are less complex to implement and monitor through to those that are more complex and require a more integrated approach.

There is a series of elements that should be considered when developing a school food and nutrition policy. The core action group should consist of most (if not all) of the stakeholders considered important. The aim is to develop the overall policy to ensure that all nutritional messages within the school, direct and indirect, are coherent. This includes the curriculum and the school environment, and a robust evaluation, the outcomes of which are relevant to the different stakeholders involved and presented in appropriate language and formats. Collaboration with parents and the local community is also important and a policy document should make clear how the dialogue between these different sectors is to be facilitated. After initiatives have been implemented, it is vital not only to monitor the health of the children, via health services or school-based surveys, but also to evaluate the success of the different interventions in terms of a range of outcomes, from nutrition to education to behaviour. Local research institutions, teacher training colleges and universities may be interested to help schools carry out both process and impact evaluation.

## Recommendations

The final discussion session of the workshop focused on a range of desirable actions to further the development and appropriate dissemination of a robust evidence base

relating to school food. These are summarized below. They represent the collective views of the workshop attendees, and not the exclusive views of the authors.

1. Define the scope and conduct a comprehensive review of research on school food in order to identify good evidence, good practice and gaps in both knowledge and technique. This would include the development of an evidence map that links policies and the requirements for evidence of effectiveness and outcomes. Identify differences in needs between low-income and middle- and high-income countries.
2. Develop and publish comprehensive policy advice on monitoring, evaluation and research of school food policy and programmes, including approaches to translating evidence into policy. Current approaches are often without context or elements of comparability, limiting both internal effectiveness and comparability between studies and between regions or countries.
3. Map the evidence against stakeholders to ensure that the right messages are reaching the right decision makers and implementers in the right format.
4. Support wider alliances between campaigning and special interest groups (e.g. commercial growers of fruit and vegetables as well as small farmers and local markets) and promote research supporting such specialist interests that have proven public health benefits. Equally important, disseminate information on responses to pressures from the food industry and other special interest groups whose objectives undermine healthy eating in schools.
5. Develop a manual for professionals who wish to run public health nutrition programmes in schools, including priorities, goals and means of evaluation.
6. Design strategies and tools for workforce development relating to school food and nutrition, including teachers, school nurses, cooks and caterers. These could be included in National School Health policies as well as part of the existing in-service curricula for teachers and health professionals, particularly school nurses and doctors.
7. Develop a questionnaire disseminated through the network to engage researchers in other countries, understand the scope of work being undertaken, and provide the basis for a regularly updated repository of research and guidance relevant to school food policy.
8. Establish an international network for experts involved in school food policy: government representatives (education, health, agriculture, local development), experts in education and educational outcomes, principals and head teachers, civic organizations, public health nutritionists and caterers. The aim would be to facilitate the sharing of learning outcomes from evidence, the use of regulation as a mechanism or tool for implementation, and other relevant experiences. This could be achieved through webinars, workshops, conferences, training

(both direct and distance learning) and bilateral visits, organized to promote deeper understanding of (i) the development and implementation of school food policies and (ii) approaches to monitoring, evaluation and dissemination of research in formats appropriate for key stakeholders and policy makers.

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## Appendix

### *School Food Research: building the evidence base for policy*

19–20 January 2012

Hotel Russell

London, England.

Thursday	Chair: João Breda	Speaker
09.00–09.30	Welcome, aims of meeting, and introductions	Michael Nelson
09.30–10.00	<b>Keynote:</b> School food, politics, and child health	Don Bundy, World Bank
10.00–10.45	<b>Evidence session 1</b> School food policy, guidelines, and standards: evidence of the impact of existing programmes on children’s eating habits and health-related outcomes (research findings, and strengths and weaknesses of research approaches)	1. USA: Jay Hirschman 2. UK: Ashley Adamson 3. Brazil: Emilie Sidaner
10.45–11.15	Discussion	All
11.15–11.35	Refreshment break	
11.35–12.15	<b>Workshop 1</b> Building evidence relating school food to nutrition, growth and health	‘A’ discussion groups
	<ul style="list-style-type: none"> <li>● School food programmes – showing what works and what doesn’t</li> <li>● Provision, choice and consumption – short-term, long-term, and impact outside of school</li> <li>● Take up, meal price and free school meals</li> </ul>	
12.15–13.00	Workshop 1 feedback and discussion	All
13.00–13.45	Lunch	
13.45–14.30	<b>Evidence session 2</b> What evidence do politicians want, and do they listen?	1. Liselotte Elinder, Sweden 2. Aulo Gelli, PCD* 3. Yu Mingxiao, China
14.30–15.00	Discussion	All
15.00–15.45	<b>Workshop 2</b> Political objectives	‘B’ discussion groups
	<ul style="list-style-type: none"> <li>● Who sets the school food agenda?</li> <li>● What do the politicians want to achieve?</li> <li>● What do the politicians want to know?</li> <li>● Strategies for political engagement</li> </ul>	
15.45–16.15	Refreshment break	
16.15–17.00	Workshop 2 feedback and discussion	All
17.00–17.30	<b>General discussion</b> How well are school food policies and programmes integrated with other health and education interventions?	All
17.30–18.30	Break	
19.00–22.00	Conference dinner	

\*Partnership for Child Development.



Friday	Chair: Judy Hargadon	Speaker
09.00–09.15	Summary of Day 1	Michael Nelson
09.15–10.00	<b>Evidence session 3</b> The wider evidence base <ul style="list-style-type: none"> <li>● School food, cognitive function, learning behaviours, and attainment</li> <li>● Influencing food choice – Individual behaviours, Nuffield ladder of interventions, 'nudge' and other practices</li> <li>● Marketing, media and health outcomes</li> </ul>	1. Wanda Bemelmans, Netherlands 2. Laurence Moore, Cardiff 3. Christina Pollard, Australia
10.00–10.30	Discussion	
10.30–11.15	<b>Workshop 3</b> Building evidence for stakeholders and the public <ul style="list-style-type: none"> <li>● School leadership, school governance, local government, and catering providers</li> <li>● Campaigns – who is agitating for change?</li> <li>● Media and communications – how are messages being disseminated?</li> </ul>	'C' discussion groups
11.15–11.45	Refreshment break	
11.45–12.30	Workshop 3 feedback and discussion	
12.30–13.15	Lunch	
13.15–14.00	<b>Evidence session 4</b> Cost-effectiveness and relative impact <ul style="list-style-type: none"> <li>● School food-based interventions <ul style="list-style-type: none"> <li>○ Input and output measures</li> <li>○ Evaluation models</li> </ul> </li> <li>● England</li> <li>● School food in the context of other interventions – relative impact</li> </ul>	1. Tim Marsh, NHF* 2. Michael Nelson, CFT† 3. Joanna Christo Aguirre, Mexico
14.00–14.30	Discussion	All
14.30–15.00	Refreshment break	
15.00–15.30	<b>Closing session</b> Building an international consensus on evidence for school food	
15.30–16.30	Discussion	All
16.30–17.00	Next steps	All
17.00	Close	

\*National Heart Forum.

†Children's Food Trust (formerly the School Food Trust).

### First International Workshop on School Food Research and Policy

The School Food Trust, in partnership with WHO-Europe, is hosting an international workshop in London on how best to create a robust evidence base to influence the development and implementation of school food policy at national and local level. The emphasis is on the broad strategic picture, hard outcomes, and the practicalities of building an influential evidence base. The focus is on middle- and high-income countries.\*

**Title:** School Food Research: building the evidence base for policy

#### Theme and topics

Developing and conducting research and disseminating evidence on school feeding to support policy makers and inform public opinion

- Strategic aims of school food research
  - Policy makers: the relationship between evidence and decision making
  - School food, policy makers and stakeholders: who cares and who pays?
  - Measuring 'hard' outcomes: what are the best examples of research design and method that are most effective for demonstrating that school food and school food policy make a difference to diet, nutritional status, learning behaviours and attainment, growth and health?
  - School food in context: is changing school food a cost-effective route for bringing about change in eating habits, attainment, behaviour, and child growth and health?
- Policy-related evidence: do school food policy and standards make a difference?
  - Take up, meal price and free school meals
  - Provision, choice and consumption at school and beyond
  - The impact of school feeding programmes on diet, health and growth
    - National and regional
    - Local

\* Poorer countries generally have agendas that focus more strongly on undernutrition, deficiency disease, and school as a vehicle for community engagement and growing programmes for the very poorest, although obesity is acknowledged to be a growing problem. It could be that in future activities in low-income countries are included.

- How influential is school food as a determinant of eating habits, attainment, behaviour, and child growth and health in the context of other factors?
- Cost and benefits
  - Pieces of the puzzle: steps in the causal pathway
  - School food, cognitive function and learning behaviours
  - School food and attainment
  - Development of eating habits: food choices and consumption
    - Short term
    - Long term
- Disseminating and publicizing school food research
  - Engaging with policy makers: routes and formats
  - Informing and influencing the opinion of stakeholders and the public

#### **What will the workshop NOT cover?**

- Development and trialling of standards and guidance for school food and nutrition (although these would provide a framework or benchmark relating to policy evaluation)
- Methodological studies and issues (except insofar as they bear on reported findings)

#### **Length, format, time, place, size**

- 2 days (including conference dinner and accommodation for two nights)
- Plenary lectures, seminar presentations, workshops, posters
- 19–20 January 2012
- Location: London
- Attendance: maximum fifty participants

#### **What will the conference achieve for the participants?**

- Sharing knowledge, evidence and insights
- New ways of working: how to influence and promote school food, school food regulations and policy

- With policy makers (international, national, regional and local)
- With the media and communication to the public
- With other stakeholders (head teachers, catering providers, food manufacturers)
- Dissemination of peer-reviewed papers and workshop outcomes in an issue of *Public Health Nutrition*
- Improved plans for building, implementing and disseminating the evidence base relating to policies on school food, including future workshops or conferences

#### **Host, International Scientific Organizing Committee, and sponsorship**

- Host: School Food Trust; WHO-Europe
- International Scientific Organizing Committee
  - Michael Nelson, Director of Research and Nutrition, School Food Trust, London, UK
  - João Breda, WHO-Europe
  - James Bunn, School Food Trust Board member, paediatrician, Alder Hay Hospital, Liverpool, UK
  - Agneta Yngve, Karolinska Institute, Stockholm, Sweden (Editor, *Public Health Nutrition*)
  - Jay Hirschman, MPH, CNS Director, Special Nutrition Staff, Office of Analysis, Nutrition, and Evaluation, Food and Nutrition Service, US Department of Agriculture, Alexandria, VA, USA
  - Barrie Margetts, Professor of Public Health Nutrition, Faculty of Medicine, University of Southampton, Southampton, UK; President, World Public Health Nutrition Association
  - Don Bundy, World Bank and Partnership for Child Development
  - Aulo Gelli, Partnership for Child Development
- Sponsorship: School Food Trust; WHO-Europe