

Food for Life Partnership Evaluation

Summary Report

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Evaluation research team

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Overview

The Food for Life Partnership is led by the Soil Association together with the Focus on Food Campaign, Garden Organic and the Health Education Trust. Initiated in 2007, it received initial funding for over five years from the BIG Lottery Wellbeing Fund to deliver a programme of work with schools and their wider communities across England to promote healthy eating and reconnect people with how their food is produced. The FFLP set itself the ambitious goal of transforming food culture. The programme aims to revolutionise school meals, to ensure children can concentrate and achieve, and to inspire young people and their families to eat, cook and grow healthy and sustainable food.

In July 2007 the Soil Association commissioned the University of the West of England, Bristol and Cardiff University to provide an evaluation of the Food for Life Partnership programme. The evaluation focused on the following key programme goals:

- increasing school meal take-up
- promoting healthier eating habits amongst pupils
- improving school performance, pupil attainment and behaviour
- improving pupil awareness of food sustainability issues
- influencing food habits at home and parental engagement in school life
- developing sustainable food sourcing and school meal provision

The central elements of the evaluation study are presented in this summary report. The full evaluation report provides an in depth account of the evaluation process, findings, interpretation and context.

Evaluation context

Over the last ten years, there has been increasing concern over the health of English children particularly in relation to rising obesity rates. This is largely explained in relation to poor diets and lack of physical exercise¹. With most English children attending school daily, schools are in a unique position to influence and promote healthy eating amongst this age group.

Research drawing upon focused interventions in school settings indicates that practical food education, garden enhanced education and programmes that establish farm links are all promising strategies for promoting children's interest in healthier eating. Development of practical cooking skills has been shown to promote positive attitudes and to encourage children to try new foods; studies report that children involved in growing food are more positive about eating fruits and vegetables and tend to have higher fruit and vegetable consumption². Similarly, studies suggest that children in schools with strong farm links eat more fruit and vegetables³.

Furthermore, a growing body of evidence has emerged on the benefits of promoting healthy school meals. School meals have been found to have higher food and nutritional values in comparison to packed lunch alternatives⁴. More generally, sensible eating habits formed at school are considered to have lasting significance into later life.

The notion of sustainable food procurement by public institutions has become increasingly of interest in recent years. There is a growing recognition of the impact food purchasing policies in general can have on local and sustainable food production, public health, social justice and the environment. In a school context, how and what food is purchased and consumed is increasingly being used as a way of teaching pupils about the positive aspects of food as well as having a direct impact on dietary intake⁵.

Research suggests that school health promotion initiatives can have a positive impact on children's health and behaviour but do not do so consistently. The school is one amongst many influences on the behaviour of children with respect to food choice. It would appear that most school interventions are able to increase children's knowledge but changing other factors which influence health, such as attitudes and behaviour, is much harder to achieve. Overall, experience suggests a multifaceted approach is likely to be most effective, combining a classroom programme with changes to the school ethos and/or environment and/or with family/community involvement. This is consistent with the health promoting schools approach. Reviews have highlighted the importance of a whole school approach in which there is a shared vision at senior levels from the school, their caterers, local government and health authorities⁶.

The perspectives of children clearly have a central role in the reform of school meals. Yet, until recently, the voices of children have been marginalised in school meals reform even though, paradoxically, they are the central subjects. Children have had little involvement in the design and conduct of initiatives and their role as active agents has been confined to the “serving spoon” end of the decisions. Research reviews have therefore highlighted the need for programmes to create situations for children to have ownership over their food choices⁷.

This importance of active participation, the role of school settings and the need to address health inequalities are central to the recent Department of Health White Paper *'Healthy Lives, Healthy People: Our strategy for public health in England'* (Department of Health, 2010). Clearly the education process is highly relevant to the Government's commitment to building people's self-esteem, confidence and resilience through the life course. In addition, local government and local communities are considered to be at the heart of improving health and wellbeing.

The Food for Life Partnership

The Food for Life Partnership (FFLP) evolved out of a growing concern that obesity and the climate change impact of our food cannot be addressed unless individuals and communities are reconnected to how their food is produced, and regain the skills and knowledge needed to take active control over what they eat. To meet this challenge, the FFLP set itself the goal of transforming school meals and the wider school food culture. The Partnership aims to inspire young people and their families to make good food more of a priority in their lives by encouraging them to visit farms and to cook and grow their own food.

Since the programme started in 2007, the Partnership has recruited and worked intensively with 180 diverse 'Flagship' schools and communities, 20 in each of 9 English regions, based on their commitment and enthusiasm to transform food culture in the school and wider community and act as best practice exemplars to inspire other schools and communities. In addition to the Flagship

schools, FFLP works with all schools that register as 'Partnership' schools. Currently over 3000 of these schools have joined the programme.

Through the framework provided by the Food for Life Partnership Mark award scheme, schools and their communities can turn their existing food culture into one that focuses on health, sustainability and enjoyment. The importance of engaging all stakeholders such as cooks, parents and wider communities in building vibrant food cultures is central to the aims of the FFLP programme. This involves encouraging a wide range of people to participate in school based activities; delivering practical food education which travels home with pupils to influence parents' food knowledge and food habits; promoting closer connections between schools and communities and their local farms; and supporting the development of sustainable local food systems.

By supporting the creation of a whole school food policy and action plan for each school, the FFLP programme aims to influence and improve the health of students and the whole school community. It is envisaged that schools can play a key role in equipping young people and their families with the skills and knowledge they need to maintain lifelong healthy and climate-friendly eating habits. The school environment provides an opportunity to help establish these good habits from a young age. In order to develop an effective school food policy, each school is encouraged to involve representatives of the whole school community in a food action group.

Schools participating in the programme are encouraged to work towards Bronze, Silver and Gold levels of the Food for Life Partnership Mark scheme. Enrolled schools record their progress online against criteria in four strands: 1) food leadership, 2) food quality & provenance, 3) food education and 4) food culture & community involvement. In addition the Soil Association has developed a Food for Life Catering Mark scheme available for school caterers seeking to make greater use of fresh, seasonal, local and organic ingredients, high welfare meat and sustainable fish.

Evaluation framework and methodology

The evaluation draws upon a theory of change approach⁸ to examine theoretical linkages between programme inputs, short term outcomes, longer term outcomes and context. This has meant building the evaluation plan around how the programme is thought to work. Drawing upon this programme model, the evaluation identified the theoretical links between short term inputs, outcomes and contextual conditions that might have an influence. Given that FFLP goals are wide ranging and long term in nature, the evaluation approach is intended to assess the plausibility of the changes theorised in the programme design.

The evaluation consisted of a range of data collection strategies including a pre and post cross-sectional study with 111 FFLP Flagship schools at the point of enrolment ('baseline') and again after approximately 18-24 months ('follow up'). Process evaluations of the programme were also conducted during this period.

In all 111 schools, the lead teacher contact was asked to complete a comprehensive questionnaire on FFLP-related activities at baseline and follow up. Other lead staff were also asked to complete questionnaires at baseline, follow up and with respect to some elements during the course of the programme. These staff included: cooks; caterers; and lead teachers for garden, farm link and

cooking activities. Interviews were used to supplement the interpretation of data. Programme documentation and official data sources were also analysed. These data sources included the FFLP website schools log, FFLP Mark applications, DfE School Census and Ofsted reports.

A sub-sample of the 111 schools was asked to participate in pupil and parent questionnaire surveys. These schools were selected randomly from the FFLP recruitment list as the schools' enrolled with the programme. These schools consisted of: 33 out of the 75 primary schools and 22 out of the 31 flagship secondary schools. None of the 5 special schools took part in this process.

In the sub-set of schools, over 4600 pupils in mixed ability classes completed questionnaires. At follow up, approximately 4700 pupils from the same schools in matched Year groups completed questionnaires. Also at follow up, 1080 parents with children in Years 1-10 were surveyed from the same sub-sample of schools.

Case study work with teachers, parents and children is reported in the UWE-led Primary Schools Case Study Report. Case study work with caterers and their supply chains is reported in the Cardiff-led Food Sourcing Case Study Report. All empirical aspects of the UWE, Bristol and Cardiff University evaluation have been approved by the UWE Research Ethics Committee.

A number of limitations to the study need to be considered. The study did not include comparative analysis with the large number of FFLP registered schools that are outside the intensive flagship programme. It does not address economic or policy impact aspects of the programme or include in depth analysis of the impact on participating special schools. The study design does not allow for causal inferences, although the mixed methods approach provides an evidence base for tracking the links between programme inputs and longer term outcomes.

Characteristics of schools participating in the evaluation

Of the 111 FFLP flagship schools studied, between 11 and 13 schools were selected by FFLP from each of the nine England regions. 75 of the schools participating in the evaluation are primary, 31 are secondary and 5 are special schools. These schools were drawn from 62 of the 150 LEAs in England.

Primary schools vary considerably in size, from 48 to 671 pupils ($SD=136.21$). Similarly, secondary schools range in size from 201 to 1809 pupils ($SD=322.94$). The primary schools are, on average, bigger than the English average and the secondary schools are slightly smaller. The majority of schools are located in urban areas. In terms of catering provision, 45% have local authority providers, 37% have in-house provision and 17% have a private contractor.

Nineteen percent of the primary schools and 12% of the secondary schools are in the top quintile for free school meal entitlement. The IDACI measure of social deprivation suggests that the sample has an above average national representation of schools located in ward catchments with high child poverty. Whilst there are gaps in reporting, the data suggest that the schools have a similar proportion of pupils from Black or Minority Ethnic backgrounds as the national picture for schools in England.

At enrolment with the programme, 80% of schools had National Healthy School Status and 51% had Eco-school status. At the close of the evaluation period, 85 of 111 had reached the standard of the Gold, Silver or Bronze FFLP Mark award.

School meal take up

The evaluation found that the FFLP flagship school programme is associated with increases in school meal take up that are above national trends for both paid and free school meals^{i,ii}. Increases in take up are evident within the first year and are sustained into the second year of the programme.

After two years of the FFLP flagship programme, take up for primary schools rose on average by 3.8 percentage points from 45.4% to 49.2% (n=71). During the same period take up for secondary schools increased by 5.7 percentage points, from 50.3% to 56.0% (n=22). The secondary school figures need to be interpreted with caution. Some secondary schools supplied - albeit consistently - 'old' method calculations that give elevated overall take up figures.

For all schools achieving a Bronze, Silver or Gold FFLP Mark (n=80) take up increased on average by 3.7 percentage points in the first year and 5.0 percentage points over two years, from 47.4% to 52.4%. The increase was greater for those schools achieving either the Silver or Gold Award (+6.1%, n=35). However even those flagship schools that have no current FFLP award have, on average, increased their take up above the national trend.

With an average increase of 13 percentage points over two years, free school meal take up has markedly increased for FFLP flagship schools. The increase was greater for those schools achieving either the Silver or Gold Award (+21%). This is reflected in primary schools with high free school meal eligibility (top FSM quintile, n=8) where total take up increased by 6.6 percentage points, from 49.5% to 56.1%. These trends suggest that participation in the FFLP flagship programme has been effective at increasing school meal take up for schools within areas of high social deprivation.

The evaluation team sought full supporting evidence from all reporting schools and caterers. 13 out of 111 schools were excluded from the analysis owing to poor quality data. 34 of the schools (all primary) provided higher quality data in the form of daily, weekly or monthly records. These schools showed an increase in take up of 4.6 percentage points after two years, from 45.4% to 50.0%. The remaining 64 schools supplied acceptable quality data in the form of term or annual records that corresponded with the estimates of school office administrators, lead teachers, cooks and caterers.

Specific patterns of take up are mixed owing to the wide range of organisational and demographic circumstances of the study schools. Drawing upon the FFLP whole school approach, schools adopted

ⁱ The evaluation team sought to collect school meal data from 111 Flagship schools for the year preceding enrolment with the FFLP programme through to the review at 18-24 months. In addition lead agents, including cooks, caterers and school teacher leads were asked to report on their perceptions of the effectiveness of FFLP strategies for increasing take up.

ⁱⁱ Since 2008/9 National SFT/LACA figures shows that take up has increased by 2.1 % in primary schools (including special schools) and 0.8% in secondary schools. Changes to the collection and calculation of take up figures do not make direct comparisons straightforward. However, national annual surveys suggest that take up has increased in primary schools since 2007 and in secondary schools since 2008.

a number of strategies to increase take up. The participation of parents, children, cooks and other stakeholders, however, has been a consistently central element in this process. The data suggest that the inclusion of all stakeholders has been an effective approach for many schools, although it should be noted that some others have employed alternative strategies, such as better marketing, that have also been effective.

Schools that did not achieve increases in take up report that factors outside the influence of the programme, such as local authority contract restructuring, inhibited progress. Some schools and caterers also reported that FFLP strategies were challenging to implement or not productive.

Supplementary evaluation data sources lend plausibility to the effectiveness of FFLP strategies. Records provided by schools show a considerable volume of activities from different quarters to promote school meals. These include school food action planning, closer integration between food education and the work of the school kitchen and, to a lesser extent, reforms to school food procurement.

Students' experiential food education, awareness of food sustainability, and healthy eating

Analysis of implementation shows that FFLP led an intensive programme of school reform. For some primary schools, in particular, these developments transformed the scale and nature of activities.

Before FFLP enrolment only a minority of schools (37%) had actively involved pupils in school food policy development. The majority of schools lacked facilities needed to deliver an effective course of garden or cookery enhanced education. For example, only one in five primary schools reported that they had sufficient facilities to deliver cooking classes to larger groups. Fewer than half the schools had conducted a farm visit in the last year.

This picture changed through an action planning process that included student consultations, staff training, infrastructure upgrades and revisions to the curriculum. As a consequence, pupil's exposure to experiential food education increased. In primary schools, reported participation in growing activities rose 45 percentage points, from 29% to 74% of pupils. While cookery and food preparation is already part of the curriculum, schools extended this work within and outside school hours. Nearly all primary schools were running a skills based cookery club and for half of the schools this was available to all students. 24% of these schools reported using sustainably sourced ingredients on a regular basis.

According to teacher records, visits to farms and food production related businesses increased over the course of the programme. For 31 secondary schools, the overall percentage of pupils making visits rose from 8.2% in the year prior to enrolment to 15.8% in the year prior to review. For 72 primary schools, the overall percentage of pupils making visits rose from 18.2% to 26.7%. While the increase in pupil numbers exposed to farm visits was not substantial, the farm visit experience changed significantly, in line with the FFLP goal of hands-on experiential learning in smaller groups. This is reflected in farm visit evaluation reports by teachers which suggest high impact learning.

In secondary schools, student exposure to programme related activities developed from a very low baseline, particularly for growing activities. For example, students involved in growing activities rose from an average of 1% to 12.3% in the schools sampled.

The primary school baseline and follow up surveys both included approximately 1500 Year 5 and 6 students matched by school. Compared with the point at which schools enrolled with FFLP:

- The number of children reporting growing fruit and vegetables at school in the last year rose by 28.1 percentage points, from 54.4% to 82.5%. This represents a 50% increase in the number of children growing fruit and vegetables at school.
- The number of children helping to grow fruit and vegetables at home in the last year rose by 9.2 percentage points, from 26.0% to 35.2%. This represents a 35.3% increase in the number of children helping to grow fruit and vegetables at home.
- The number of children reporting that they practised food preparation skills in school in the last month rose by 20.2 percentage points, from 17.3% to 37.5%. This represents a 53.9% increase in the number of children practising food preparation skills in school.

Analyses of student questionnaire responses show statistically significant positive associations between healthy eating and FFLP related behaviours such as participation in cooking and growing at school or at home; participation in farm visits and sustainable food learning; and attitudes to school food. This suggests that the FFLP model for changing behaviour has an empirical evidence baseⁱⁱⁱ.

- Children reporting eating an average of 4 or more portions of fruit and vegetables a day increased by 11.9 percentage points, from 37% to 48.9%. This represents an increase of more than 30% in the number of children eating 4 or more portions.
- For Year 5 children only, those reporting eating an average of 5 or more portions a day increased from by 4.6 percentage points from 16.3% to 20.9%. This represents a 28.2% increase in the number of children eating 5 or more portions a day in this age group.

The analysis of Years 5 and 6 shows that the follow up respondents reported eating, on average, an increase of 0.31 more portions fruit and vegetables per day compared to the baseline respondents (3.11 to 3.42; SEMs: 0.03). Whilst the limitations of the study design need to be taken into account, this compares favourably with other school-based healthy nutrition programmes that have shown a positive intervention effect ranging from +0.14 to +0.99 servings per day⁹. The self reported consumption of both fruit and vegetables were higher in the follow up survey. Vegetable consumption increased slightly more than fruit consumption, but the difference was not statistically significant.

Although not statistically significant, other measures of behaviour change showed positive trends. For Year 5 and 6 respondents, those who reported that they enjoyed growing fruit and vegetables rose from 35.6% to 40.1% and those who reported that they enjoyed selected cooking activities rose from 75.2% to 78.3%. Those who reported that they felt confident cooking with basic ingredients such as rice, pasta or fresh vegetables rose from 65.8% to 69.5%.

ⁱⁱⁱ The evaluation team conducted two surveys with primary and secondary school students: at enrolment (baseline) and after 18-24 months (follow up) of the programme. For matched school and Year groups, over 2500 primary and 2000 secondary school students took part in each survey.

As part of the follow up survey, teachers were asked to report whether their class had learnt about organic, fair trade, animal welfare or local food issues in the previous 12 months. It was found that Year 5 and 6 children who have taken part in FFLP-related education on sustainability were more than twice as likely to hold very positive attitudes towards organic, local, free range and fair trade foods, compared with children who had had no such education in the last year (21.8% compared to 10.7%). The analysis therefore suggests that FFLP-related educational inputs on sustainability are associated with improved attitudes towards food sustainability issues amongst Year 5 to 6 primary school children. Reports from children in Year 1 to 4 reflected these trends, although issues with the reliability of self reports from this younger age group need to be taken into account.

At follow up, for all primary school year groups over 17% more children rated school meals positively, and over 24% more children rated their dining room positively compared with baseline respondents. Over half of children thought that school meals had improved in the last year. Responding to an open question, over one third of children wrote that they thought the meals had become healthier and over 30% wrote that there had been an improvement to their dining room (Years 4-6, n=1998).

The data show that the most promising programme change mechanisms are the experiential and skills based learning elements: notably practical gardening and food preparation activities and farm visits. As a holistic intervention, the programme also probably provides a general stimulus effect.

Supplementary data tracking of a sub-sample of six primary schools suggests that behaviour changes occur in the first year of the intervention, and are sustained one year after most FFLP external staff inputs have been withdrawn.

The secondary school surveys with Years 7 to 10 produced less conclusive results. At follow up there were positive trends for increased fruit and vegetable intake, and attitudes towards: the school meal service, cooking, growing, food sustainability and healthier eating. However none of these positive trends were statistically significant. Student questionnaire reports and school lead reports indicate quite limited exposure of students to the combined elements of the programme. This may account for the results. However it could also be the case that the dietary habits of this age group are harder to change or that a longer time period is needed for observable changes to occur.

Nevertheless the results provide valuable insights for the development of health and sustainability education in secondary schools. The study found that a broad practical engagement with food issues is linked to positive attitudes towards healthy eating amongst young people. Whilst the links between healthy eating and cooking skills have gained policy recognition in England, less attention has been given to the value of experiential learning about food origins, production and sustainability. Progress made by FFLP flagship schools indicates that the current deficit of educational provision in these areas can be addressed through realistic and realisable curriculum reform. It is notable that, as practical cooking education becomes compulsory for 11-14 year olds in England, there is an opportunity for all secondary schools to adopt a broader, holistic approach to the provision of food education.

Food habits at home and parental engagement in school life

A sample of 35 out of 75 primary and 22 out of 31 secondary schools were asked to participate in a parent survey as part of the follow up review. In total 52 schools completed the survey, representing 1083 parents.

Of the 740 parents of primary school children who completed the survey, 81% said they had heard of the Food for Life Programme before receiving the questionnaire. This indicates a strong awareness and coverage of the programme across parents and year groups.

Parents were also asked to assess the quality of school meals and the degree to which they had improved over the previous twelve months; 637 parents responded to these questions. This shows positive perceptions of school meal quality and levels of improvement with over 82% of parents surveyed reporting school meals as either excellent or good. 60% said there was marked improvement and a minority (13%) reported a very significant improvement.

Parents were asked about whether their child discussed healthier food choices at home and 77% reported that they had. In addition, 42% reported that their child had raised the issue of fair trade and 27% had talked about locally grown food. Some children had been able to connect this with the concept of food miles with 15% of parents reporting this had been discussed at home as a consequence of the programme. Parents also reported an enhanced interest in where food came from and animal welfare: 23% of parents highlighted free range eggs as something specific that had been discussed. In addition, 25% reported that their child had raised the issue of organic food. In terms of the environment, 20% of parents reported their children had raised the issue of food packaging and its negative environmental impact.

A key element of the programme was the development of a food culture that encouraged children to cook and try new foods. Although this had often happened at school as part of the programmed activities, a large number of parents (40%) reported their children were also becoming more adventurous at home, talking about new fruit and vegetables in family discussions. This extended to an interest in shopping, with 21% reporting that their children were more interested in shopping locally.

Children's experience of FFLP had influenced cooking and food consumption at home with 38% reporting they either strongly agreed or agreed with a statement suggesting family attitudes to food had changed. In addition, 43% of parents reported changes in buying patterns and 45% reported they were eating more vegetables as a result of FFLP.

With regard to influence on consumption habits, parents were asked to rate the degree to which they ate more, the same or less of particular food types. 33% reported eating more seasonal food, 26% reported they ate more locally sourced food, 25% reported eating more fair trade food, 25% reported eating more free range eggs, 11% reported eating more organic food and 7% reported eating more organic meat.

Parents described a number of different types of involvement in school life particularly related to the aims of the programme. These included harvest celebrations (42%), cooking events such as

barbecues (37%), food festivals (14%) and food related activities such as events with homemade food (33%).

The most common themes were related to the positive impact of FFLP on the family and child's attitudes and behaviour. Parents focused in particular on an increased interest in food that included trying new foods and attempts to cook. In some instances the ability of children to influence family discussions about food led to changes in parental behaviour in relation to buying, growing and aspects of food preparation. A number of parents who viewed the programme positively overall also raised a number of reservations. These were often connected to children wanting to buy more food that parents felt was unaffordable.

At secondary school level, a total of 343 parents completed the survey. Only 47% reported that they had heard of the programme before being invited to participate in the survey. In relation to school food, secondary parents reported a lack of consultation about school meals (57%) and food issues more generally (63%). Nevertheless, they had a positive view of school meals with 69% reporting school meals were 'excellent' or 'good' and 42% suggesting that they had improved enormously or at least got better over the last year.

Of the secondary school parents (n=141) who responded to the open ended questions on the impact of FFLP on discussions at home, the most commonly reported view (51%) was that involvement had resulted in a positive impact on the family and child's attitudes and behaviour at home, followed by no impact (35%).

These findings demonstrate from a parental perspective that there were behavioural outcomes that could be attributed to the programme. Nevertheless, the limitations of the survey sample and the self reported nature of the data must be acknowledged.

Perceptions of school performance, pupil attainment and behaviour

School Census data show that FFLP flagship schools, on average, improved their attainment scores over the course of the programme period^{iv}. The trend for absenteeism shows no change for either primary or secondary schools. Ofsted reports (n=70 where pre and post reports were available) show that twice as many primary schools were rated 'outstanding' across ten criteria for inspection following their participation in the programme.

For all cases where data were available, Ofsted inspection reports are 30% more likely to comment positively on an aspect of healthy or sustainable food related activity in schools in the period after enrolment with FFLP.

Half of the Ofsted reports analysed comment directly on FFLP and FFLP activities. These comments largely focus on health aspects, although they also include references to a wide range of ways in which school food culture has an impact upon performance.

^{iv} The evaluation team analysed official school documentation, comparing the period before enrolment with FFLP to records produced 18-24 months into the programme. Senior management from participating schools were also asked to report on the perceived impact of the programme in their schools.

Eight out of ten senior teaching staff (n=95) in FFLP flagship schools report that the initiative has been effective or highly effective across a range of school development priorities. Also 67% say that FFLP activities fed through into positive Ofsted assessments for personal development and well-being. Almost a third felt there were links to improved test results.

School leads reflect wider research evidence on the complex links between health programmes and attainment. Respondents, particularly in primary school settings, highlighted the broader educational value of whole school food reforms in terms of promoting pupil voice, and increased opportunities for holistic and experiential learning.

School leads report that the most challenging aspects of the programme concern time and resource implications in addition to the reform of catering and school meals. The most successful elements identified include the mainstreaming of food education (particularly growing and cooking) and the strategic approach to promoting the participation and enthusiasm of pupils in school life. Secondary school leads were more likely to report coordination, education reform and participation challenges than primary school respondents. However, in corroboration with the data on school meal take up, more than half of secondary schools were reported to have made significant progress with school meal take up.

Sustainable sourcing and school meal provision

Caterers from a total of 38 of the 111 study schools gave food sourcing data for this evaluation at both baseline and follow up stages. Among this group, the number of local suppliers involved in school procurement rose by 73% during the evaluation period while organic suppliers increased by over 50%. The financial data provided by respondent caterers can be used to calculate an estimated annual spend among all study schools of £941,000 for local, £132,100 for organic and £90,400 for Marine Stewardship Council (MCS) sourced fish. These figures should be treated with caution, however, due to the low sample size and concerns about data reliability.

The average ingredient spend per meal reported by primary schools in the sample rose from 70.1p to 78.8p during participation in the programme, representing an increase of 12.4%. This can be compared with the latest national average of school meal ingredient costs at primary level of 68p as reported by the School Food Trust¹⁰. The higher level of food spend by schools participating in the FFLP programme can, of course, be interpreted as a positive impact of FFLP in terms of greater investment in quality and support for sustainable food producers. There is also a risk in the current climate that it may be viewed as a threat to the affordability of school meals. However, the overall affordability of a school meals service depends on the relationship between fixed costs and sales revenue, so the increase in ingredient spend must be considered alongside the finding that the number of school meals taken increased on average by 3.7 percentage points in FFLP Mark schools in the first year at a time of declining take-up nationally (see page 7).

It should also be noted that this evaluation focuses on caterers supplying individual FFLP flagship schools. The emphasis of caterer involvement in FFLP has shifted towards applying for Food for Life Catering Mark accreditation from the Soil Association for meeting the standards on a local authority-wide scale. This will have an impact going forwards on the scale economies open to caterers in meeting the standards, and therefore on their ingredient spend.

A further key message from this part of the evaluation is the lack of availability of quantitative food sourcing data through the programme. The analysis suggests that both aggregation of data among multi-site caterers and a general low priority given to retaining and communicating sourcing data among caterers in general are the principle factors behind this. This has implications for the ability of programmes such as FFLP and caterers themselves to demonstrate the benefits of sustainable sourcing.

The accompanying food sourcing case study provides a qualitative account of the impact of FFLP on individual producers and supply chains. The report concludes that the potential impact of FFLP is much greater than its direct financial contribution to participating businesses. Indirect benefits include orienting producers towards wider growing consumer demand for local and sustainable food as well as the stability of public sector supply contracts. For example, a sausage product, using local meat, was developed by a regional supplier for an individual FFLP Silver school and subsequently sold across a neighbouring Food for Life Catering Mark-certified local authority as well as to other private contract school meal caterers. Another butcher told a similar story of a sausage developed for an FFLP flagship school now proving to be popular among their retail trade: "We developed a product, an out door reared pork sausage as a result of food for life really, for [FFLP School] ... and now we sell that onto other people and it's quite popular really". Involvement in FFLP can also provide a stimulus to integrate quality standards such as Red Tractor, Organic and Freedom Foods into supply sourcing channels which can be subsequently offered to other trade customers.

An assessment of different catering and procurement models within FFLP found a series of typical pros and cons from the perspective of producers but no clear recommendations about which models provide the greatest benefits. This is largely a reflection of the inherent complexity within the school meal system. The supply businesses consulted for this study felt, on the whole, that the long term sustainability of the programme depends largely on the issue of ingredient spend and adequate financing of the school meals service in general.

Significant investment was made in the kitchen environment by FFLP schools during the evaluation period in terms of introducing new equipment and improving facilities in general. For school cooks, mean satisfaction ratings, out of 10, grew from 6.6 to 6.84 (n=62). Improvements still desired by cooks at the follow up stage tended to focus on relatively costly investments such as new flooring, better ventilation and more space.

Numbers of kitchen staff grew slightly during the evaluation period, as did total numbers of hours worked. The sample, however, showed strong variance within these figures so as to make firm conclusions problematic. Professional development opportunities were stimulated by FFLP, with the proportion of kitchens with Continuous Professional Development programmes in place rising from 60% to 65%. At the same time, satisfaction ratings for available training opportunities grew from 6.24 to 6.47 out of 10. The number of formal qualifications among staff also increased.

Overall job satisfaction remained similar (from 7.45 to 7.25, scored out of 10) among respondents. We would suggest that the broader economic conditions affecting the service at the time of the follow up study has probably affected this figure. This is backed up, somewhat, by respondent comments on future challenges for FFLP schools. These tended to concentrate on cost pressures and their potential impact on the kitchen environment and individual conditions of service.

Finally, kitchen staff consistently report that they have a greater degree of involvement and broader integration with the rest of the school as a result of FFLP involvement.

Food for Life Partnership and the whole school approach

FFLP's flagship programme whole school approach is complex, extensive and wide ranging. It has sought to work not only with children and young people but the whole school community, including parents and other stakeholders such as school cooks. Its educational work has sought to go beyond the classroom to include the lunch break and the extended school environment. The programme delivery has included support to develop new resources and facilities, staff training, policy development and external partnerships.

The evaluation identified a number of challenges associated with the whole school approach. Some of these include:

- Programme inputs become highly dispersed in an effort to create an impact across the whole school. This dilutes the potential impact of the programme.
- Action to address a wide range of goals leads to difficulties for prioritisation. In some contexts this led to action on the quick wins rather than on the more complex or demanding aspects of the programme.
- The extent, intensity and duration of the actions required created high levels of demand for participating schools.

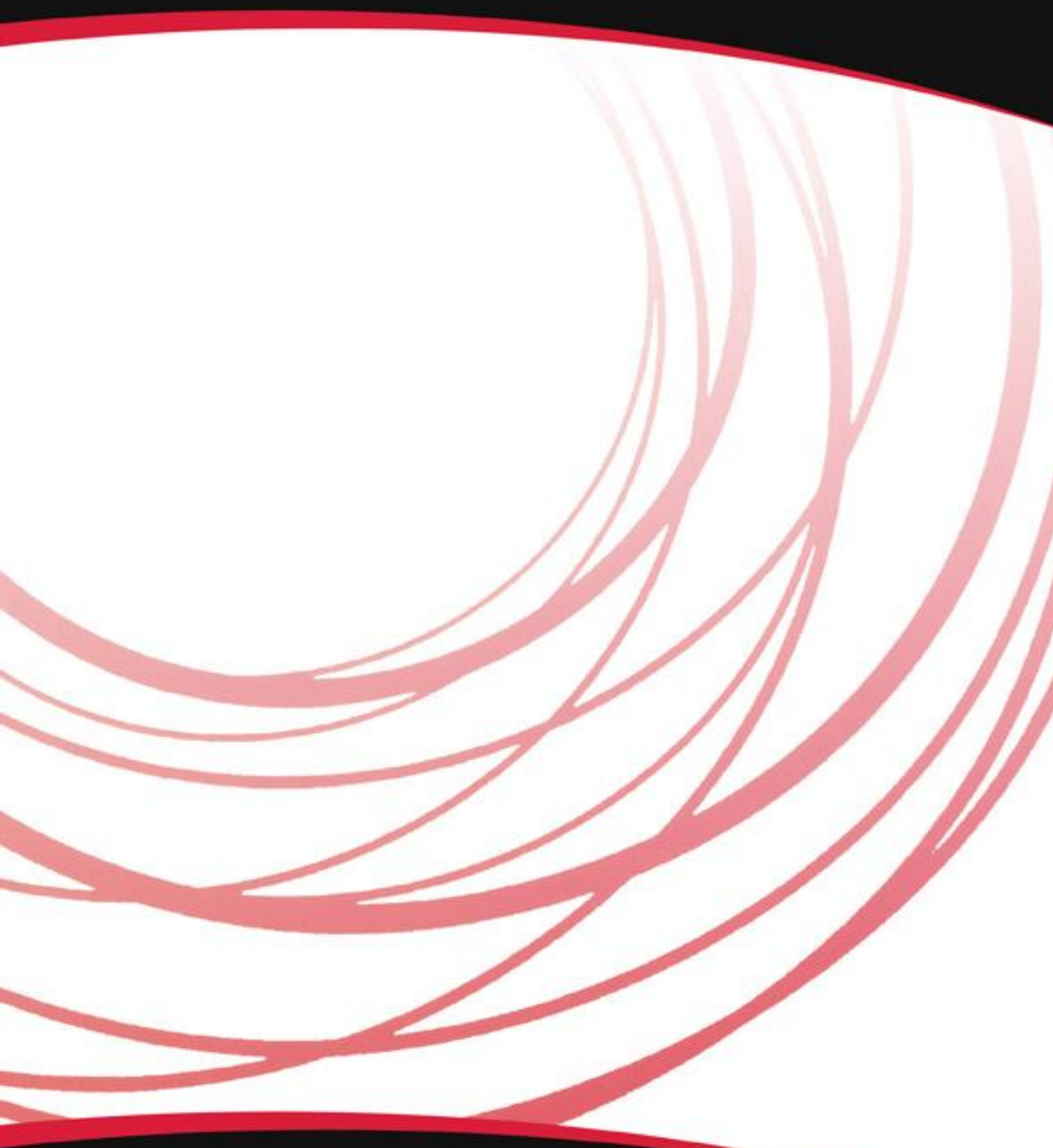
Programmes of this nature also work within a complex economic and social context that can present structural barriers to implementation. Nevertheless, FFLP's whole school approach has produced benefits that would be less evident in a single component programme. Some of these include:

- A general stimulus effect such that programme messages become reiterated or amplified in multiple settings, for example from the classroom, to the dining room, to the home and up through the food procurement chain.
- Mobilisation of diverse stakeholders to act, each within their spheres of influence - whether these are amongst student peer groups, catering teams or parent social networks.
- Integration of formerly disparate fields of activity to promote a coherent vision. Areas of school, catering and community activity come to obtain greater visibility and credibility as part of a joined up initiative.
- The development of an overarching set of principles and practices for organising work over the longer term.

The evaluation results show all of these processes in operation across different areas of the FFLP's programme implementation. Changes theorised in the FFLP model were found to have an empirical basis across a number of domains of action. Although not universally the case, FFLP Mark standards can act as a proxy for outcomes across school meal take up, parental engagement, sustainable food attitudes and healthier eating. These outcomes relate to schools in diverse settings including those with indicators of higher social deprivation or lacking in infrastructure or staff skills at the outset. Achievement in these circumstances provides a strong case for multi-level and holistic food reform programmes in school settings.

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