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## Free School Meals Pilot Evaluation

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Prepared by Sarah Kitchen, Nilufer Rahim, Emily Tanner, Clarissa White, Mehul Kotecha, Meg Callanan, Vicky Brown and Colin Payne from NatCen Social Research, Claire Crawford, Lorraine Dearden and Ellen Greaves from the Institute for Fiscal Studies and Susan Purdon from Bryson Purdon Social Research

This research brief summarises the findings of the evaluation of the Free School Meals pilot.

The Free School Meals (FSM) pilot was a two-year programme operating in three local authorities between the autumn of 2009 and the summer of 2011. Two different approaches to extending FSM entitlement were tested as part of the pilot. In the local authorities piloting a 'universal' offer (Newham and Durham), all primary school children were offered free school meals. In the third area (Wolverhampton), entitlement was extended to cover pupils in primary and secondary schools whose families were claiming Working Tax Credit and whose annual income did not exceed £16,040 in 2009-10 or £16,190 in 2010-11<sup>1</sup>.

The pilot also included a range of supporting activities in each area to encourage take-up of school meals, raise awareness of the pilot and encourage parents to engage with the pilot. Activities included holding school meals taster sessions and a range of talks. The findings of the evaluation should therefore be considered in relation to the whole pilot approach rather than just the provision of free school meals.

The full reports on the impact and implementation of the pilot can be found at:  
<https://www.education.gov.uk/publications/RSG/AllRsgPublications/Page1/DFE-RR227> and  
<https://www.education.gov.uk/publications/RSG/AllRsgPublications/Page1/DFE-RR228>

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<sup>1</sup> Under the current criteria, children whose parents receive one or more of the following support payments are entitled to receive FSM: Income Support; Income Based Jobseekers Allowance; an income-related employment and support allowance; support under part VI of the Immigration and Asylum Act 1999; Child Tax Credit, provided they are not entitled to Working Tax Credit and have an annual income, as assessed by Her Majesty's Revenue and Customs, that as of 6 April 2012 does not exceed £16,190; or the guarantee element of State Pension Credit. Where a parent is entitled to Working Tax Credit during the four-week period immediately after their employment ceases, or after they start to work less than 16 hours per week, their children are entitled to receive free school lunches. Children who receive a qualifying benefit in their own right are also entitled to receive FSM. According to a DWP Policy Simulation Model (based on FRS 2008/9) around 80% of children currently eligible for FSM live in out-of-work households or in households with earned income of less than £1,000.

## Key findings

- Most pupils in the universal pilot areas took up the offer of free school meals. Around nine in ten primary school pupils were taking at least one school meal per week by the end of the pilot compared with around six in ten pupils in similar comparison areas.
- In the universal entitlement areas, take-up increased more for pupils who were not eligible<sup>2</sup> for free school meals before the pilot was introduced. Take up of school meals also increased among pupils who were already eligible for free school meals.
- The extended entitlement pilot did not significantly increase take-up of school meals among secondary school pupils, even for those who became newly entitled to free school meals as a result of the pilot.<sup>3</sup>
- Cost savings for families was the main reason for opting for a free school meal given by parents interviewed in the qualitative case studies. Other factors included: the choice and quality of the food available; the dining experience; time savings for parents; and, in the extended entitlement area, how well parents understood the entitlement criteria and application process.
- Successful delivery of the pilot was underpinned by: a willingness to trial new approaches to delivery and working as a school to solve problems; effective partnership working; building sufficient staff resources and capacity; and being able to accurately predict and monitor demand.
- In the universal pilot areas, the increased take-up of school meals led to a shift in the types of food that pupils ate at lunchtime, away from foods typically associated with packed lunches towards those associated with hot meals.
- Despite the changes in lunchtime food consumption, the universal pilot had few significant impacts on the reported overall consumption of different types of food, although children in the universal pilot areas were less likely to report eating crisps at least once a day than children in the comparison areas. This suggests that the reduction in crisp consumption at lunchtime did not lead children to eat crisps in the afternoon and/or evening instead.
- The extended entitlement pilot had little impact on children's diet and eating habits.
- The universal pilot had a significant positive impact on attainment for primary school pupils at Key Stages 1 and 2, with pupils in the universal pilot areas making between four and eight weeks' more progress than similar pupils in comparison areas. These effects on attainment could have arisen through the provision of free school meals directly or through the wider activities that accompanied the pilot, such as the promotion of school meals and healthy eating to pupils and parents, or both.
- The improvements in attainment in the universal pilot areas appeared to be greater for children from less affluent families<sup>4</sup> and those with lower prior attainment, though it should be noted that the effects between different types of pupils are not always significantly different from one another.

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<sup>2</sup> Entitled to and registered for free school meals.

<sup>3</sup> Information on the impact on take-up in primary schools in the extended entitlement pilot was not collected as part of the evaluation.

- The extended entitlement pilot did not significantly affect attainment for either primary or secondary school pupils.
- The improvements in attainment found in the universal pilot areas do not appear to have been driven by an increase in the amount of time children spend in school, as neither pilot approach led to a significant reduction in absence rates from school. This suggests that the increases in attainment evident in the universal pilot areas must arise as a result of improvements in productivity whilst at school.
- The source of these improvements in productivity is not clear, as the evaluation did not provide any evidence that the universal or extended entitlement pilot positively affected parents' perceptions of children's behaviour. The evaluation did not include a quantitative assessment of classroom behaviour though.
- There was no evidence that the FSM pilot led to significant health benefits during the two year pilot period. For example, there was no evidence of any change in children's Body Mass Index.
- The pilot was valued by school staff and parents for raising the profile of healthy eating, ensuring pupils get at least one healthy meal a day, increasing the range of food pupils eat, building their social skills at meal times, easing the financial stress for parents and helping parents save time by not having to prepare a packed lunch.
- The extended entitlement pilot yielded little in the way of positive benefits for any of the outcomes considered in this evaluation; thus it seems clear that it does not offer good value for money. Compared with selected other interventions designed to affect similar outcomes, the universal entitlement pilot appears to deliver better value for money than some, but worse value for money than others.

## Background

### The Free School Meals pilot

Building on evidence that suggested school lunches benefited children's behaviour, concentration and health,<sup>5</sup> the Free School Meals pilot was set up to explore how extending entitlement to free school meals affected:

- take-up of school meals;
- pupils' eating habits at school and at home;
- pupils' Body Mass Index (BMI) and general health and well-being;
- pupils' behaviour, attendance and academic performance.

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<sup>4</sup> 'Pupils from less affluent families' here refers to both those who are eligible for FSM under the old criteria and those who are newly entitled under the extended entitlement criteria introduced in Wolverhampton.

<sup>5</sup> See, for example:

Golley R, Baines E, Bassett P, Wood L, Pearce J and Nelson M (2010). School lunch and learning behaviour in primary schools: an intervention study. *European Journal of Clinical Nutrition* 64: 1280–8;

Storey H C, Pearce J, Ashfield-Watt P A, Wood L, Baines E and Nelson M (2011). A randomized controlled trial of the effect of school food and dining room modifications on classroom behaviour in secondary school children. *European Journal of Clinical Nutrition* 65: 32–8.

<b>Table 1 Pilot areas and approaches to providing school meals</b>		
<b>A: Newham</b>	Free school meals made available to all primary school children	Universal entitlement
<b>B: Durham</b>	Free school meals made available to all primary school children	Universal entitlement
<b>C: Wolverhampton<sup>6</sup></b>	Free school meals made available to more primary and secondary school children by extending entitlement to include families on Working Tax Credit with an income of no more than £16,040 in 2009-10 (£16,190 in 2010-11)	Extended entitlement

The FSM pilot ran from September 2009 to July 2011. Two local authorities (Newham and Durham) offered free school meals to all primary school children, while a third (Wolverhampton) offered them to more primary and secondary school children by extending entitlement to families who were claiming Working Tax Credit and whose annual income did not exceed £16,040 in 2009-10 or £16,190 in 2010-11.

### **The evaluation**

The Department for Education (DfE) and the Department of Health (DH) commissioned a consortium consisting of NatCen Social Research, the Institute for Fiscal Studies (IFS) and Susan Purdon of Bryson Purdon Social Research (BPSR) to evaluate the Free School Meals pilot.

The objectives of the evaluation were to investigate and report on:

- how and to what extent the pilot affects the take-up of school lunches and whether this varies amongst pupils from different family backgrounds;
- the impact of the changes in take-up on children's outcomes including diet (at school and at home), health, behaviour, engagement with school and attainment;
- the process of implementing the pilot, to help identify the most effective methods of expanding provision of school meals;
- the value for money of expanding the offer of free school meals.

To identify the impact of the pilot on children's outcomes, pupils in pilot areas were 'matched' with similar pupils in a set of comparison areas on the basis of characteristics (for example, age, sex and ethnicity) before the pilot was introduced. The outcomes of this group of pupils in comparison areas were then used to represent the outcomes of pupils in pilot areas had the pilot not been introduced. Using this approach, the impact of the pilot can be estimated from the difference in outcomes between pupils in the pilot and comparison areas after the pilot was introduced.

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<sup>6</sup> Although the FSM pilot ran in both primary and secondary schools in Wolverhampton, the collection of data for the evaluation focused on secondary school pupils only, due to budgetary constraints. As such, it was not possible to identify the impact of the extended entitlement pilot on the diet, eating habits, behaviour or health of primary school pupils. It was, however, possible to identify the impact of the extended entitlement pilot on the attainment and absence from school of primary school pupils using administrative data.

The evaluation used the following approaches to collect and analyse information about the pilot:

- Administrative data from the National Pupil Database were used to select suitable comparison areas and to select the samples of pupils from whom take-up information was collected. They were also used to estimate the impacts of the pilot on attainment and absence from school.
- Information on the take-up of school meals for a sample of pupils was collected from schools in pilot and comparison areas before and after the pilot was introduced. This sample of pupils included those in Reception to Year 4 in Newham and Durham and Years 7 to 9 in Wolverhampton. This information was used to estimate the impact of the pilot on the take-up of school meals.
- A longitudinal survey of pupils and parents in pilot and comparison areas was carried out before and after the pilot was introduced. The sample was selected from those pupils who were not taking school meals before the pilot was introduced. Information from the longitudinal survey was used to estimate the impact of the pilot on various aspects of pupils' diet, health and behaviour.
- Qualitative case studies were carried out in pilot schools to explore how the FSM pilot was set up and delivered and to assess the challenges associated with implementation and the perceived impacts of the pilot. These provided information from a variety of stakeholders, including pupils, teachers and parents.
- Telephone interviews with school caterers were carried out to help provide information about the delivery of school meals from a provider's perspective, both before and after the pilot was introduced, in pilot and comparison areas. This evidence was combined with the qualitative case studies to support the interpretation and understanding of the impact evaluation by setting the context of what happened on the ground.

## Findings

### Setting up the pilot

Local authorities led the implementation of the pilot in each area, with support provided by the School Food Trust (SFT). Primary care trusts (PCTs) were primarily involved at a strategic level, engaging in discussions about the issues affecting the pilot. Set-up activities included promoting awareness of the pilot and ensuring schools had adequate kitchen capacity, equipment, catering staff and data-monitoring systems in place.

Implementation was approached in different ways, depending on the pilot type and on the anticipated increase in take-up as a result of the pilot. In the local authorities providing universal free school meals, schools concentrated on building their capacity to deliver the pilot by extending school kitchens and purchasing new equipment. In contrast, in the extended entitlement area, there was a need to develop effective data-monitoring systems and to promote the pilot to parents.

The scale of work undertaken to set up the infrastructure in schools was the most extensive in Durham. The average cost per school of extending and equipping school kitchens and dining facilities was reported to be around £20,000. The catering company contracted by the local authority increased its workforce by 30 per cent, which translated into 160 new cooks including staff employed on fixed-term two-year contracts. It seems clear that much of this activity would have been carried out even if the pilot had not been taking place.

In Newham, there was some investment in additional equipment and furniture in specific schools but facilities were mostly seen to be adequate to deal with the increased demand. There was also a 30 per cent increase in staff recruited in Newham. Due to uncertainty about the future of the pilot, these were largely temporary agency staff.

In Wolverhampton, implementation activities involved identifying entitled families, adapting the application process to cope with the extended entitlement and processing applications.

## **Delivering the pilot**

The primary challenge for schools, particularly in the universal pilot areas, was dealing with an increased volume of pupils taking school meals. Initial teething problems, such as a lack of storage space, insufficient time to train staff to use new equipment and speeding up the lunch service, were addressed quickly and schools soon settled into efficient routines.

The following minor challenges continued to present some schools with ongoing difficulties:

- Management and organisation of the lunch service. Coping with external factors that could slow down the lunch service, such as the arrival of reception pupils who were unfamiliar with lunch routines, increased noise levels and more accidents in dining halls. Responses included extending the lunch break, a buddying system for reception pupils and various practices to reduce the noise.
- Meal planning and preparation. Schools found it difficult to accurately predict demand for particular meal options and order the appropriate quantities of food. This problem was addressed using a pre-order system for meal selection in some schools.
- Staffing. Continuing problems with understaffing and high staff turnover in catering and lunchtime supervisory teams meant some schools found it difficult to achieve both adequate and consistent levels of staff to cover the workload during the pilot.
- In extended entitlement pilot schools, there were concerns that entitled parents were not applying for the pilot and parents reported difficulties understanding the entitlement criteria and application process. Parents' difficulties stemmed from literacy problems, language issues, and uncertainty about whether they met the new criteria and how to demonstrate entitlement. Some schools responded by providing one-to-one support and guidance to parents, but this resulted in a further drain on staff capacity.

## **Experiences of information, support and guidance**

Local authorities and catering services were the main source of information, support and guidance for schools throughout the pilot. They helped schools implement changes to the physical school structure, workforce and menus, and in Wolverhampton they helped set up administrative systems and sent schools literature for distribution to parents.

Good relationships between schools and local authorities were underpinned by the provision of timely, clear and accurate information and by responsiveness and flexibility in addressing individual schools' needs.

Less positive experiences often resulted from delayed or unclear information. For example, although resolved fairly quickly, some case-study schools in Wolverhampton reported that they did not receive adequate information about eligible pupils and entitlement rules. They also stemmed from being unable to access additional resources to help manage capacity issues and being unable to modify menus and portion sizes.

## **Perceived impacts of the pilot on schools from an implementation perspective**

The following impacts were identified by schools particularly where there was a large increase in the number of children opting for a free school meal as a result of the pilot:

- Staff. Administrative and catering staff increased their working hours and/or took on additional duties resulting from the pilot.
- School infrastructure. The pilot resulted in an expansion of school kitchen facilities and serving areas and the rearrangement of dining halls to cater for more pupils. Durham saw this impact more than the other pilot areas.
- Lunchtime arrangements. These tended to be modified to accommodate the increased number of pupils taking school meals. Changes tended to involve one or more of the following: staggered lunchtimes, pupil involvement in clearing up their own trays and the introduction of the pre-choice menu system.

## Impacts of the pilot

Both staff and parents taking part in the case study component of the evaluation found it difficult to disentangle the influence of the FSM pilot from impacts arising from other school and local authority initiatives. These initiatives were seen to work alongside and sometimes complement the pilot in producing observed health and pupil performance-related impacts. Many of the initiatives that were mentioned by stakeholders during the case studies, such as the 'Healthy Schools' programme, would also have been taking place in comparison areas. Other initiatives such as teaching strategies are likely to vary from school to school. Consequently, it is important to recognise that the FSM pilot did not happen in isolation, but alongside other activities in schools. It did not appear that there were particular initiatives taking place across the pilot areas that were not in operation in comparison areas, so it seems unlikely that these concerns would undermine the approach to estimating the impacts of the pilot.

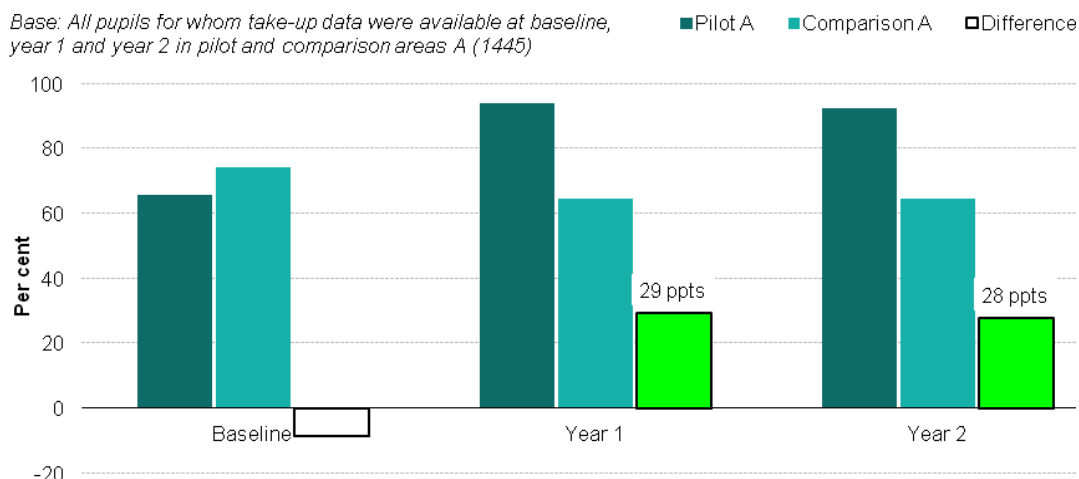
It is also important to note that the pilot included substantial investment in catering facilities and activities to encourage take-up of school meals by schools and local authorities, supported by the School Food Trust. Activities included promoting school lunches and the pilot to parents and enforcing strict packed lunch policies. The impacts reported should therefore be seen as the impacts of the whole pilot approach, rather than solely as the effects of making free school meals more widely available.

## Take-up of school meals

The universal entitlement pilot in Newham and Durham led to a large increase in the number of children opting to eat a school lunch. Based on take-up information collected directly from schools, around 90 per cent of pupils were taking school meals in the pilot areas at least once a week at the end of the pilot, compared with around 60 per cent of similar pupils in comparison areas. This suggests that the universal pilot led to a nearly 30 percentage point increase in the percentage of primary school pupils taking school meals at least once a week.

**Figure 1 Impact on take-up of school meals in area A (Newham; universal entitlement area)**

Base: All pupils for whom take-up data were available at baseline, year 1 and year 2 in pilot and comparison areas A (1445)

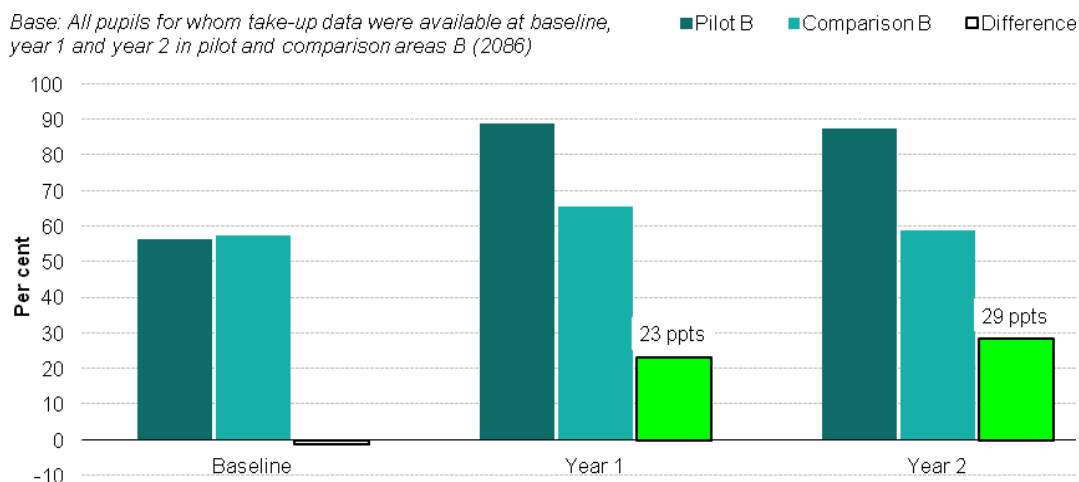


Notes to Figure 1: If the difference between the pilot and matched comparison groups is not shaded green, then the impact estimate is not significantly different from zero at the 5 per cent level.

Source: Data collected from a sample of schools in pilot and comparison areas for pupils originally sampled for the longitudinal survey of parents and pupils. These figures relate to all pupils in Years 0 (Reception) to 4.

**Figure 2 Impact on take-up of school meals in area B (Durham; universal entitlement area)**

Base: All pupils for whom take-up data were available at baseline, year 1 and year 2 in pilot and comparison areas B (2006)



Notes to Figure 2: If the difference between the pilot and matched comparison groups is not shaded green, then the impact estimate is not significantly different from zero at the 5 per cent level.

Source: Data collected from a sample of schools in pilot and comparison areas for pupils originally sampled for the longitudinal survey of parents and pupils. These figures relate to all pupils in Years 0 (Reception) to 4.

Figures 1 and 2 present the impact of the universal entitlement pilot on the take-up of school meals at least once a week in Newham and Durham respectively. In each figure, the dark turquoise bar shows the percentage of pupils in the pilot area who take up school meals, the light turquoise bar shows the percentage of similar pupils in comparison areas who take up school meals and the final bar shows the percentage point difference between them. Where this final bar is shaded bright green, the difference between the two groups of pupils is statistically significant at the 5 per cent level. The figures at 'baseline', before the pilot started, in both areas (the first two columns) show that the proportions of pupils taking school meals in the pilot and comparison areas were very similar before the pilot was introduced. This provides reassurance that the estimates of impact are valid.

The effects on take-up in the universal entitlement areas were greatest for

- children who did not take school meals before the pilot;
- children who were not eligible for free school meals before the pilot;
- children from families who would have been newly entitled to free school meals under the extended entitlement criteria introduced in Wolverhampton (that is, pupils whose parents were claiming Working Tax Credit and whose annual income did not exceed £16,040 in 2009-10 or £16,190 in 2010-11).

There was also a significant increase in the take-up of school meals amongst primary school children who were eligible for free school meals under the previous criteria before the pilot was introduced.

In Wolverhampton, extending entitlement to free school meals did not have a significant impact on the take-up of school meals for secondary school pupils, even amongst those who were newly entitled.

Take-up information was not collected for primary school pupils in Wolverhampton as part of the evaluation, but the local authority provided management data based on primary and secondary school pupils who it estimated to be entitled to free school meals under the new criteria. These data showed that more meals were eaten per week by these primary school pupils than by secondary school pupils who the local authority estimated to be entitled to free school meals under the new criteria.



The take-up of school meals by primary school pupils in Newham and Durham, the universal entitlement areas, who would have been newly entitled to free school meals in Wolverhampton, the extended entitlement area, was higher than the take-up of school meals amongst pupils who were estimated (by the local authority) to be entitled to free school meals under the new criteria in Wolverhampton.<sup>7</sup> While this is not a perfect comparison, it suggests that extending entitlement does not increase take-up as much amongst this group of children from less affluent families as making school meals available to all. Evidence from the case studies suggests that this may be because the universal pilot decreased the stigma attached to taking free school meals, because parents were not aware of or did not think they met the entitlement criteria in Wolverhampton or because they were deterred by the application process.

## **Understanding the changes in take-up**

### ***Awareness of the pilot***

Awareness of the pilot among parents was very high. After the pilot had been running for two school years:

- Almost all parents of primary school children surveyed in Newham (99 per cent) and Durham (100 per cent) were aware of the pilot. Most found out about the scheme through communication from the school.
- Awareness of the scheme in Wolverhampton was lower, although 71 per cent of parents whose children were estimated to be entitled to free school meals under the extended entitlement criteria were aware of the pilot. Lower awareness may partly explain the lower take-up of school meals in this area.

### ***Choosing to take up free school meals***

The qualitative case studies identified three approaches to deciding whether to take up free school meals:

- Child-led decision-making. Here, the parental priority was to ensure that the child would eat their lunch, whether that was a school meal or a packed lunch.
- Parent-led decision-making. Parents who made the decision to take school meals as a result of the pilot identified the financial benefits, the reduced burden on parent time, the quality of the meals and the social benefits of school meals as factors that potentially outweighed the preferences of the child.
- Joint decision-making. The parent encouraged their child to try school meals but left it open for them to return to packed lunches if they preferred.

Cost savings were identified in the case studies as the main reason for taking up a free school meal. Other factors included: the choice of food available; the extent to which pupils and parents felt they had control over what children ate; the quality of the food available; social factors; the dining experience; the impacts on parents of taking school meals; and, in the extended entitlement area, the entitlement and application process.

The main reasons given in the survey by the minority of parents in the universal pilot areas whose children did not take school meals every day were to do with food choice and provision. More than half of these parents said that there were not enough meals available that their child liked to eat.

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<sup>7</sup> Note that it is not possible to observe take-up amongst primary school pupils who are predicted to be newly entitled to free school meals under the extended entitlement criteria introduced in Wolverhampton on the basis of evaluation data; nor is it possible to observe the number of meals eaten by pupils who are estimated to be entitled (not just newly entitled) to free school meals in Newham and Durham under the extended entitlement criteria introduced in Wolverhampton from management data.

In the extended entitlement area, cost remained a deterrent for a minority of parents surveyed. School caterers in Wolverhampton reported that the average price of school meals for those who still had to pay rose over the course of the pilot, although the price by year 2 was comparable to that in similar secondary schools in other areas. This increase could have depressed demand for school meals among those who had to pay and, given that not all parents were aware of the pilot, possibly among some who would have been entitled to free meals.

Schools taking part in the case studies identified a number of initiatives that were felt to encourage take-up including: introducing a pre-order system for meal selection; maintaining a strict policy about the contents of packed lunches; involving children in decisions about the menu options; improving the dining experience; offering taster sessions to parents; promoting school meals by emphasising the health and social benefits; and reducing the stigma attached to school meals through, for example, the introduction of a cashless payment system.

These efforts appeared to have had positive effects on parents' perceptions in the universal pilot areas. In the survey, parents in these areas were more likely to rate school meals positively in terms of quality and how healthy they are and to think that a school meal is healthier than a packed lunch. Given the importance of quality of meals in parents' decision-making, these improved perceptions are likely to have contributed to the high level of take-up of meals in the universal pilot areas.

### **Impacts on children's eating habits, health and behaviour**

In the universal pilot areas, the increased take-up of school meals led to a shift in the types of food that pupils ate at lunchtime, away from food typically associated with packed lunches towards those associated with hot meals.

At lunchtime, children were:

- more likely to eat hot food, vegetables, chips or fried/roasted potatoes, and rice, pasta or potatoes not cooked in oil;
- less likely to eat crisps, sandwiches and whole pieces of fruit;
- more likely to drink water and less likely to have soft drinks with lunch.

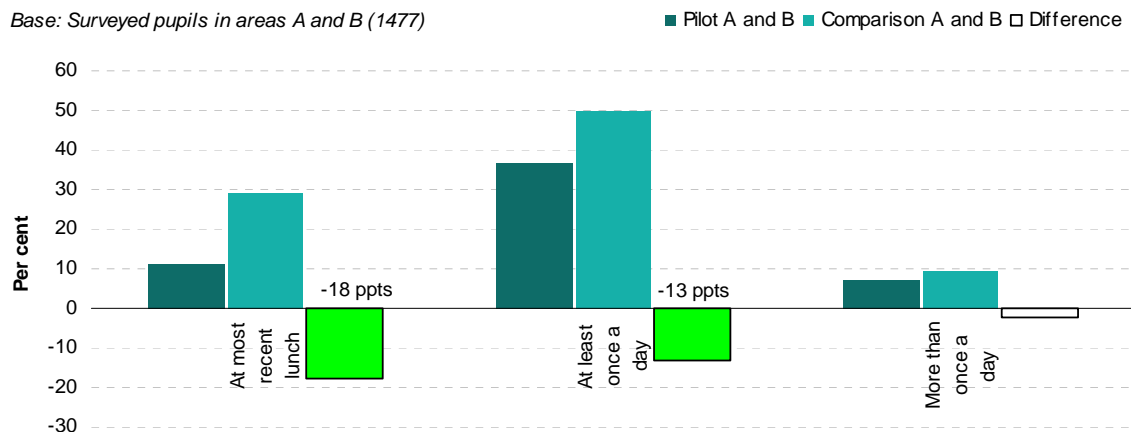
There was little evidence of substitution between a hot meal at lunch or in the evening. The majority of pupils in Newham and Durham had hot food<sup>8</sup> at lunchtime and for their evening meal. Some parents in the case studies did report feeling under less pressure to cook a meal for their child in the evening.

Pupils in the universal pilot areas were also less likely to eat crisps at least once a day on school days (Figure 3). There was, however, no change in the total reported consumption of chips, vegetables or fruit on school days, despite the changes in food eaten at lunchtime.

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<sup>8</sup> It is important to note that hot food is not necessarily more nutritious than cold food; the nutritional value will depend on the content of the meal.

**Figure 3 Impact on eating crisps in areas A and B (Newham and Durham; universal entitlement areas)**



Notes to Figure 3: If the difference between the pilot and matched comparison groups is not shaded green, then the impact estimate is not significantly different from zero at the 5 per cent level.

Source: Data collected from a sample of parents and pupils as part of the longitudinal survey in year 2 of the pilot. These figures relate to pupils in Years 0 (Reception) to 4 at baseline.

The universal pilot was perceived to have had positive impacts on the range of food that children were prepared to eat. Parents surveyed in the universal pilot areas were more likely to agree that their child was willing to try new food. In the case studies, parents commented on the positive impact of the pilot on diets and cooking practices at home, with children tending to be less 'fussy', eating more healthily and asking for new dishes at home.

School staff interviewed in the case studies noted that the universal pilot appeared to have a 'levelling effect' on the quality of lunches that pupils were eating. Staff noticed that there could be quite a difference between the types of packed lunch that children brought to school prior to the pilot. They attributed any differences in the content and healthiness of packed lunches to parents' income levels, perceiving that those on a higher income were able to provide a better-quality and healthier packed lunch than those who were less well off. The pilot was seen to address this by ensuring that all pupils received a meal of a similar standard, variety and quality.

By contrast, extending entitlement to free school meals in Wolverhampton did not show any significant impacts on lunchtime eating habits and had fewer positive effects on parents' attitudes to diet and school meals.

There was no evidence of change in children's Body Mass Index (BMI) over the two year pilot period, nor that the pilot positively affected parents' perceptions of their child's behaviour at home under either pilot approach. There were differing views among participants in the case studies about whether children's behaviour and concentration in the classroom had improved as a result of the pilot. The evaluation did not include quantitative assessments of classroom behaviour.

### **Impacts on children's attainment and absence from school**

The universal entitlement pilot for primary school pupils in Newham and Durham led to a significant increase in attainment for pupils in these areas. The estimates are larger in magnitude and more consistently significant at Key Stage 2 than at Key Stage 1, with pupils in both areas found to make around two months' more progress, on average, than similar pupils in comparison areas.

The universal entitlement pilot not only provided all primary school pupils with free school meals, but also included a range of supporting activities to promote the pilot, encourage the take-up of school meals and support healthy eating. The effects on attainment, and the impacts on diet and eating habits discussed above, could have occurred through the provision of free school meals directly or through the wider activities that accompanied the pilot or both.

The effect of the universal entitlement pilot appears to be stronger amongst pupils from less affluent backgrounds<sup>9</sup> than amongst pupils from more affluent backgrounds. It also appears to be stronger amongst pupils with lower prior attainment than amongst those with higher prior attainment. These findings provide some suggestive evidence that the universal entitlement pilot may help to reduce educational inequalities. This evidence is only regarded as suggestive, because the effects for pupils with different characteristics are not always statistically significantly different from one another.

By contrast, there was little evidence of any significant effect of the extended entitlement pilot on the attainment of pupils in Wolverhampton, either for primary or secondary school pupils. This was true even for children who were predicted to be newly entitled to free school meals.

These results suggest that extending entitlement to free school meals and undertaking any other activities implemented alongside the extension of entitlement criteria may not replicate the positive and significant effects found in the universal entitlement areas for pupils who would have been entitled to FSM under the extended entitlement criteria introduced in pilot area C. This implies that universality, combined with the additional activities undertaken by schools and local authorities as part of the universal pilot, may be key to the improvement in attainment for these pupils in Newham and Durham.

It is clear that reducing the amount of time that pupils are absent from school is not the route through which the universal entitlement pilot improved attainment, as the pilot had no effect on the amount of time pupils were absent from school. This suggests that the increases in attainment evident in the universal pilot areas must arise as a result of improvements in productivity whilst at school, although the evaluation was not able to identify what form these improvements in productivity might have taken.

## **Value for money**

The total running cost of a programme is thought to provide a good indication of its likely cost in the long term. The total running cost of the FSM pilot was estimated to be £12.1 million in Newham and £16.6 million in Durham (the universal entitlement areas) and £2.0 million in Wolverhampton (the extended entitlement area), over two years. These figures are equivalent to around £220 per primary school pupil in Newham and Durham and to just under £40 per pupil in Wolverhampton.

The 'deadweight' cost of the pilot is the cost associated with providing free school meals for pupils whose parents would have paid for them in the absence of the pilot. This amounted to £3.8 million in Newham (around one-third of the total running costs), £7.6 million in Durham (just under half of the total running costs) and £0.72 million in Wolverhampton (just over one-third of the total running costs).

It is difficult to estimate the fixed costs of the pilot with any degree of accuracy, but it is clear that they are relatively small compared with the overall running costs. The figures in the report suggest that reasonable estimates may be around £2500 per school to upgrade kitchen and dining facilities and around £150,000 per local authority to promote and support the pilot.

The extended entitlement pilot yielded little in the way of positive benefits for any of the outcomes considered in this evaluation. Thus it seems clear that it does not offer good value for money.

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<sup>9</sup> 'Pupils from less affluent backgrounds' here refers both to those who are eligible for free school meals under the old criteria and those who are newly entitled under the extended entitlement criteria introduced in Wolverhampton (children living in households with parent/s or carer/s claiming Working Tax Credit and whose annual income did not exceed £16,040 in 2009-10 or £16,190 in 2010-11).

The universal entitlement pilot gave rise to significant increases in a variety of outcomes. To assess whether it offers good value for money, it is necessary to translate these benefits into a common metric, such as a cost per percentage point (ppt) impact. This enables the FSM pilot to be compared with other interventions designed to affect similar outcomes.

The outcomes that can be most readily compared with those in other studies are the proportion of pupils reaching the expected level of attainment in English and maths at Key Stages 1 and 2. The universal entitlement pilot led to a 1.9ppt increase in the proportion of pupils reaching the expected level in reading at Key Stage 1, a 2.2ppt increase for maths at Key Stage 1, a 4.0ppt increase for English at Key Stage 2 and a 5.5ppt increase for maths at Key Stage 2. At a cost of around £112 per pupil per year, this suggests that it has cost £50 to £60 to obtain a 1ppt increase in attainment at Key Stage 1 and £20 to £30 to obtain a 1ppt increase in attainment at Key Stage 2. Table 2 provides the full details of these estimates.

<b>Table 2 Value for money of the universal pilot</b>				
	<b>Key Stage 1</b>		<b>Key Stage 2</b>	
	Reading	Maths	English	Maths
Impact (ppt)	1.9	2.2	4.0	5.5
Cost per 1ppt impact	£59	£51	£28	£20

Comparing these figures with those for selected other interventions designed to affect similar outcomes suggests that the universal entitlement pilot delivered better value for money (in terms of higher attainment of pupils on average) than some educational interventions, but worse value for money than others. It is clear that the universal entitlement pilot provides better value for money than the extended entitlement pilot (which did not significantly improve any of the outcomes considered in this evaluation), but the evidence raises questions over its value for money compared with some other initiatives.

## Conclusions

It is important to note at the outset that the Free School Meals pilot was accompanied by substantial investment in catering facilities and activities to encourage the take-up of school meals by schools and local authorities, supported by the School Food Trust. Activities included holding school meal taster sessions, promoting the pilot to parents and enforcing strict packed lunch policies. This means that the impacts of the pilot cannot be attributed solely to making meals available to some or all pupils free of charge, but rather to the whole pilot approach. Any roll-out of the pilot would thus need to consider the supporting activities that might be necessary to achieve the same impacts.

A number of key points underpinned successful implementation of the pilot:

- Effective communication and partnership working between all parties involved in delivering the pilot. School staff involved in delivering the pilot identified the need for local authority staff and senior school managers to provide clear, accurate and timely information, to be available and responsive, to consult with the relevant staff, and to share information and updates.
- Building sufficient staff resource and capacity. This was achieved by having the appropriate levels of staff with the right skills.
- Being prepared to trial new approaches to delivery until the right solution was found. This helped schools develop systems to manage the increased volume of free school meals being delivered.
- Being able to monitor demand accurately. Cashless payment systems, such as Capita SIMS, were a helpful resource in monitoring take-up in Wolverhampton.

The universal pilot approach was very successful at increasing the take-up of school meals among primary school pupils, with most pupils taking school meals. In contrast, the extended entitlement pilot did not succeed in significantly increasing take-up among entitled pupils. The evaluation findings also show that only the universal entitlement approach had positive impacts on children's diet and attainment. It therefore appears that it is only through the universal provision of free school meals, and the accompanying activities undertaken by schools and local authorities in the pilot areas, that outcomes have improved.

Of particular note is the fact that the universal pilot approach improved outcomes among children from less affluent families: it increased the take-up of school meals among pupils who were already eligible for free school meals before the pilot was introduced and had positive impacts on diet among these pupils. School staff in the qualitative case studies also noted that the pilot had a 'levelling effect' on the quality of lunches eaten by pupils from different backgrounds; the implication was that while the quality of packed lunches varied considerably by socio-economic background, all pupils taking school meals had access to a nutritious, balanced meal, thus reducing socio-economic differences in the quality of food eaten at lunchtime. The improvements in attainment in the universal pilot areas also appeared to be greater for children from less affluent backgrounds and those with lower prior attainment. The evaluation findings thus provide some suggestive, but not conclusive, evidence that rolling out the universal pilot might help to reduce educational inequalities. Evidence from the evaluation shows that it would be a more effective way of trying to do so than extending entitlement to free school meals to a small group.

The shift in lunchtime eating habits in the universal pilot areas from packed lunches to school meals underlines the importance of balanced, healthy school menus. For example, the restrictions on starchy food cooked in oil and deep-fried foods help to ensure that these types of food are not consumed too frequently, while offering desserts with fruit content may help to counteract the decrease in children eating whole pieces of fruit as a result of the pilot. As new academies and free schools no longer have to comply with the nutritional standards, any roll-out of the universal pilot needs to consider how best to ensure that all school menus offer healthy, balanced meals.

It is important to note that the mechanisms underlying the improvements in attainment observed in the universal pilot are not clear. Neither the universal nor the extended entitlement pilot reduced the amount of time pupils were absent from school, suggesting that the increases in attainment must arise as a result of improvements in productivity whilst at school. The evaluation did not find any evidence that this increased productivity resulted from better pupil behaviour, as neither the universal nor the extended entitlement pilot appeared to positively affect parents' perceptions of children's behaviour. The evaluation did not include a quantitative assessment of classroom behaviour though and, of course, it is possible that classroom behaviour might have improved in a way that was not picked up by changes in parental perceptions of behaviour. Nor did the changes in lunchtime eating habits translate into any quantifiable health benefits (for example, in terms of Body Mass Index), at least not during the lifetime of the pilot. It is therefore difficult to identify the underlying causes of the improvements in attainment that have been found, and consequently which elements of the universal entitlement pilot will be key to its success in any future roll-out.

The universal pilot approach cost £12.1 million in Newham and £16.6 million in Durham, equivalent to around £220 per primary school pupil, over two years. Of this, 32 per cent in Newham and 46 per cent in Durham was deadweight cost (that is, involved paying for meals that would otherwise have been paid for by parents). It is clear that the universal entitlement pilot delivers better value for money than the extended entitlement pilot, which did not significantly improve any of the outcomes considered in this evaluation. Compared with other initiatives targeting similar outcomes, the picture is more mixed. The universal entitlement pilot appeared to deliver better value for money (in terms of higher attainment of pupils on average) than some educational interventions, but worse value for money than others. This raises questions about its overall value for money compared with other initiatives.

**Additional Information**

The full report can be accessed at <http://www.education.gov.uk/publications/>

Further information about this research can be obtained from

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This research report was commissioned before the new UK Government took office on 11 May 2010. As a result the content may not reflect current Government policy and may make reference to the Department for Children, Schools and Families (DCSF) which has now been replaced by the Department for Education (DFE).

The views expressed in this report are the authors' and do not necessarily reflect those of the Department for Education.