



Encouraging better nutrition, and cleaner plates

Around a quarter of school food served ends up in the bin: how can we stop school children leaving so much on their plates?

Amy Fetzer, Footprint Intelligence, reports

Encouraging fuller bellies, and cleaner plates

It's one thing to provide school children with a plate of delicious, nutritious food, but it's another to get them to eat it.

Younger diners are easily distracted, more focussed on having fun with their friends, and on getting outside, than on concentrating on finishing their food.

Fast and furious

Meanwhile, busy schools with packed schedules and often-tight dining spaces need to feed children as quickly as possible. In the state sector, year groups tend to have tightly allocated time slots with pupils channelled through in well-organised chaos. For example, in secondary school environments, it's not unusual to have a scant 50 minutes to get well over a thousand pupils served and fed. Even in independent schools, packed timetables of lessons, sports and lunchtime clubs squeeze the time available to eat.

We've been working closely with Chartwells across both its state and its independent school businesses to do an in-depth piece of research looking into food waste reduction across a range of school environments, identifying the shared and unique challenges and opportunities for each school sector. And the time available to eat appears to be a common factor in contributing to plate waste. For example, in focus groups we ran with pupils at state primary and secondary schools earlier this

year, the majority of children said they felt rushed eating their school lunch.



to serve over a thousand pupils

Then there is the level of noise created by funnelling so many children into one (typically echoey) space. In some state secondaries, this can become riotous as stewards corral children into queues along corridors as they wait their turn, keeping order and lively pupils in line with a bellowing stream of instructions. In the colder months, dining halls in state primaries can also be uncomfortably cool, as doors may be left open for ventilation and to enable pupils to quickly easily exit to get outside.

All in all, it's a recipe for a hectic, highly stimulating experience not conducive to pupils lingering over thoughtfully-prepared food to savour and enjoy, and to explore new food textures and flavours.

Plate waste = over 70% of school food waste

It's no surprise then to learn that these factors contribute to making plate waste responsible for the vast

majority of food waste coming out of school kitchens. And, with food poverty a persistent problem, and every kilo of food waste responsible for over three times its own weight in climate-harming emissions, it's an issue operators like Chartwells are taking seriously.

In our audits of a selection of state primaries and secondaries in the Chartwells Schools' portfolio – its state sector business – plate waste can account for over 70 per cent of school kitchen's food waste. And the volumes left behind can be equivalent to throwing away around a quarter of the food served.

Our research indicates the hectic dining environment is an important factor. One way to address this in primary schools is by having staff members actively engaging with pupils in the dining hall to help keep them focussed, such as by eating with them or encouraging them to eat more of their meal. In secondaries, longer lunch services can help, if timetables and catering team hours can be adjusted to support this.

Other contributory factors are familiarity and dietary norms. Vegetable consumption in young people is typically low. Research Chartwells undertook with over 2,000 pupils found that, despite them being readily available during school lunch, only 38 per cent of state pupils reported eating five portions of fruit and vegetables a day, compared to 68 per cent for independent school pupils. This

data is in line with insight from the National Diet and Nutrition Survey which shows that 11-18 year olds are only eating 2.8 portions of fruit and vegetables a day.

"In a primary school serving around 4,000 covers a month, plate waste can stack up to over 1,000 meals worth of food left on pupil's plates every month."

Yet Chartwells' classroom research shows that children want to eat healthily, with 67 per cent of state pupils saying they want to eat a healthy and balanced diet. However, less than half (46 per cent) get the chance to try new food at home every week. In state primary schools, where vegetables portions are mandatory, this unfamiliarity appears to contribute to making vegetables a key cause of plate waste. Pupils in our focus groups also reported preferring vegetables when they were dressed with flavour enhancers like butter, salt and oil – practices that are incompatible with adhering to School Food Standards. "As a nation, we need to eat more fruit and vegetables," observes Chartwells Head of Nutrition and Sustainability Olivia Pratt.



“We know one of the reasons children don’t tend to eat enough vegetables is simply because they are unfamiliar. Our tasting workshops, which provide access to different types of food in fun, educational formats, help to drive familiarity, thus reducing waste and increasing the nutritional benefit of the meals. We’re encouraging children to try vegetables that they haven’t seen before in a fun, no-pressure environment... Parents are always excited, and sometimes surprised, to hear their children have tried things in the school setting that they wouldn’t at home. Whilst teachers often tell us that our workshops encourage children to become more adventurous over lunchtime too.”

Plate waste is also an issue in independent school environments. Paying parents understandably expect their children to be provided with a generous, wide-ranging selection of quality, nutritious dishes. This can inadvertently drive plate waste as supporting pupils in accessing plentiful nutrition, much of it through self-service stations, can lead to self-overserving, because time-pressed pupils don’t want to have to return to the counters if they want more after finishing their first serving. This can send plate waste in independent schools spiralling to over 80 per cent, and it’s not uncommon to see untouched items, from whole fruits to dessert pots and pristine plates of pasta, go straight into the bin as pupils

run out of time or appetite to finish their trays of food. And, with some schools feeding close to 65,000 boarding pupil covers a month, this can equate to more than 10,000 meals worth of food being thrown away just from pupils’ plates.

The power of partnerships

Tackling plate waste can be a tricky issue for caterers to control on their own, impacted as it is by school dining environments, timetables, and complex pupil, teacher and school cultures relating to food, its value, and the relative importance (or not) of wasting it. This is why working in partnership with schools is crucial.



Education about food – including nutrition and the importance of different food groups and a varied diet – needs to be a key element of the school day, delivered through PSHE (Personal, Health, Social and Environment) and food technology lessons, as well as through partnerships with external parties, such as caterers. One way Chartwells supports the work schools are doing is through its ‘Beyond the Chartwells Kitchen’ nutrition, health, and food education programme. This delivers workshops on topics including nutrition and health, cooking and food, and sustainability, reaching over 100,000 pupils each academic year.

Reducing food waste by 40 per cent

Introducing food tracking, altering practices and running educational workshops has helped Chartwells Independent to reduce its food waste at St Faith’s School, Cambridge by over 40 per cent.

Working with the school in a true partnership, 40 educational workshops have been delivered over two years, reaching almost 1,000 pupils, while assemblies and cross learning in classrooms reinforced these messages to embed food saving into the food culture. Alongside this, daily plate waste totals were shared through a display in the dining room created by pupils and the catering team.

Chartwells Independent reports that “the transparency between caterers, teachers, pupils, and parents, has led to a greater appreciation and understanding of the food quality and environmental impact of the dishes served each day.”

Harnessing pupil passion

As seen in **Reducing food waste by 40 per cent**, awareness campaigns are a powerful tool.

Research shows they can lead to reductions in pupil plate waste of 35 per cent. Chartwells’ survey

found that 61 per cent of all pupils are concerned about food waste and its impact on the environment. Engagement with pupils during our research (through focus groups and/or engagement with pupils as they were dining) typically indicated a strong untapped passion to tackle food waste, and a huge amount of excitement to get started.

Pupils were motivated by issues (in order of priority) including food poverty; the fact they felt it was immoral to waste food when others were going hungry, as well as the impact on the planet. Our Chartwells plate waste interventions will therefore build on previous work to include harnessing pupil eco-councils, feeding back food waste stats and facts, and competitions to foster engagement.



Plate waste might seem like a multifaceted challenge, but there is plenty of evidence that, by working together to change practices and cultures, caterers and schools can help prevent good food from being wasted.

Top tips for engaging pupils in reducing plate waste:

- Feedback food waste stats in a way that is meaningful to pupils – such as the equivalent number of meals. Weights won’t mean much to young people. Focus on the positive (e.g. meals saved, not wasted), and share their progress so they know their efforts are making a difference.
- Include images of anthropomorphised food i.e. pictures that depict happy and sad food – a Winnow/LSE study found that this had significant impacts on behaviour, and contributed to reducing food waste by up to 35 per cent in other food settings.
- Challenge pupils to save a certain amount of meals that is meaningful to them (adjusted according to the school e.g. enough to feed the English football team for one week; enough to feed a whole class). If possible, provide a prize (e.g. house points/a chosen treat/an extra few minutes for their lunch break one day).



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