

DR BEE WILSON, TASTED - SUPPLEMENTARY WRITTEN EVIDENCE (FDO0147)

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SUPPLEMENTARY EVIDENCE FROM TASTED: GENERATING A PREFERENCE FOR VEGETABLES AND FRUITS IN CHILDREN

I am writing to thank you for the opportunity for me to speak to the committee about TastEd on March 7th. Helping children to love whole vegetables and fruits (and other healthy non-ultra-processed foods) is an essential piece of the jigsaw of reforms that need to happen to improve diets in the U.K. As Dr. Lucy Cooke wrote in a 2007 review of the evidence on what determines healthy eating in childhood, children 'like what they know and they eat what they like'.¹

We cannot improve a child's diet without enabling them to learn to enjoy healthy foods – something which we know happens through repeated positive exposure in a no-pressure environment.² Our preferences shape our food habits.³ I am attaching a list of some of the evidence of the effectiveness of **taste education** (a term which is used interchangeably with **sensory food education**) in improving a child's 'willingness to try' and liking of vegetables and fruits. As I mentioned to the committee, TastEd is a U.K adaptation of Sapere, a system of taste education which has been taught in many countries including Sweden, Norway, France and Finland for decades. Teachers say that the majority of children in every TastEd lesson do try new foods. We have seen children who were reluctant eaters take their first bite of carrot or tomato – or even cabbage – and enjoy it.

Since it was founded as a charity in 2019, TastEd has seen **rapid growth and national recognition**. In 2023, we won the 'Food Innovation' award at the BBC Food and Farming Awards. We are also featured in the Early Years pages of the Department for Education: <https://help-for-early-years-providers.education.gov.uk/get-help-to-improve-your-practice/sensory-food-education>. The National Food Strategy recommended that sensory food education should be taught to all children of Nursery and Reception age.

Key points:

TastEd has grown from 10 schools in 2019 to **more than a thousand** schools and nurseries signed up today, indicating an appetite for taste education from teachers and nursery practitioners.

The programme is **fully scalable**. Our resources – a library of more than 100 lesson plans, PowerPoints and more, all tailored to deliver the existing national curriculum on food in England (from ages 3-11), are freely accessible to school, nurseries and HAF providers, as are our teacher training videos (we include an example of a training video below).

¹ Cook, Lucy (2007) 'The importance of exposure for healthy eating in childhood: a review', *Journal of Human Nutrition and Dietetics*, <https://onlinelibrary.wiley.com/doi/10.1111/j.1365-277X.2007.00804.x>

² Birch, L.L. & Marlin, D.W. (1982) I don't like it; I never tried it: effects of exposure on two-year-old children's food preferences. *Appetite* 3, 353–360; Galloway AT, Fiorito LM, Francis LA, Birch LL. "Finish your soup": counterproductive effects of pressuring children to eat on intake and affect. *Appetite* (2006) 46(3):318–23. Wardle, J., Herrera, ML., Cooke, L. *et al.* Modifying children's food preferences: the effects of exposure and reward on acceptance of an unfamiliar vegetable. *Eur J Clin Nutr* 57, 341–348 (2003); Ahern, Sara Marie (2013) *Learning to like vegetables: the importance of exposure in the food preference development of preschool children*. PhD thesis, University of Leeds.

³ Drewnowski A. (1997) Taste preferences and food intake. *Annu. Rev. Nutr.* 17, 237–253.

Because the resources and training videos are free to access, the only expense for schools is purchasing vegetables and fruit, estimated at under £50 per class of 30 pupils for five TastEd lessons a year, even with rising food costs. This money could be diverted from some of the existing 'sports premium' money allocated to primary schools, thus not requiring any extra public money. The purpose of this sports premium money is to help children lead 'healthy active lives', something which cannot happen without children eating healthy diets as well as engaging in physical activity. There is evidence from Durham University that many schools have not complied with the spending and reporting requirements of the sports premium money and in 2018 Schools Week reported widespread misspending of the money.⁴ To reallocate a small percentage of this money (which can amount to more than £27 000 a year for some primary schools) to food education would be a good investment in child health. £1500 would cover the vegetables and fruits for every year group from Reception to Year 6 for at least five sessions of TastEd for a primary school with 2-form intake. £3000 would cover at least 10 lessons (and possibly many more, depending on the ingredients purchased).

We are asking for your support in helping TastEd to become a universal entitlement for children in the U.K. through:

- a) TastEd (taste education with vegetables and fruits) becoming the DfE recommended programme of study for primary schools to deliver food and nutrition education as set out in the national curriculum in England.⁵
- b) Provide funding to schools to fund the purchase of vegetables and fruits for taste education, this could be a reallocation of a portion of the 'sports premium' money for primary schools.
- c) Finally, we are asking for government funding to support the roll-out of TastEd across the country (we have got this far with a small team and the charity's trustees but to reach and support every primary school, we would need to expand our team and would welcome the government's support).

We would be delighted to meet and discuss this further with you and also warmly invite you to come and see TastEd for yourself in a school setting.

SUPPLEMENTARY EVIDENCE:

1. **Video evidence demonstrating how TastEd works:**

a. Introduction to TastEd

<https://www.youtube.com/watch?v=L8HeOje8Cvg&t=1s>

b. Example of a Teacher Training Video for Early Years Practitioners

<https://youtu.be/tt3j3jJ9C6w>

c. TastEd: What Is It? Head Teacher Jason O'Rourke explains the benefits of sensory food education from a teacher's perspective

<https://www.youtube.com/watch?v=CjJ19wfTqCk&t=1s>

2. **Evidence on the effectiveness of taste education/sensory food education in increasing a child's willingness to try new foods/enjoy vegetables and fruits.**

a. Evidence specific to TastEd:

The 'ME, HENRY & TastEd' project: Final report

In 2022-2023, researchers at the Universities of Roehampton, Stirling and Northumbria studied the impact of TastEd in three London primary schools alongside two other interventions (Mentored exercise and parental support in healthy lifestyles). Here are some sections of the report on TastEd:

Overall teachers across the three schools ran 29 [lessons]... between October 2022 and February 2023. It was found that 85% of children who attended the lessons tried a new fruit or vegetable during the sessions and that 100% of children liked a fruit or vegetable that they tried during those sessions.

⁴ Sport and Recreation Alliance (2019) The PE and Sport Premium: An Assessment of Primary Schools' Spending and Reporting. Available at: <http://sramedia.s3.amazonaws.com/media/documents/d8ef628a-861f-47c3-9178-6ecb389b95b3.pdf> ; <https://schoolsweek.co.uk/investigation-schools-accused-of-fudging-sport-premium-funding/>

⁵ As a point of comparison, here is an example of the DfE recommending phonics schemes: <https://www.gov.uk/government/publications/choosing-a-phonics-teaching-programme/list-of-phonics-teaching-programmes>

School 1 (Feedback from J - a Yr 4 Teacher at Sc1Y4) J and five other members of staff from Sc1Y4 attended a TastEd training session... Five... said they felt confident about delivering a TastEd lesson, with the final attendee feeling very confident.

Pupil impact: J reported that the pupils were very receptive due to the golden rules of TastEd (no one has to try, and no one has to like), which allowed pupils the freedom to explore the fruit and vegetables without feeling pressure. During the first couple of TastEd lessons children become very emotionally charged by the sight of the food and had to be calmed down, but over the course of the lessons they became familiar with the process. A few pupils from the class refused to try any food from beginning to end. However, they were still completely engaged in the lesson and J felt that watching their friends try new foods was a good learning experience. J felt that traditionally D&T has often focused on baking and that healthy eating education had typically been theoretical, whereas the hands-on approach TastEd adopts really engages pupils with the experience.

Teacher impact: J found the lesson plans were really easy to use, with the consistency of the lessons making them easy to deliver. J initially felt nervous as TastEd was new to her; however, they said it was easy to run and they loved doing the sessions.

School 2 (Feedback from teacher F - a Yr 4 teacher at Sc2Y4)

F and six other members of staff from Sc2Y4 attended a TastEd training session... Five attendees said they felt confident about delivering a TastEd lesson, one attendee felt very confident, and the final attendee did not provide an answer.

Pupil impact: F reported that the pupils thoroughly enjoyed the sessions with most pupils trying many new fruits and vegetables. All the pupils gave trying new things a go and they did not want it to end. The pupils really looked forward to the lessons, they went really smoothly because they all just loved it. All the pupils were very engaged, even pupils with sensory needs, the golden rules helping to create a safe environment. One child, with autism, thanked his teacher for teaching him about melons. He engaged really well with the session and although he normally would work alone, he was more inclined to work with a group and participate in the sessions. Pupils told F that after the sessions they had gone home and made salads with the different foods they had tried in class.

Teacher impact: F shared that the resources were very well structured and sequential, they enjoyed delivering them, especially with the pupils asking for more TastEd lessons. The only barrier F had was finding the additional time to prepare for the lessons, including buying ingredients.

School 3: (Feedback from teacher C – a Yr 5 teacher at Sc3Y5)

C was the only member of staff at Sc3Y5 to attend the TastEd training session on 07/12/2022. C felt very confident after the session with

regard to delivering TastEd lessons: if support staff had been able to attend, they would have benefitted from the opportunity to practise the lessons.

Pupil impact: In the first few sessions pupils were a bit worried about trying new foods but by the end of the 10 sessions everyone was keen. The pupils really liked the idea that they did not have to try and did not have to like - this made them feel comfortable. The pupils took to these rules and made the sessions inclusive; no one was forced to try the foods they did not want to. All children were engaged with the sessions. The pupils were desperately sad when the lessons finished.

Teacher impact: The lessons were clear and easy to follow using the slides. C said it was a moment to breathe in the week as no planning was required. The repetitive structure meant she knew what was coming. It was nice to let the pupils explore and let them be excited and that from a teachers' perspective "We absolutely loved the sessions".

b. Evidence about taste education around the world:

- **A randomised control trial in Iceland found that a 7-week course of taste education was a simple and 'non-invasive' way to improve problematic eating habits for children with an average age of 10, many of them on the autistic spectrum or with ADHD.**

(*Nutrients* 2022, 14(19), 4000;
<https://doi.org/10.3390/nu14194000>)

- **A study of more than a thousand children in The Netherlands found that a short course of taste education led to children tasting and knowing more unfamiliar foods and healthy foods compared to a control group.**

(Battjes-Fries et al 'Effect of the Dutch school-based education programme 'Taste Lessons' on behavioural determinants of taste acceptance and healthy eating', *Public Health Nutrition*, 2015: 2231-2241

- **Research from the University of Eastern Finland (from May 2018) found that sensory-based food education such as TastEd increased the willingness of 3-5 year-olds to try berries, vegetables and fruits – especially among children whose mothers had a lower educational background.**

The researchers in Finland notes that this kind of 'food education method also seems to improve the eating atmosphere in kindergarten groups. This encouraged children who, according to their parents, were picky eaters, to choose a more diverse selection of vegetables, berries and fruit on their plate,"

(Details of the research can be read here: <https://www.uef.fi/en/-/aistilahtoinen-ruokakasvatus-innostaa-paivakoti-ikaisia-syomaan-kasviksia-marjoja-ja-hedelmia>. The full paper is: Kaisa Kähkönen, Anna Rönkä, Mika Hujo, Arja Lyytikäinen, Outi Nuutinen. 'Sensory-based food education in early childhood education and care, willingness to choose and eat fruit and vegetables, and the moderating role of maternal education and food neophobia'. *Public Health Nutrition*, published online 8 May 2018)

- A 2010 study from France found that a short course of sensory education **increased children's preference for complex flavours although the effects were not lasting suggesting that more than one course of taste education will be required for lasting change to eating behaviours.**

(Caroline Reverdy, Ep Koster et al 'Effect of Sensory Education on Food Preferences in Children', *Food Quality and Preference*, 21: 794-804)

- **A 2021 study from Norway found that introducing one year-olds to celeriac using sensory food education increased the children's acceptance of the vegetable.**
- (Sissel H. Helland et al 'Wow! They really like celeriac! Kindergarten teachers' experiences of an intervention to increase 1-year-olds' acceptance of vegetable', *Appetite*, Volume 166, 2021) A 2010 study from **Finland** involving **8-12 year-olds** found that over a period of 1.5 years, children who had received two waves of sensory food lessons (1st wave of 10 lessons followed by a second wave of 5 lessons) **were more willing to try a larger group of unfamiliar foods** than a control group. The effects were **strongest for the youngest children**, suggesting that the younger that children can have access to TastEd, the better. (Sari Mustonen and Hely Tuorila 'Sensory Education Decreases Food Neophobia Score and Encourages Trying Unfamiliar Foods in 8-12 Year-old Children', *Food Quality and Preference*, Volume 21, June 2010: 353- 360)
- **A 2013 study from South Korea** found that a programme of 12 40-minute sensory education lessons resulted in **positive changes** in children's attitude to food. The children who had received the education were **less neophobic about food** than they were before the lessons (and also in comparison with a control group). Neophobia refers to a person's fear of new foods.

The authors wrote: 'One of the goals of sensory education is to allow children to familiarize themselves with the distinct tastes of different foods and to enjoy culinary diversity ... Sensory education may eventually have positive effects on children's diets in terms of greater variety and better quality of foods. The increased willingness to try unfamiliar foods may lead to a healthier diet'.

(Taejung Woo and Kyung-Hea Lee 'Effects of Sensory Education

Based on Classroom Activities for Lower Grade School Children',
Nutrition Research and Practice, August 2013: 336-341).

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