Chapter 2
Exploring Food Education in the English Primary Curriculum

Sue Miles-Pearson

Abstract There have been a lot of changes over the years within the English primary education system, and this chapter investigates what impact this has had on design and technology (D&T) and in particular the food technology education element. I am going to reflect on previous research in 2009 on teaching food education with university initial teacher education (ITE) trainee teachers. I will then replicate this research to explore if, and how, the results have altered in 10 years and why this is significant to us in how we move food education forward.

For the second part of this chapter, I have contacted a spread of 25 primary schools across England to find out just what food education is being taught and how it varies throughout the age phases. I am going to be looking at the different primary age ranges, firstly early years (3–5 years old). This area will focus on nursery and reception classes and the early year's framework that they follow, concentrating on what skills are being both taught and learnt. Within Key Stage 1 (5–7 years old) and Key Stage 2 (7–11 years old), I will reflect on the content from the current national curriculum in England.

My expectation is that my research will enable myself, and others, to gain an overview and a better understanding of what changes have occurred during the last almost 10 years. The later part of this chapter considers food education currently being taught across England in early years and primary schools. Literacy and numeracy have a dominant focus in English primary schools, and I want to see if this has had an impact on the teaching of food education.

Keywords Food teaching · Primary schools · England · National curriculum Food technology · Cross-curricular

S. Miles-Pearson (✉)
University of Roehampton, London, UK
e-mail: s.miles-pearson@roehampton.ac.uk

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The Primary National Curriculum

Food education, taught as cookery, was first introduced in the English schools in the nineteenth century. This later became home economics, which included textiles and covered not only learning how to cook but also how to clean and launder clothes, in secondary schools in 1985 (Her Majesty's Stationary Office, (HMSO), 1985). It was intended to help pupils prepare to be a good homemaker, which was aimed mainly for the girls. Similarly, craft, design and technology (CDT) (HMSO, 1987) aimed at helping pupils become more proficient with tools in woodwork, metalwork and generally building skills and was taught mostly to boys. However, the government realised the benefits of having all these specialisms (Department of Education and Science (DES), 1990), and by 1990 and the introduction of the national curriculum (DES), it was decided that all of these skilled subjects should be brought together under the umbrella term of design and technology, making it more of an inclusive subject for all pupils.

It was not long before secondary schools found that the pupils who were coming into Year 7 did not have the skills that they needed to embark in the D&T lessons and teachers needed to teach basic skills using simple 'focused practical tasks'. Skills such as how to thread a needle and sew a basic stitch within textiles; learning skills and techniques on how to saw, sand and join pieces of wood together. Within food technology learning simple cooking skills like, rolling, kneading, blending, creaming, whisking and cutting. All of which took up a lot of value lesson time. Thus, D&T was introduced into primary schools, so they could learn the basic life skills they needed before going to secondary school (British Nutrition Foundation (BNF), 2017). But has it been as embraced by the primary schools as we in the profession would have hoped? Unfortunately, it is not being taught as much as we would have liked, whether this is because of the class teachers lacking in confidence and personal skills to be able teach D&T or whether the strong emphasis on teaching the core areas of English and mathematics has had an impact, leaving very little time for the wider curricular subjects, or could it be that a lot of organisation and resources are needed? The Design and Technology Association founded in 1989 (Design and Technology Association, 2018) currently provides a bounty of resources to support educators teaching D&T to both primary and secondary schools.

In 2012 I was fortunate enough to be asked to be a part of the working party to revise the primary D&T programmes of study in the national curriculum for pupils aged 5–11 years (Department for Education (DfE), 2013). Unfortunately, the government appeared to want to take food technology out of D&T curriculum; but after a lot of lengthy discussions, the outcome was that, through a variety of creative and practical activities in D&T, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts and use a wide range of materials and components, including construction materials, textiles and *ingredients*, according to their characteristics (DfE, 2013, pp. 2–3).

However, it also introduced a new section called cooking and nutrition as part of their work with food which, as the title suggests, had a different focus to the previous 'food technology' component. It aimed to ensure that the pupils learn the 'principles of nutrition and healthy eating, including where food comes from and how to make some basic dishes' (DfE, 2013, p. 3). There is also a school of thought that children in their school should be encouraged to grow the vegetables that they use in the kitchen (Baker & Shelley, 2013). Nevertheless, the working party was not allowed to embed 'cooking and nutrition' within D&T; it had to be a stand-alone section at the end focusing on 'learning to cook'. The English national curriculum states:

> Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life (DfE, 2013, p. 4).

In the next section, recent research is discussed looking at comparative results from identical research carried out in 2009 (Rutland & Miles-Pearson, 2009). I anticipate that my current research (2018) will reflect as to whether the English primary national curriculum revision of 2013 has made a difference to our research results from almost 10 years ago and if in fact food lessons have changed: whether this is through what they are cooking or how they are approaching the subject or if there has been a change in the amount of food sessions that are being taught.

2009–2018: Potential Changes in the Position of Food in the Primary School Curriculum

In 2009 a research project 'The position of food in the school curriculum: implications of the Review of the Primary Curriculum in England' (Rutland & Miles-Pearson, 2009) was completed. Ten years on (2018), the research has been repeated to see if the views of the students and the primary schools have altered in respect to the importance of food in the primary curriculum. It focuses on what the ITE students had observed or taught in relation to food technology in the primary school. These students for both sets of research data were undergraduate students and postgraduate students in primary education at the University of Roehampton. In the original research 10 years ago, the total number of students that took part in the cohort was 650. Due to the climate change in teaching in England, there has been a host of different routes into the profession, and the overall number of ITE students has greatly reduced; evidence has shown at least 29% less applications for teacher training degrees over a 1-year period from 2017 to 2018 (Times Educational Supplement (TES), 2018). However, I decided to proceed with the research to see how attitudes have changed about teaching food in the primary school. The number of students that participated in the current research is 450.

The results from the research are set out below, each table referring to a different question. As with the original results (Rutland & Miles-Pearson, 2009), they have

been organised in age ranges separating nursery and reception followed by each year group up to Year 6. Although we were looking at the national curriculum, early year's classes have been included, as we wanted to see if they were being prepared with the basic skills and knowledge that they would need for Year 1. I will use my current results to reflect on the previous tables and discuss my findings.

Question 1: 'Have you observed any food technology sessions being taught in your placement schools? What was the content of the sessions being taught?'

In Table 2.1 of the original research (Rutland & Miles-Pearson, 2009), Key Stage 1 (Years 1 and 2) activities show some progression in the skills and knowledge needed, although the main difference in the early years was the variety of things that the children were making, i.e. tortilla wraps and pancakes. In the current research (Table 2.2), we can see that there has been very little progression from the reception experience.

In Table 2.1 of the original research (Rutland & Miles-Pearson, 2009), Key Stage 2 (Years 3, 4, 5 and 6) activities show that there was not actually much of a progression in the variety of food that was being cooked, although there seemed to be more opportunity to develop the skills and knowledge from prior learning when the children were in upper Key Stage 2 (Years 5 and 6). Reflecting on the information within the current research (Table 2.2), we can see that there is not much of a selection of food being taught, the focus that is being taught has a strong link to other curriculum subjects, for instance, looking at instructional writing in literacy, weighing and measuring for mathematics and reversible and irreversible change in science; and themes from history looking at food in other countries, although they have started to look at how food is grown in Year 5. Comparing the results of Tables 2.1 and 2.2, there seems to be a distinct diminishment of the amount of food being taught in the primary classroom, with a lot of repetition in the skills being taught.

Question 2: 'Have you taught any food technology sessions in your placement schools? What was the content of the sessions being taught?'

In Table 2.3 for the previous research (Rutland & Miles-Pearson, 2009), we looked at what was being taught in the different age phases. Interestingly, in the previous research the students had taught a wide range of cooking in nursery, compared to just sandwiches being taught in reception. However, when we observe these phases in Table 2.3, we can see that there is a lot more of an even spread of cooking being reported and skills and knowledge being taught. The British Nutrition Foundation (BNF, 2019) states as part of their 'food teaching in schools' that the framework of knowledge being taught should include the 'teaching of food preparation and cooking' and 'promoting and applying nutrition'. This does nevertheless refer to children from the ages of 5–16 years old, with no mention of early year's education.

In Table 2.3, Key Stage 1 (Years 1 and 2) in the previous research (Rutland & Miles-Pearson, 2009), there was a range of recipes and skills being taught across the 4-year groups. However, when you look at Table 2.4 for the current research, you can see that only a gingerbread recipe was taught in Years 3 and 4 and then in Year

Table 2.1 Previous research (Rutland & Miles-Pearson, 2009)

Question 1 Food technology sessions observed								
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Products	Pizza Fruit salad Gingerbread men Bread Flapjacks Smoothies Chinese new year Cakes Porridge Chocolate nests Rock cakes Cookies (stained glass) Easter nest cakes Noodles Cornflake cakes Mini eggs Mini Xmas cakes Sandwiches Biscuits Bird food	Pumpkin soup Fudge Xmas biscuits Valentine biscuits Bread Biscuits Xmas cake Gingerbread men Pancakes	Sandwiches Cakes for Chinese new year Fruit salad Chocolate Easter Cakes Porridge Pancakes Topping for Pancakes Tortilla wraps Biscuits Peppermint creams—Xmas Healthy pizza Xmas cornflake/ chocolate cakes	Kitten cakes Pizza Bread Sushi Easter baking Fruit skewers Salad Cakes Icing biscuits Pancakes Planet pizza Iced cakes Kipper cakes (story)	Apple pies Brownies Apple pies Sandwiches Muffins Xmas cookies Pancakes Burgers Fruit salad Wraps Fillings Fruit kebabs Gingerbread men	Boston Cookies Banana bread	Bread Brownies Xmas cakes Design and make biscuits Smoothies—experiment Scrambled eggs (science) Buddle and squeak (history)	Brownies Pancakes Pizza—Xmas fare Shortbread

(continued)

Table 2.1 (continued)

Question 1 Food technology sessions observed								
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Skills	Setting in fridge Baking Follow instructions Melting chocolate Measuring (maths) Tasting	Cooking Cutting, weighing		Following instructions Writing instructions	Following a recipe Working together Cutting Measuring Designing icing	Working together Cutting Measuring Designing icing Following instructions	Writing instructions Working together	Working together Weighing ingredients
Knowledge	Hygiene Healthy eating Science through D&T (liquids/solids) Space theme Easter	Diwali—linked to art	Healthy eating Links to previous work on fruits Aztecs	Healthy eating Shrove Tuesday Links to literacy	Shrove Tuesday Healthy schools Healthy eating Changing ingredients	Combining ingredients Effect of heat Healthy sandwiches Tasting Hermitage week Balanced diet	Links to literacy Science (yeast) Healthy eating Links with PHSE and science Irreversible changes Foods from the garden	Links with maths (shortbread)

Table 2.2 Current research (2018)

Question 1 Food technology sessions observed								
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Products	Bread Gingerbread—decorating Cheese-straws	Bread Porridge Rice crispy cakes Cupcakes Pumpkin soup Pumpkin pie Vegetable—stir fry Scrambled eggs	Fruit—smoothies Jam-sandwiches Vegetable—soup Cupcakes Biscuits Fruit salad Gingerbread	Icing biscuits Pitta pizza Bread Cookies Porridge Cheese—sticks	Ratatouille Cheese-biscuits Vegetable kebabs Rock cakes Sandwiches	Egyptian sweet-making Bread rolls Mushroom—soup Ratatouille Rice crispy cakes	Bread Christmas cakes	Fruit kebab Sandwiches Date and oat bars
Skills	Kneading Rolling Baking Grating Cutting Follow instructions Measuring (maths) Smelling Tasting	Kneading Rolling Baking Melting Cooking Cutting, weighing	Cutting Blending Creaming Spreading Following instructions	Kneading Rolling Baking Grating Decorating Following instructions Writing instructions	Cutting Measuring Creaming Blending Following a recipe Working together	Kneading Shaping Cutting Measuring Creaming Blending Following a recipe Working together	Kneading Weighing Measuring Writing instructions Working together	Working together Weighing ingredients

(continued)

Table 2.2 (continued)

Question 1 Food technology sessions observed								
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Knowledge	Hygiene Healthy eating Science through D&T	D&T linked through literacy and stories Also looking Basic reversible and irreversible change Safety using cutting tools	Safety in the kitchen Links to literacy with storytelling Maths knowledge/ measuring/ weighing	Science—changing state Effects of yeast Maths knowledge/ measuring/ weighing	History links to Second World War Healthy eating Changing ingredients Maths knowledge/ measuring/ weighing	Combining ingredients Science—effects of heat Geography/ history Egyptian sweets	Links to literacy Science (yeast) Healthy eating Links with PHSE and science Irreversible changes Foods from the garden	Health and safety Maths knowledge measuring/ weighing Link with RE Jewish celebration

Table 2.3 Previous research (Rutland & Miles-Pearson, 2009)

Question 2 Food technology sessions taught by ITE students								
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Products	Snacks Chocolate sparklers Fruit salad (Oliver's fruit salad) Porridge Fruit skewers Salads Cakes Chinese New Year cakes Pancakes Angel cake Popcorn Biscuits Gingerbread men	Sandwiches	Fruit salad Biscuits Cakes Pizza	Brownies Planet pizza (space project) Sandwiches	Healthy sandwiches Tortilla wraps—Aztecs	Roman feast grapes, honey bread School trip—packed lunch—sausage, soup	Bread	Biscuits Scrambled eggs—science Bubble and squeak
Skills	Experimentation Describe and taste Making shapes—marzipan Making shapes—marzipan Golden time activity Handling foods Making decisions		Follow instructions Practical skills Making shapes—marzipan Using equipment safely	Practical Writing instructions	Follow instructions Copy skills	Designing of foods Being creative		Designing for purpose Appearance Experimentation Making food from basic ingredients

(continued)

Table 2.3 (continued)

Question 2 Food technology sessions taught by ITE students								
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Knowledge	Good growing foods Properties of foods Healthy foods Properties of foods—porridge Different cultures Healthy choices Measuring—numeracy Consistency What happens in the oven Changing ingredients—science Indian foods		Health and safety	Links with literacy		Likes/dislikes Foods available in Roman times Rabbit, goat, vegetables Changing ingredients/flavours	Hygiene Purpose of ingredients	Links with science, e.g. irreversible change Links with history, e.g. rationing and growing food in the garden

Table 2.4 Current research (2018)

Question 2 Food technology sessions taught by ITE students								
	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Products	Christmas decorations	Pumpkin soup Pumpkin pie	Vegetable-soup Gingerbread Healthy snacks Sandwiches	Bread	Gingerbread	Gingerbread	Evaluating different types of bread	Date and oat bars
Skills	Rolling Baking Use shaped cutters Follow instructions Measuring (maths) Smelling Tasting (science)	Healthy eating Following instructions (English) Cooking Cutting, weighing (maths)	Cutting practice Decorating H&S Blending Following instructions (English)	Following instructions Reflecting on method (English)	Cutting Measuring (maths) Creaming (PSHE) Following a recipe Working together	Following a recipe (English) Working together (PSHE) Weighing Measuring (Maths)	Taste testing Comparing/ contrast (science)	Weighing ingredients Blending H&S Allergies
Knowledge	Hygiene Science and maths through D&T	D&T and maths linked through literacy and stories	Links to literacy with storytelling Maths knowledge/ measuring/ weighing	Science—changing state Effects of yeast Maths knowledge/ measuring/ weighing	D&T and maths knowledge/ measuring/ weighing	Combining ingredients Science—effects of heat	Links with geography breads from around the world	Health and safety Maths knowledge measuring Link with RE Jewish celebration

6 a date and oat recipe. In Year 5, they did not do any cooking, just a taste-testing and an evaluation of a variety of different breads from around the world. Although no cooking was done, this was a good way to develop their scientific knowledge of comparing and contrasting and of their geographical knowledge of where their breads had come from.

Question 3: 'What do you think that children in primary school should learn about food?'

Table 2.5 Previous research (Rutland & Miles-Pearson, 2009)

Question 3a What do you think that children in primary school should learn about food?					
Knowledge	Number of responses	% of responses	Skills	Number of responses	% of responses
A balanced diet	14	6.39	Being creative	2	2.99
Costing	1	0.46	Basic cooking skills, measuring and making	20	29.85
Ethics of food	1	0.46	Experimenting and combining ingredients	7	10.45
Food groups and nutrition	14	6.39	How to cook simple products/meals—toast, pizza, desserts, bread, salads, pizza 10	21	31.34
Foods from other cultures	7	3.20	How to cook healthy meals	9	
Food miles—sustainability	1	0.46	How to follow instructions	1	1.49
Food science	1	0.46	Evaluating and modifying	1	1.49
Greater understanding of their bodies	3	1.37	Safety with utensils	5	7.46
Healthy foods/eating	107	48.86	Tasting foods—sensory evaluation	1	1.49
Healthy lifestyles	3	1.37			
Health and safety of foods	23	10.50			
Health risks	1	0.46			
Hygiene	9	4.11			
Properties of foods	4	1.83			
Storage of food	2	0.91			
Where food comes from	12	5.48			
What foods are made of	6	2.74			
Total number of responses	219	100	Total number of responses	67	100

Table 2.6 Current research (2018)

Knowledge	Number of responses	% of responses	Skills	Number of responses	% of responses
Healthy eating/ balanced diet	42	57.53	How to cook simple meals, i.e. pizza, toast bread, salads, etc.	16	44.44
Cutting skills	6	8.22	How to follow simple instructions	10	27.78
Where food comes from	5	6.85	Basic cooking skills—measuring and making	8	22.22
Life skills	5	6.85	Safety with utensils	1	2.78
Health and safety using kitchen equipment	3	4.11	Being creative	1	2.78
Basic savoury recipes	3	4.11			
Being creative with food	2	2.74			
Allergies/health risks	2	2.74			
How cooking can taste good	2	2.74			
How to make scrambled eggs	2	2.74			
Forest school—leaf kebabs	1	1.37			
Total	73	100.00		36	100.00

This question has been broken up into skills and knowledge in Tables 2.5 and 2.6. Comparing the previous and current research (Rutland & Miles-Pearson, 2009). The percentage of ITE students thought that 'healthy eating' and a 'balanced diet' was 55.25% compared to 57.53% in the current research (Table 2.6). I did expect an increase with all the recent articles on healthy schools (Harris, 2013; Lannelli, 2018; NHS, 2018; Oliver, 2017; Owen, 2013), especially with the rising concerns of childhood obesity (Freemark, 2018; Gatenby, 2010; Gesserick, Vogel, Gausche, et al., 2018; Gov.uk, 2019; Oliver, 2017). However, with only a rise of just under 2% I found this quite staggering, as with all the publicity around this area I thought that this would have been a greater increase. Reflecting on this area of healthy eating, I looked at another area 'How to cook a simple meal'; this had 31.34% of ITE students in the original research (Rutland & Miles-Pearson, 2009) believing that children should know these basic skills. This compared to 44.44% in the current research which is an increase of 13.10% overall. Another aspect that was believed should be covered was that pupils should learn 'basic cooking skills, including measuring and making'. This was stated by 29.85% of ITE students in the initial research (Table 2.5) compared to 22.22% in the current research (Table 2.6), which is a drop

of 7.63% over the last 10 years. Is this a true reflection of how society are relying more on pre-prepared food rather than cooking everything from scratch?

We can also see (Table 2.6), current research, that the students have come up with suggestions that were not present on the previous research. For instance, they have said that children should learn more about allergies and forest school food (cooking outdoors, directly from nature), although to my surprise they have not considered the carbon footprint and the food miles and sustainability that had previously been mentioned (Rutland & Miles-Pearson, 2009). I will address Question 3, when I look at the different curriculum areas that the ITE students thought that food should be taught in.

Question 4: In which curriculum areas do you think they should learn about food?

In Tables 2.7 and 2.8, the ITE students were asked 'what curriculum area do you think that food should be taught in'? The results showed that science is a strong leader as a preferred subject in the recent research to teach food with 19.47% (Table 2.8); this compares to 27.73% (Table 2.7) in the previous ITE student research (Rutland & Miles-Pearson, 2009), which, although agreeing with science being the forerunner, was a hefty decrease of 8.26%. Although all the curriculum areas were represented, the other main surprise was that the amount of ITE students that suggested that food should be taught in a cross-curricular setting has decreased from a massive 24.35% (Table 2.7) in the previous research (Rutland & Miles-Pearson, 2009)

Table 2.7 Previous research (Rutland & Miles-Pearson, 2009)

Question 4 In which curriculum area do you (ITE student) think children should learn about food?		
	Responses	% of responses
Art	6	2.95
D&T	58	18.83
English	4	1.30
Geography	16	5.19
History	11	3.57
ICT	1	0.32
MFL	2	0.65
Maths—measuring	10	3.25
PE	13	4.22
PHSE	20	6.50
RE	14	4.55
Science	70	27.73
Literacy	5	1.62
Numeracy	1	0.32
Citizenship	1	0.32
Creative curriculum	1	0.32
Cross-curricular	75	24.35
Total	308	

Table 2.8 Current research (2018)

Subject/area	Responses	% Responses
Science	37	19.47
Geography	24	12.63
D&T	21	11.05
English	20	10.53
History	19	10.00
Maths	16	8.42
Art	14	7.37
PE	13	6.84
PSHE	13	6.84
RE	7	3.68
Cross-curricular	6	3.16
Total	190	99.99

10 years ago to a modest 3.16% which can be seen in Table 2.8, meaning that there has been a substantial drop of 21.19%. I would like to investigate this further in the future with alumni students, to see if their views have changed.

Question 5: What content of the food technology sessions that you attended at the university were most useful and what else would you include?

Looking at Table 2.9, there are clear comparisons between the two pieces of research that have been carried out over a 10-year period. In the most recent research, we can see that there is some consideration about sustainability and the amount of food that is wasted. Health, safety and food waste have a greater emphasis; although we can see that since the change with the food element in the current D&T national curriculum (DfE, 2013), where the food aspect is now referred to as 'cooking and nutrition', there is a lot less importance given to looking at the effect of changes in ingredients. However, we can see from looking at the table that taste testing has been given more inference. This is quite possible since there is uncertainty and lack of clarity as to whether the scientific enquiry element has been removed from primary national curriculum (DfE, 2013).

Discussion

When reflecting on the past research recommendations, Rutland and Miles-Pearson (2009) examined the teaching of food and how it is seen in the primary curriculum through the views of ITE students. We can see that there was a strong belief that teaching food to primary school children would benefit from a strong association with science due to the commonality of the foci involved, for example, looking at the properties of ingredients and how they are used. As we can see in Tables 2.1 and 2.2,

Table 2.9 Previous research (Rutland & Miles-Pearson, 2009) and current research (2018)

Question 5: Content of university food technology session		
Previous research 2009		Current research 2018
1	Analysing	7
4	Being creative with ingredients	4
19	Effect of changing ingredients	
12	Exploring/experimentation	10
4	Health and safety	27
2	Organisation of lessons	24
3	Simple cooking skills	15
16	Tasting foods	33
5	Varying ingredients—toppings/fats/flours/liquids	35
	Extras to include	
2	Deserts	
1	Budgeting	
4	Cakes	4
1	Cooking healthy snacks	8
1	Cultural food	3
1	Fruit salads	
7	Healthy eating/diet	13
1	Packaging	4
	Methods of cooking/building confidence to teach	9
1	Pancakes	
1	Pies	
2	More food technology time	1
1	Nutrition	8
1	Risk assessment	
1	Scones	
	More recipe ideas for the classroom	9
	Using leftovers	1
	Sustainability	1

the ITE students now believe there should be a stronger emphasis of teaching food across a wider range of the curriculum disciplines, which is in agreement with Rose where he stated:

> Food is a very large and important area of knowledge and learning for children. Locating it in one subject or area is unwise (Rose, 2009).

This, however, does not reflect what was observed in the primary classrooms. In comparison, the teacher's views will be discussed within the findings and conclusion of this chapter. Interestingly, only one ITE student in the current research had

really considered sustainability and the carbon footprint, when they were asked what they thought children should be taught in the food lessons.

When looking at Table 2.3 (Rutland & Miles-Pearson, 2009), comparing it to the current research (Table 2.4), there definitely seems to have been a shift towards less food being taught in nursery. I have come to the conclusion that this may well be because of a lack of confidence on the teacher's behalf, as there are elements of health and safety that would be addressed when teaching food skills to children, and as very young children can be very unpredictable, this can be quite challenging. Nevertheless, this is a concern as the children in Year 1 (5 years old) need to build on their prior learning experiences from the early year's foundation stage (Rose, 2009), and without this sound foundation, the children are disadvantaged. We can also see a decline again in Table 2.4 in the teaching of food in upper Key Stage 2. This could be partly due to the changes in the 2013 English primary design and technology national curriculum (National Curriculum 2013). There is also the possibility that this could be partly due to newly qualified primary teachers, who have chosen to train on a different new 'school-based' route into teaching in the United Kingdom (UK). As a result, they may not necessarily have benefitted from the D&T sessions run at ITE providers that focus on key skills that teachers will need to teach a safe food lesson.

Interview Research from a Sample of Primary Schools Across England on What Food Is Taught in Their Schools

The next part of this chapter will give an overview of the interview answers relating to 'What food is being taught in their school?' Also, how often it is taught and who teaches it? Out of the 85 primary schools across England that I contacted, only 25 of them—21.25%—agreed to a short telephone interview about the teaching of food in their schools. I am concerned that having only 25 responses might mean that the majority of the other schools do not teach food. When interviewing the head teachers/coordinators, they addressed each age phase in the school, as had been done in the previous questionnaires.

The first interview question that I asked was: How often is 'food technology' taught in your primary school?

Findings:

- In the early years—nursery and reception. There seemed to be a regular pattern of daily/weekly food being taught, where children were encouraged to develop basic skills and hand eye coordination. I will explore this more when we look at the other questions.
- In Key Stage 1—Years 1 and 2. It varied from two to three sessions a term to only once a term.
- In Key stage 2—Years 3, 4, 5 and 6. This was a lot more varied where the teaching of food ranged from every 3 weeks to termly or even annually.

'Cornerstones' (Cornerstones Education Ltd. 2018) is a scheme of work that quite a lot of schools seemed to be following, so I am going to investigate this further at a later date.

The second interview question that I asked was: 'Who teaches "food technology" in your primary school?'

Findings
This was a quite a standard answer across all the schools, with the class teacher teaching the food sessions with the teaching assistants helping. In a few schools, parents came in to assist the teacher when a teaching assistant was not available.

The third interview question that I asked was: What sort of things do the children cook?

Findings
In the Early Years Foundation Stage (EYFS) within the UK, (including any Ofsted registered EYFS providers), have a compulsory set of skills, knowledge and understanding that have to be taught to the children aged 0–5 years old. These are known as the seven areas of learning and development (Mohammed, 2018). These are divided into three prime areas (physical, communication and personal, social and emotional) and four specific areas (literacy, mathematics, understanding the world and expressive arts and design). Many of the food activities would probably be linked to the specific areas that involve key life skills the children will need (Pascal & Bertram, 2017). It seems that the 'Froebelian' influences of early years of teaching and learning have not been totally lost (Tovey, 2017).

In the older age phases, I was pleasantly surprised at the extensive range and variety of foods that the children were cooking. In some cases, even planning a meal, cooking and serving parents and families the meal also included an evaluation of how things had gone. There was also lot more schools that were growing their own fruit and vegetables. There was a lot of topic-based and cross-curricular food being taught; some of these were from the 'Cornerstones' schemes of work which I mentioned earlier (Table 2.10).

The fourth interview question that I asked was: 'Is food technology taught in any extracurricular sessions, i.e. after school club?'

Findings
- In Nursery, Reception and Year 1, there were no extracurricular sessions. This is understandable as the day is long enough for the younger children.
- In Year 2 there were various things going on related to food. They were given 'homework' where they had to plan a three-course menu (this was after a lot of input in the classroom), and there were lunchtime food clubs. In some schools, they were growing their own fruits and vegetables.
- In Year 3 there tended to be an after-school cooking club (which was facilitated by a teaching assistant).
- In Year 4 there was a 'bikers' breakfast for children who cycle to school.

Table 2.10 What sort of things do the children cook?

	What sort of thing do the children cook?
Nursery	Biscuits—linked to topic/drying fruit/soup/gingerbread men (key skills)
Reception	Learning basic skills rolling/kneading/soup
Year 1	Afternoon tea—sandwiches (no designing)/fruit kebabs/taste testing/fruit smoothies/salads/chopping and cutting skills/gingerbread men/eating the rainbow/taste testing/pumpkin soup
Year 2	Taste testing and sensory analysis/fruits from around the world/cakes/pizzas/flapjacks/fruit smoothies/salads/chopping and cutting skills/bread (great fire of London)/fruity yogurt cups
Year 3	Smoothies/children cook their own lunch/make their own ice cream (links with an ice cream producer)/growing own food/plan and cook a two-course meal/sweet potato and chickpea curry
Year 4	Taste testing cheese/growing own food/Romans salad/plan and cook a two-course meal/Spanish omelette/tasty tomato pasta
Year 5	Bread (around the world)/growing own food/South American food/Aubergine dips
Year 6	Christmas dinner/café–serve parents and families/growing own food
	Always—design/make/evaluate—for a purpose

- In Year 5 there was a 'hook cook' residential experience (cooking Victorian food) making Victorian cakes.
- In Year 6 the children hosted a community Christmas party for the elderly—where they planned, prepared, cooked and served. There were also a few schools that focused on First World War food, and after researching, they went on to make it.

Holding a community Christmas party for the elderly was an amazing idea, which covered a whole range of skills. This could be also adapted for other events throughout the year. The quantity of cross-curricular opportunities that are going on in schools is remarkable.

The fifth and final interview question that I asked was: 'What cross-curricular opportunities do you link to your food sessions?'

Looking at Table 2.11, there seems to be quite a range of different cross-curricular activities in the schools. One thing that seems to occur in various guises is teaching the children about where food comes from and how it has been grown. There are different organisations available to support schools in teaching food in the primary classroom. The British Nutrition Foundation (BNF, 2019) runs a website called 'Food a Fact of Life' which has a host of ideas for teachers, including activities and videos for children, to help them understand the basics of teaching food in the classroom. Another website is 'School Food Matters' (2007) which has a host of ideas on their site. In fact, Ofsted launched a new inspection framework in 'School Food Matters' in January 2019 stating that nursery and reception are learning a lot of new life skills that will prepare them for their school life. The new inspection framework (Ofsted, 2019) states that 'instead of feeling able to spend time reading to children, or playing with them, nursery staff feel pressured into

Table 2.11 'What cross-curricular opportunities do you link to your food sessions?

	What cross-curricular opportunities do you link to your food sessions?
Design and technology	Healthy eating/risk assessments/progression of cooking skills/links with local butcher for children to design a sausage
Literacy	Adjectives for sensory activities/writing instructions/key vocabulary/ goldilocks and the three bears
Mathematics	Weighing/measuring ingredients/goldilocks and the three bears/breakfast tally charts
Science	Food and nutrition/healthy eating/drying fruit/independent research project on honey/goldilocks and the three bears
Physical education	Healthy eating
Geography	Where food is from/recipes from different countries/field to plate
History	Children to research Roman food and design a menu/history of breakfast around the world/First World War food/Victorian cakes
Art	Still life
Computing	Child set up his own 'food blog' about growing his own vegetables
PSHE	Healthy eating/well-being/staying safe and physically healthy
Religious education	Festivals/Chinese New Year/celebration with food

completing endless documentation to demonstrate each stage of a child's development'. Baselines are important but the Government do not realise how much learning goes on whilst the children are learning new skills, playing and using their imagination.

Conclusion

Having reflected on my research, I have found that over the last 10 years there have been some significant changes to the food sessions that are being taught in the primary schools across England. Firstly, I would like to help build the confidence of teachers who are not D&T specialists, encouraging schools to hold twilight sessions, or arrange cover for their staff to attend a D&T skills booster course. At the very least, ensure that the schools have membership to the Design and Technology Association so that as they will have their support.

From the interviews, I have found out that there are a lot of amazing initiatives that we need to make sure are known about in schools. I would be very interested to see if the pupil's academic progress has benefited from these practical activities, as they often help promote an emotional well-being as well as a healthier body for the pupils (Wheatcroft & Woolley, 2018).

This has informed and updated my own understanding, which has in turn given me a focus on how to move forward with my own ITE training at the University in the future, making sure that all the future primary school teachers that I teach are fully versed in what is going on in schools and how they can empower the pupils'

own learning of food technology. I hope that they can encourage some of their fellow teachers to look more at the possibilities of cross-curricular opportunities in the English primary classroom.

References

Baker, T., & Shelley, N. (2013). Charlton Manner's food journey. *Education and Health, 31*(4), 90.
DES. (1990). *Technology in the national curriculum*. London: HMSO.
Freemark, M. (2018). Detriments of risk for childhood obesity. *New England Journal of Medicine, 379*, 1371–1372.
Gesserick, M., Vogel, M., Gausche, R., et al. (2018). Acceleration of BMI in early childhood and risk of sustained obesity. *New England Journal of Medicine, 379*, 1303–1312.
Gov.uk (2019). Ofsted launches consultation on proposals for change to the education inspection framework. https://www.gov.uk/government/consultation/education-inspection-framework-2019-inspecting-the-substance-of-education/outcome/education-inspection-framework-2019-a-report-on-the-responses-to-the-consultation
Harris, L. (2013). Food for thought. *Education and Health, 31*(4), 88.
HMSO. (1985). *Home economics from 5–16* (HMI series: curriculum matters, No. 5). London: Her Majesty's Stationary Office.
HMSO. (1987). *Craft, design and technology from 5–16* (HMI series: curriculum matters No. 9). London: Her Majesty's Stationary Office.
Mohammed, R. (2018). *Creative learning in the early years. Nurturing the characteristics of creativity*. Oxen: Routledge.
Oliver, J. (2017). *Food foundation*. London: AKO Foundation.
Owen, G. (2013). Teaching cooking at Ashton Vale primary. *Education and Health, 31*(4), 93–96.
Pascal, C & Bertram, T. (2017). *Creativity and critical thinking are central to an early years curriculum and pedagogy*. Birmingham: BECERA. Retrieved October 28, 2019, from www.becera.org.uk
Rose, J. (2009). *The rose report*. Nottingham: DCSF Publications.
Rutland, M. & Miles-Pearson, S. (2009). *The position of food in the primary school curriculum: Implications of the review of the primary curriculum in England*. Research paper presented at the CRIPT Primary Design and Technology Conference—Making a difference, Birmingham.
Tovey, H. (2017). *Bringing the Froebel approach to your early years practice*. London: Routledge.
Wheatcroft, R., & Woolley, K. (2018). *Mental well-being and mindfulness*. London: Wayland.

Websites

British Nutrition Foundation. (2017). Retrieved October 28, 2019, from https://www.foodafactoflife.org.uk
British Nutrition Foundation. (2019). Retrieved October 27, 2019, from https://www.nutrition.org.uk/foodinschools/competences/foodteachingframework.html
Cornerstones Education Limited. (2018). *South Yorkshire*. Retrieved October 28, 2019, from https://www.support@cornerstoneseducation.co.uk
Department for Education (DfE). (2013). National curriculum in England: Design and technology programmes of study. Published 11 September 2013. Retrieved October 28, 2019, from https://www.gov.uk/government/publications/national-curriculum-in-england-design-and-technology-programmes-of-study/national-curriculum-in-england-design-and-technology-programmes-of-study

Design and Technology Association. (2018). Retrieved October 27, 2019, from https://www.data.org.uk

Gatenby, Lisa. (2010). https://www.research.leedstrinity.ac.uk/files/182216/Gatenby_Education_and_Heath.pdf

Lannelli, V. (2018). *Change for life. Food and nutrition, healthy eating plan for children*. Retrieved September 23, 2019, from https://get-information-schools.service.gov.uk

National Health Service (NHS). (2018). *The school fruit and vegetable scheme (SFVS)*. Retrieved August 30, 2019, from https://www.nhs.uk/live-well/eat-well/school-fruit-and-vegetable-scheme

Ofsted. (2019). *Consultation proposals on how Ofsted inspects schools, early years settings and further education and skills providers, to take effect from September 2019*. Retrieved October 20, 2019, from https://www.gov.uk/government/news/ofsted-launches-a-consultation-on-proposals-for-changes-to-the-education-inspection-framework

School Food Matters. (2007). Retrieved October 10, 2019, from https://www.schoolfoodmatters.org

School Food Matters. (2019). Retrieved October 10, 2019, from https://www.schoolfoodmatters.org/news/launch-ofsteds-new-inspection-framework

Times Educational Supplement (TES). (2018). *Bloom, Adi*. Retrieved October 16, 2019, from https://www.tes.com/news/new-teacher-applications-down-29-last-year