Chapter 10
Where Will Future Secondary Food Teachers Come from in England?

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Abstract This chapter asks 'where will future secondary food teachers come from in England?' It tracks the evolution of food teaching in the curriculum, tracing its origins in domestic science through to the present focus on food, nutrition and preparation. To answer the question it is necessary to understand the unintended impact and consequences of changes to the English school curriculum and the direct impact this has had on recruitment to initial teacher training. It is also necessary to understand the social impact of good food teaching within the context of the health of the nation and in particular children. To deliver a quality food curriculum in English schools we need skilled food teachers. The progression pathway through food education needs reinstating so that food teachers of the future can progress from General Certificate of Education (GCSE) for pupils aged 16 years, through Advanced (A) level for pupils aged 18 years, to subject-related degrees and on to teacher training. Without such a route, it is questionable that the subject can survive on the curriculum.

Keywords Food · Curriculum · England · Teacher training · Secondary

Introduction

This chapter will focus on how food education has evolved in English secondary schools in response to shifting political influences, alongside the changing landscape of initial teacher training to consider where future food teachers will come from. High-quality food education requires good teachers and a forward-thinking curriculum.

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The current crisis (in England) in recruiting secondary trainee teachers in all subject areas is severe. In 2015 the president of the Association of School and College Leaders (ASCL) indicated that schools were facing a 'perfect storm' in teacher recruitment (ASCL, 2015). This was due to increasing pupil numbers, entrants to the profession falling short of the numbers needed, a steady decline in the population of 21-year-olds from 2016 to 2022, meaning a smaller pool of graduates, and an economic upturn resulting in more graduate opportunities in the jobs market (ASCL, 2015). Their statistics applied to teachers of all subjects and phases. Recruitment of secondary food teachers is further challenged by the limited number of students studying a food-related degree and excellent professional job opportunities available in the food and beverage industry and hospitality sectors.

The food and drink industry is the biggest manufacturing sector in the country. The food supply chain employs almost four million people and generates over £112 billion of value for the economy each year (Food and Drink Federation, 2018). The demand for graduates with knowledge of food and the food industry is high for the sector and for teaching. An ever more competitive food and drinks job market possibly detracts graduates from contemplating teaching. It is acknowledged that the demands of the profession are particularly pronounced for new recruits (DfE, 2019a) as evidenced by the challenge of retaining early career teachers. Over 20% of new teachers leave the profession within their first 2 years of teaching, and 33% leave within 5 years (DfE, 2019a, p. 10).

This chapter will look at the shifting political focus on school-based food education along with the identity and purpose of the subject in schools. We will examine the unintended consequences and potential impact of the most recent changes to the English curriculum and qualifications framework on the supply of teachers for the future, and also consider how teachers might be trained.

Historical Influences on Food Education

Food as a subject in the English curriculum has its origins in the eighteenth century, with British Museum records tracing cookery in London schools to 1740 with food in the school curriculum originating back to 1840 (Rutland, 2006). Lawson (2013, p. 101) notes that food education at this point was 'practical, philanthropic and utilitarian' with the functional role of providing girls with domestic homeliness as well as skills for domestic auxiliary occupations. Educational reports, such as Howden in 1926, reinforced the teaching of food studies was mainly concerned with the development of cookery life skills 'with due regard to home conditions and the need for the economy' (Central Advisory Council for Education (CACE), 1926, p. 235).

The introduction of post-war secondary modern schools saw the rise of 'domestic science' as a key to restoring the health of the nation (Rutland, 2006). Teachers of this post-war era taught a curriculum differentiated by gender where 'house craft and needlework easily justified their place in the curriculum for most girls' (CACE, 1963, p. 389). By the mid-1960s domestic science evolved into home economics but

the focus was still on girls preparing family meals in contrast to the male-dominated craft, design and technology (CDT) that provided boys with problem-solving skills when working with wood, metal and plastics. Teachers of the subjects tended to be female in home economics and male in CDT. Traditional barriers had begun to change during the 1970s when equal opportunities legislation (The Sex Discrimination Act, 1975) made it illegal to restrict subjects based on a gender divide (Geen,1989), but it was the introduction of the National Curriculum (Department of Education and Science (DES), 1990) that provided an opportunity for the two subjects to work together albeit in a sometimes inharmonious union.

As a subject, design and technology (D&T) was introduced in 1990 as a National Curriculum compulsory subject for pupils aged 5–16 years in England and Wales (DES, 1990) with different curriculums in Scotland and Northern Ireland where home economics has been retained. Revisions ensued in 1995 (DfE/WO, 1995), 1999 (DfEE/QCA, 1999), 2007 (QCA, 2007) and 2013 (DfE, 2013). The early years of the National Curriculum were challenging with many traditional home economics teachers feeling threatened teaching a subject that now had a technological and industrial context. Rutland (2006) notes that despite this unease many D&T departments did unite to develop a curriculum based on the design and technology fields of resistant materials, food and textiles technology and systems and control (DATA, 1995). Critics of the National Curriculum, most notably the engineering community, did not think food belonged in the D&T curriculum. Smithers (1993, cited in Fine 1994) considered that the inclusion of food in technology was more about keeping home economics alive and making technology 'girl friendly' than on its intrinsic value. The anti-food lobby argued that Technology was about making structures and artefacts with many food teachers fighting a dichotomy between the subject's survival within technology and a desire to return to a curriculum focusing on practical skills, healthy eating and the function of ingredients.

The revision of the National Curriculum in 1995 simplified the prescribed programmes of study and reduced the attainment targets to two: designing and making (DfE/WO, 1995). In some schools this led to food teachers spending too much time on paper-based design activities, a situation that probably arose through traditionally trained home economics teachers lacking confidence in teaching design. In 1996, further guidance for teachers was published by the Department for Education and Employment (DfEE) and Ofsted, which sought to help schools implement food technology and define the characteristics of good teaching (DfEE, 1996).

Pressures on curriculum time meant that many D&T faculties often adopted a 'carousel' approach with pupils spending short sequences of time working in the different material areas. This resulted in limited opportunities for 'practical' cooking when the conflicting demands of developing design capabilities were prioritised over acquiring more practical skills. Criticism from Ofsted (2002, 2004, 2005) and demands to improve design skills led to some schools limiting practical experiences to sequences of short, focused practical tasks.

The Key Stage 3 National Strategy 'Design and Technology framework and training materials' (Department for Education and Schools (DfES), 2004) attempted

to redress the balance of designing and making for pupils aged 11–14 years. It provided a broader definition of 'designing', offering food teachers innovative alternatives to drawing. Lawson (2013) notes that what was lost at the time was the realisation that designing with food was not necessarily about drawing. Rutland and Barlex (2006) also argued that designing in food should be concurrent with handling food, learning new skills to develop knowledge and understanding, a view supported by Owen-Jackson (2007), who argued that designing in food was better referred to as 'food product development' involving working with ingredients rather than drawing. The early years of the national curriculum was a confusing time for many food teachers as they battled with the identity of the subject.

Political Influences on Food Education

The battle regarding the identity of food education was not only happening in the classroom. In 2004, celebrity chef Jamie Oliver attempted to improve the quality and nutritional value of school dinners and recorded a short television series for Channel 4 that documented his critique of school meals and food education. This started the campaign 'Feed me better' (http://www.feedmebetter.com) to improve the quality of the food served in schools. In response to this campaign, the Department for Education and Skills set up the School Food Trust (2012) to advise on school meals, children's food and related skills. Its remit was to transform school food and food skills, promote the education and health of children and young people and improve the quality of food in schools. The need to adopt a whole school approach to what was happening in the classroom in food lessons to the food served in school was clear in this document.

The focus on food education and children's food in schools exacerbated the underlying tension as to whether or not food fitted into the D&T philosophy and curriculum (Lawson, 2013). Those who embraced the D&T curriculum argued that it made the subject interesting, gave currency and status and provided challenge. Those that wanted a more traditional approach to food education wanted to focus on teaching children to cook (Owen-Jackson and Rutland, 2017).

In 2006, a critical Ofsted (2006) report evaluating the effectiveness of food technology teaching within secondary schools responded to these concerns about food technology in the curriculum, 'that too little time is spent learning to cook nutritious meals' (Ofsted, 2006, p. 1). In its findings, the report noted that the key to success was effective teaching 'good and very good achievement tended to be associated with exceptionally skilful teachers and highly motivated pupils' as well as reporting that 'a shortage of specialist teachers restricted provision in a significant minority of schools' (Ofsted, 2006, p. 2). The recommendations of the report were extensive but of relevance here included the need to:

- 'clarify the relationship between the teaching of food as a life skill and the use of food as a medium for teaching design and technology'
- 'reconsider the demands made by the full spectrum of food technology in order to ensure that the subject meets the learning needs of all pupils'

- ‘identify precisely the shortfall in teacher supply and take steps to train specialists, including those with industrial experience in food technology, to teach in secondary schools’ (Ofsted, 2006, p. 3).

The first of these recommendations arguably demonstrated a lack of understanding of food technology and its relationship to developing skills in cooking. The government’s response to the concerns raised was to create an ‘entitlement to cook’ for all pupils in secondary schools by 2011 (STEM learning, 2015).

This ‘entitlement’ emerged as the ‘Licence to Cook’ programme introduced in 2007 (STEM learning, 2015). This DfE-funded programme was led by a consortium group comprised of the British Nutrition Foundation, The Design and Technology Association and the Specialist Schools and Academies Trust. The programme was released with online resources and recipes with the intention that all pupils would have 16 h of cooking supported by an additional 8 h learning about hygiene and safety, diet and nutrition and wise food shopping. The lack of specialist teachers in many schools led to the course being delivered by school catering staff and other school personnel with an interest in cooking. This skills-based approach may have given some pupils the opportunity to cook who had not done before, but it did nothing to further the relationship between life skills and an academic study of food. At the time Rutland (2008) asked if the skill-focused ‘Licence to Cook’ programme was the ‘death knell’ of food technology?

To our knowledge, the shortfall of specialist teachers was never precisely identified but in 2009 funding was made available by the Teacher Development Agency (TDA) for the training and accreditation of specialist Higher Level Teaching Assistants to support the teaching of food technology in secondary schools (TDA, 2009). In addition, from 2007 initial teacher training providers could apply to run fully funded subject knowledge enhancement (SKE) courses to support the recruitment of trainee teachers providing the opportunity for teacher training applicants to enhance their subject knowledge before embarking on a teacher training course (Gibson et al., 2013).

In 2010 the change of government led to a new education bill, a revised National Curriculum and significant budget cuts. These cuts threatened the progress that had been made through the work of the School Food Trust (which later became the Children’s Food Trust) (BBC News, 2017). In April 2011 the government abolished the protection of subsidies for school meals. More than 3000 breakfast clubs closed in 2011. The rapid expansion of academies and free schools led to a Local Government Association warning that more than a million children at academies and free schools could be eating unhealthy food because the schools were exempt from the food standards which applied to other state schools. The DfE also announced that the Children’s Food Trust would receive no further government funding and future reviews of school food would be put out to tender.

Henry Dimbleby and John Vincent were commissioned to complete such a review, The School Food Plan (Dimbley and Vincent, 2013). The report made recommendations that extended beyond the provision of food in schools to putting

'cooking in the curriculum' (p.35). In its opening summary, it stated 'What you have in your hands (or on your screen) is not a traditional "report", or a set of recommendations to the government. It is a plan. It contains a series of actions, each of which is the responsibility of a named person or organisation. These are the things that need to happen to transform what children eat at school, and how they learn about food' (Dimbleby and Vincent, 2013, p. 8). Despite its laudable ambitions, funding for the plan ended in March 2016 and there was never an official formal evaluation of the project's success or otherwise (Scott, 2016).

The Obesity Issue

Concerns about childhood obesity and children's eating habits, spurred originally by Jamie Oliver, were reinforced by the School Food Plan and resulted in an arguably political focus on school food in recent years. High-profile commentators, such as Mary Berry (Nikkah, 2012) and Prue Leith (Marsh, 2018), have become involved in the debates on food in schools and these have led to political interventions that have included influencing the curriculum (the statutory requirement to teach cooking and nutrition within the D&T curriculum in Key Stages 1–3—11–14 years) and legislation (2014) that defines School Food Standards that apply to the provision of food in all maintained schools (DfE, 2019b).

In a review of the current position Owen Jackson and Rutland (2017, p. 63) argue that these political influences have been detrimental to the value of teaching about food and its potential for contributing to pupils' overall education as well as in defining what and where it can be taught in schools. There is no disputing that children need to learn about nutrition and making good food choices, and this is often heralded as a justification for including food preparation and nutrition within the school curriculum but an appraisal of the political interventions over recent years arguably does not present a coherent message as to how this might be realised. The result of these interventions also raises the concern about the recruitment and retention of food teachers in the English school system.

The politics of food education at the end of the first decade of the century had a direct impact on the new National Curriculum document in 2013 (DfE, 2013) and on the new General Certificate of Education (GCSE) specifications for pupil's aged 16 years. The former influenced by the aforementioned government-commissioned 'School Food Plan' included 'cooking and nutrition', with D&T noting 'pupils should be taught to cook and apply the principles of nutrition and healthy eating' (DfE, 2013, p. 3). As part of the curriculum reforms, there was a move towards linear examinations, and the course content for a single GCSE in Food Preparation and Nutrition was written to replace several coursework-heavy GCSE specifications (Design and Technology: Food Technology, Home Economics (Food and Nutrition), and Catering).

Where Do, and Will, Food Teachers Come From?

To become a qualified teacher in England, trainee teachers complete a programme of initial teacher training (ITT) that leads to qualified teacher status. There are a number of routes into teaching. These include an undergraduate route that is normally 3 or 4 years of 'on the job' training providing subject knowledge development and school experience, and postgraduate routes that are normally 1 year full time. Postgraduate routes can be undertaken through a Higher Education Institute (HEI) or a school-led route. School-led routes include school-centred initial teacher training (SCITT), School Direct (of which there is a salaried route and fee-paying route) or the Teach First Leadership Development programme.

The Department for Education (DfE) uses the Teacher Supply Model (TSM) to estimate the number of postgraduate trainees required in England in each subject and phase (primary and secondary) for each academic year (DfE, 2018). This model estimates the number of teachers needed to enter the profession accounting for a range of factors, including projections of pupil populations, the effect of new policies and estimates of teacher flow. Table 10.1 shows that each year the projected number and actual number of entrants has been below the forecasted need.

Since the 2016–2017 academic year, changes have been made to the process of allocating training places to ITT providers, involving the removal of formerly imposed controls on recruitment in D&T (Parliament: House of Commons, 2018). As Table 10.2 illustrates, the reality is sobering with only 33% of the target recruited in 2017/18. These figures are for all material areas as no distinction is made for food teachers alone.

How providers label subjects causes problems when looking at recruitment data specifically for food. Table 10.2 showed the overall trend for recruitment in all material areas. Interrogation of 'food' specifically suggests a similar decline in applications over time as shown in Fig. 10.1.

Low application rates for initial teacher training in England means that schools find it increasingly challenging to fill vacancies. TeachVac, a free, independent

Table 10.1 2016–2018: total secondary postgraduate (all subjects)

Year	Recruitment	Target	Contribution to target
2016/17	15,460	17,688	87%
2017/18	14,995	18,726	80%

Source: https://www.ucas.com/data-and-analysis/ucas-teacher-training-statistical-releases

Table 10.2 2016–2018: design and technology postgraduate (all material areas)

Year	Recruitment	Target	Contribution to target
2016/17	415	1034	40%
2017/18	305	917	33%

Source: https://www.ucas.com/data-and-analysis/ucas-teacher-training-statistical-releases

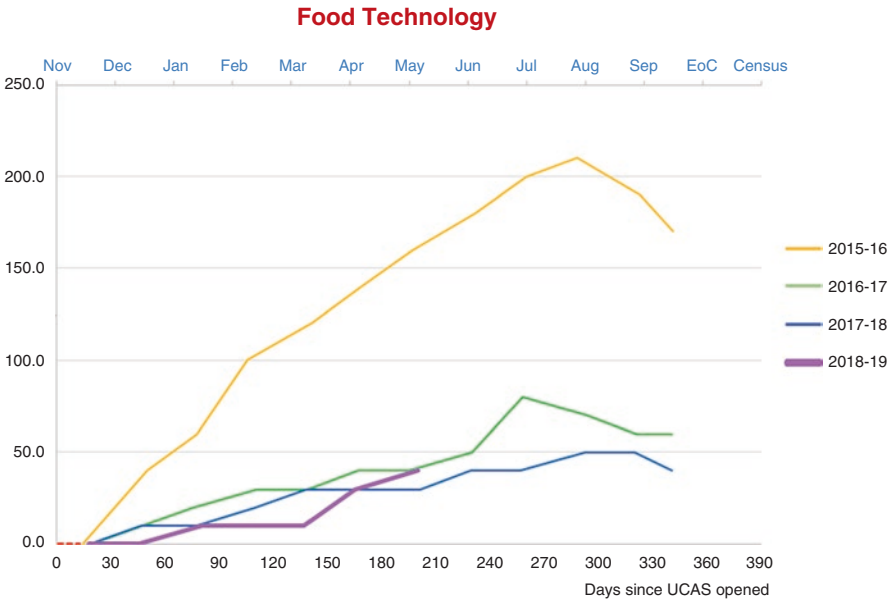

Fig. 10.1 Applications for food technology teacher training places in England from 2015 to May 2019. Source: https://www.ucas.com/data-and-analysis/ucas-teacher-training-statistical-releases

recruitment website, recorded just over 1600 advertisements for vacancies by schools seeking a D&T teacher during 2018 (Howson 2018). Some of these may be re-advertisements for posts that have not been filled. Even assuming a 25% re-advertisement rate, this would leave 1200 posts to be filled. Assuming 50% are filled by new entrants to the profession, a figure close to that used by the DfE in the past, this would require 600 new entrants from training, yet only 305 were recruited with possibly less than 50 having expertise in food according to UCAS data (Fig. 10.1). This is the number likely to be available to all schools, state-funded and independent, that want a D&T (not food specific) teacher with Qualified Teacher Status (QTS). Furthermore, we have to assume that some of these may not actually enter the profession, may defer their start, or wish to teach part time. The picture is worrying (Howson, 2018).

As an incentive to boost recruitment, eligible non-salaried trainee teachers on postgraduate programmes may qualify for a training bursary, a government incentive payment designed to attract highly qualified trainees in shortage areas. One may assume from the figures quoted above that trainee food teachers would be eligible for this funding but the reality has been quite different. Whilst subjects such as mathematics, science, modern languages and geography may qualify for up to £25,000, D&T, including food, has until recent times not qualified. In the most recent incarnation of the scheme, all eligible graduates have a £12,000 bursary but this appears to have had little impact on recruitment (Department for Education (DfE), 2019a, 2019b).

It has been contended that the reforms in ITT and education policy detailed earlier have contributed to this decline. Furthermore, the systems for recruiting teachers have had an impact on the recruitment of food teachers. The expansion of school-led ITT routes have caused some established university-centred provision withdrawing from training D&T teachers as low numbers make courses nonviable. In 2018/2019 there were 157 providers listed on the Department for Education 'Get into Teaching' website offering design and technology teacher training courses. Of these only 17 school-based courses and 15 university courses listed food as an area of focus.

The introduction of the English Baccalaureate (EBacc) has also had a significant impact on the status and viability of food in some schools. The EBacc was a controversial metric introduced in 2011 that is used to grade schools based on results in a series of core subjects. It was established as part of, the then education secretary, Michael Gove's widely criticised reforms to the National Curriculum. His intention was to develop a more academic curriculum with the EBacc being a measure of pupils' performance in traditional end-of-year examinations in English, mathematics, science, history, geography and languages. As this became an 'accountable measure', most schools adapted their curriculum for pupils at Key Stage 4 (14–16 years). The impact of this has been that pupils do not have as much opportunity to study the subjects that are not on this list, namely D&T, and the creative subjects (art, drama and music) so resulting in a hierarchy of importance being established. Despite a more recent accountability measure that reports pupils' attainment in eight subjects (Progress 8), the English Baccalaureate measure has been retained with significant consequences.

A 2016 report published by Kings College for the National Union of Teachers found that teachers had serious concerns that the EBacc was dramatically narrowing the curriculum, and that the excessive pressure of examinations was taking its toll on young people's well-being and mental health. Furthermore, teachers of creative, vocational and technology subjects reported experiencing increased job insecurity as colleagues face redundancy (Neumann et al., 2016).

This narrowing of the curriculum can also be demonstrated by the decline in examination entries in the subject. Entries for GCSE Design and Technology in England fell by nearly a third (32%) between 2012 and 2017. The new food GCSE is no longer included as a D&T subject but statistics for 2018 entries demonstrate that while entries for EBacc subjects rose by just over 5%, entries for food (including Hospitality and Catering and GCSE Food Preparation and Nutrition) declined by 21% (13,115 entries) (Office of Qualifications and Examinations Regulation (Ofqual), 2018).

While the decline in entries may be partially explained by the impact of the EBacc, it is likely that there are other influences including the lack of a clear progression pathway. The decision by the DfE to discontinue both the Design and Technology, Food, and Home Economics Advanced levels (for pupils aged 16–18 years) from 2018 is implicated here. This decision has implications for both industry and the future supply of well-qualified teachers. Buttriss (2017) indicates that the official reasons given for the decision focused on the lack of progression from Advanced

Level courses (pupils aged 16–18 years) to university warning that the effect of removal of these Advanced Level courses has implications for the teaching of food-based subjects in the school curriculum. Furthermore Owen-Jackson and Rutland (2017) suggest that the new GCSE Food Preparation and Nutrition does not prepare pupils for work in the food industry, other than catering.

We, as school governors, believe that there are also economic factors influencing the decline in uptake for a food-related GCSE courses. These are challenges that face families and schools. In many schools, pupils are required to provide their own ingredients for practical work with provision only being made for those pupils identified as being eligible for free school meals and so entitled to additional funding. The new GCSE Food Preparation and Nutrition requires pupils to develop technical skills and to work with a range of ingredients and the assessment process includes a formal 'practical examination'. For families with several children in school this can amount to a financial burden when other subjects are fully funded. For schools facing significant cuts, the cost of maintaining specialist rooms and employing technicians to support the subject can be brought into question, and anecdotally teachers are suggesting that technicians are not being replaced when they leave and that some schools are considering whether they should offer the subject beyond what is compulsory for the National Curriculum. This means that some pupils are denied the opportunnity of studying food beyonnd the age of 14 years.

The decline in the significance of food as an academic subject in England, evidenced by the decline in GCSE entries and exacerbated by the demise of an Advanced Level qualification, the EBacc and the economic climate, is likely to deter potential teachers from incurring the costs of training to teach a subject that has been marginalised. Whereas, in Scotland and Northern Ireland where there are still Advanced Higher and A Level qualifications available in Health and Food and Home Economics the subject is thriving and teaching remains a popular career option.

Conclusion

When looking at the evolution of food as a subject, it has evolved from domestic science, through home economics, to food technology with a more industrial focus, back into food preparation and nutrition. This could be construed as food education teaching coming full circle. There is, however, no circle for the evolution of food teachers. For the subject to have the status it should command, to meet the requirements of both the food industry and education, we concur with Owen-Jackson and Rutland (2017) that the redevelopment of an academic Advanced Level course is critical. We have anecdotal evidence that in schools where there are qualified teachers with expert knowledge, food education in various formats is thriving at the GCSE level. These teachers are currently denied the opportunity to engage in working with older pupils in a more academic context, as the current level 3 Food and

Nutrition qualification offers little progression from the GCSE. A post 16 Advanced Level course that offers pathways into the food industry and other food-related careers, including teaching, is necessary to give the subject academic credibility and draw enthusiasts into teaching. Whilst science and mathematical A Levels can support degrees in food science and technology the progression pathway is often not clear. An Advanced Level food course should develop pupils' understanding of food as a material for product development, and link to practical food preparation plus scientific and technological understanding. It is only then that there is a clear pathway from school to university, and possibly teacher training. Without this where will future food teachers come from?

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