Cambridge Assessment

Re-heated meals: Revisiting the teaching, learning and assessment of practical cookery in schools.

Conference Paper

Gill Elliott & Jo Ireland

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Author contact details:

Gill Elliott & Jo Ireland
Assessment Research and Development,
Research Division
Cambridge Assessment
The Triangle Building
Shaftesbury Road
Cambridge
CB2 8EA
UK

Elliott.g@cambridgeassessment.org.uk
Ireland.J@cambridgeassessment.org.uk

http://www.cambridgeassessment.org.uk

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Abstract
The place of practical cookery within school subjects in England has, in recent years, been debated as part of concerns about the nation's health and obesity. Cookery has been a school subject for over a century, but has only ever held a minority place in the curriculum. In 2017 we surveyed teachers of practical cookery in schools, in a repeat of a survey first carried out in 2007. We asked them about the ingredients used and the skills taught in practical cookery lessons at school and also about the issues they faced delivering practical cookery teaching and assessment through the school food curriculum.
We have found that the nature of the products being taught in schools has changed, with less emphasis on sugary baked items than previously, which is consistent with the development of healthy eating initiatives and awareness. However, many of the issues surrounding the teaching of cookery skills in schools identified in 2007, such as insufficient equipment, lesson time and parental support, remain unchanged. In this paper we will present the results of our study in full and discuss the implications of this research and the role of practical cookery teaching and assessment in schools in the future.

Introduction
Practical cookery is a life skill. As such, it is of great interest to the education and assessment community. The extent to which it is taught in schools and incorporated into high-stakes assessment has an impact upon whether young people emerge into adulthood equipped with the essential skills, knowledge and understanding which they need.

There are, of course, many who would argue with the statement above. Some might say that the burden of responsibility is located within families and falls outside formal schooling. Others might say that practical cookery is not even a life skill – with the abundance of pre-prepared food available the skills needed to purchase and use individual ingredients are not necessary to 21st century survival.

Whatever the arguments, practical cookery lessons currently exist in schools in England in a fairly low-key context. At primary level early work is carried out on nutrition and healthy eating. In Key Stage 3 (KS3) (age 11-14), in the early years of secondary education, students experience practical cookery in the context of technology, usually on a rotating schedule. At Key Stage 4 (KS4) and beyond, involvement in the subject is optional, and followed only by those who wish to take it at GCSE, A level or through a vocational qualification.

In Cambridge Assessment's Research Division we have taken an interest in practical cookery teaching in schools previously. In 2007 we carried out a very wide-ranging study which looked into the history of the wider subjects of Food Technology and Home Economics through materials from our Group Archive, and surveyed teachers about the practicalities of teaching practical cookery at that time. In 2017, ten years after our first survey of cookery teachers, we conducted a second. This paper describes our findings.

Background
Cookery as a subject at Key Stages 3 & 4 in UK schools has a complex history. Originally conceived as 'domestic science' and intended as a subject for girls, it was adapted into Home Economics in the 1970s and later found a place in the Craft, Design and Technology (CDT) suite of subjects (Elliott, 2008). This came about because, in the early 1990s, Home Economics was close to being abolished as a method of cutting educational costs and was saved by being incorporated into the compulsory curriculum area of Design and Technology (Elliott, 2009). In the 2000s various educational and media campaigns about food in schools surfaced, raising awareness of declining practical skills (Horne & Kerr, 2003; McBeth, 2005). The Children's Food campaign (2006), the Design and Technology Association (DATA, 2005) and the Government (DCSF, 2003) advocated the maintenance of food teaching in the

curriculum and the development of skills for healthier lifestyles. A new KS3 programme of study was brought in by QCA (QCA, 2007) and 'Licence to Cook', a compulsory cooking entitlement, was brought into schools in 2008. Awarding Bodies were required to use the same core competencies to underpin GCSE specifications as used at KS3 and Licence to Cook which meant less focus on industrial processes at GCSE.

In 2007, in the midst of this debate about food in schools, we surveyed teachers of cookery in order to establish their views about the teaching and learning of practical cookery in schools (Elliott, 2009). As a part of a wider investigation into practical cookery in schools, a questionnaire was devised, asking schools about the teaching of practical cookery skills. Questions included:

- duration and proportion of practical cookery lessons
- cooking skills carried out in the classroom
- ingredients used in the classroom; and
- issues surrounding practical cookery in schools

In 2007 we reported that teachers were frustrated. Practical issues, such as the shortening of lesson periods and the inadequacy of physical equipment, were making lessons very difficult. In addition there was a growing trend for students to be less skilled from their home experience – teachers reported having to teach basic skills, such as cutting with a knife, which had not been necessary for previous generations of students.

Ten years on from our original report there is an ongoing interest in food in schools in both Government and media reports. It is, we feel, a suitable moment to re-investigate the issues we explored a decade ago. Interest in the place of food teaching in schools is still very active. Some contributors argue that food technology should not just be about learning to cook; that there is a wider benefit to be found in the academic understanding of food and food science (Rutland, 2008; Rutland & Owen-Jackson, 2014; Jones, Bunting, & de Vries, 2013). Investigations have been made into the effectiveness of community-based initiatives (McDowell et al., 2015) and very detailed initiatives produced (Dimbleby & Vincent, 2013). In 2017 a wide-ranging report into all aspects of food culture in schools was produced by the Jamie Oliver Food Foundation (2017) in which very similar concerns were raised about the condition and future of practical food skills in schools as we ourselves have discussed (Elliott, 2009).

Method

Our research questions were (i) what are the features of teaching of practical cookery in schools (ii) what are the issues encountered by teachers, and (iii) has anything changed since 2007?

In consequence we revisited the 2007 questionnaire, updated it slightly, and re-issued it in September 2017. The full survey document is presented in Appendix A. The survey contained 23 questions, many of which were either originally used in 2007, or had been slightly updated to reflect the current context. A few questions were new; these had either been prompted by additional comments received from the 2007 survey document or related to the recent reforms of qualifications in England. The survey was presented in sections:

- You and your centre
- Emphasis on practical cookery
- Practical cookery skills
- Practical cookery ingredients
- Factors affecting teaching of practical cookery in schools
- Practical cookery facilities
- Students' skills and attitudes and support from home

Most questions were completed via radio buttons or check boxes, although many also provided a text box for any additional information that the informant wished to add.

School contacts, known through the awarding organisation OCR which is a part of the Cambridge Assessment Group, were invited by email to follow a link to the online questionnaire (an offer was also made to send a paper version). Emails were sent to 318 centres which had entered candidates for GCSE Design and Technology: Food Technology (J302) or GCSE Home Economics: Food and Nutrition (J431) in June 2016 and/or June 2017. In addition we emailed 24 contacts who had indicated in their responses to the 2007 survey that they wished to be involved in future research.

A social media campaign was also introduced; firstly by encouraging those contacted by email to share the link with colleagues and, secondly, by the promotion of the questionnaire on Cambridge Assessment social media channels including Twitter, LinkedIn and Facebook. Apart from the addition of a social media campaign and the presentation of the survey online, rather than by post, this was the same data collection strategy as applied in 2007.

Results

After removing 35 fully blank responses, the number of questionnaire respondents was 95. Nearly all of the responses came from our email campaign (a response rate of 27.7 per cent from 342 emails) and were provided by food teachers or technicians in secondary schools in England. Responses came from 84 centres in total; two from Gibraltar schools and one from a Scottish secondary. Although disappointing in the context of the 2007 questionnaire, which was returned by over 300 respondents, this was a sufficient number to enable us to address our research questions (Survey Monkey, 2018). As with the previous survey we have reported the results simply, as percentages. Comparisons have been made between the results of this study and the results from 2007, where the questions were the same. It should be noted that the responses are not necessarily from the same centres as previously, and as the surveys could be returned anonymously we cannot tell how many respondents replied to both surveys.

To assess whether we had collected responses from a representative sample, responses were coded according to centre type (Figure 1) and school gender (Figure 2) using the Government's information about schools database (Edubase). There was a greater proportion of independent schools and girls' schools than a truly representative sample of English centres would show, but there may be effects of awarding body and subject which could at least partially explain this.

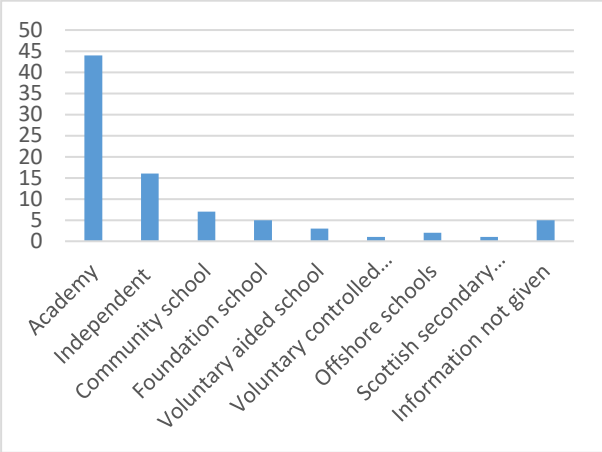

Figure 1: Number of responses by centre type

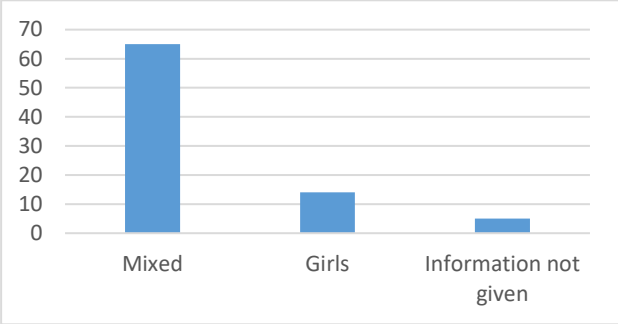

Figure 2: Number of responses by school gender

Figure 3 shows respondents' years of experience teaching cookery ranged from 1 to 45 years, which coincidentally matches exactly the experience range of the respondents to the

2007 survey. The mean number of years of teaching cookery was 17 and the mode was 7 years, compared with 21 (mean) and 30 (mode) in 2007.

Figure 3: Respondents' years of experience teaching cookery skills

The majority of centres had one or two specialist food teachers (Figure 4) and just over two-thirds had one food technician[1], although 14 per cent of respondents reported having no food technician support (Figure 5) and two centres had no food specialist teachers.

[1] A food technician's role in a school includes, but is not limited to:

- organising and maintaining the D&T rooms, resources, equipment and consumables
- supporting teaching and learning by preparing tools, materials, ingredients and equipment for use in practical lessons
- supporting teachers during specific lessons including working with small groups of students

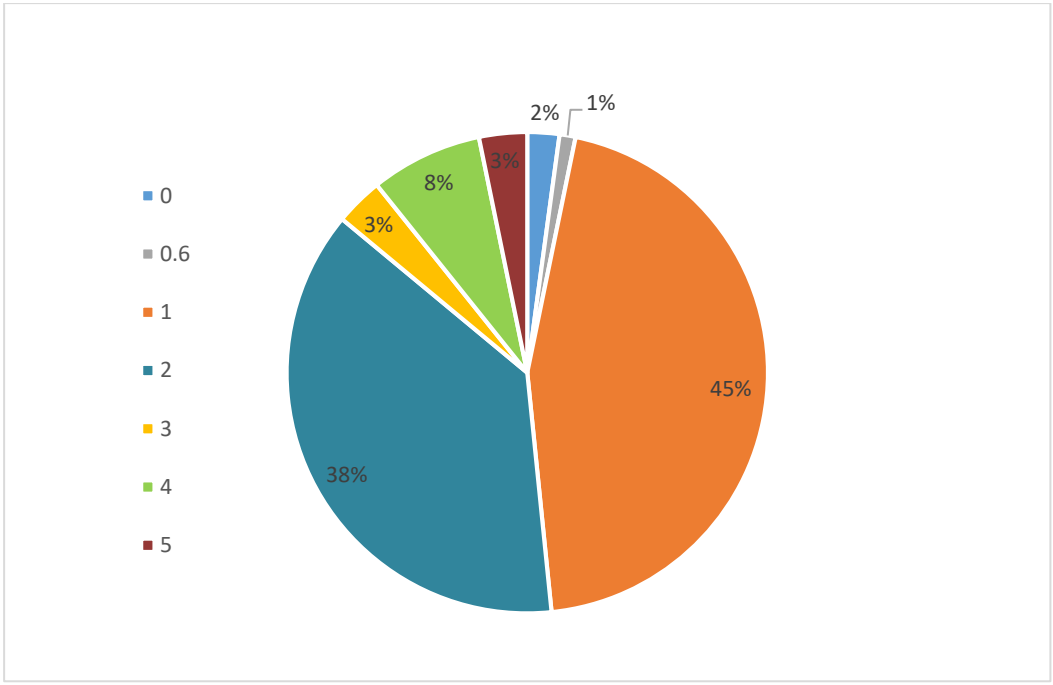

Figure 4: Number of specialist food teachers in centre

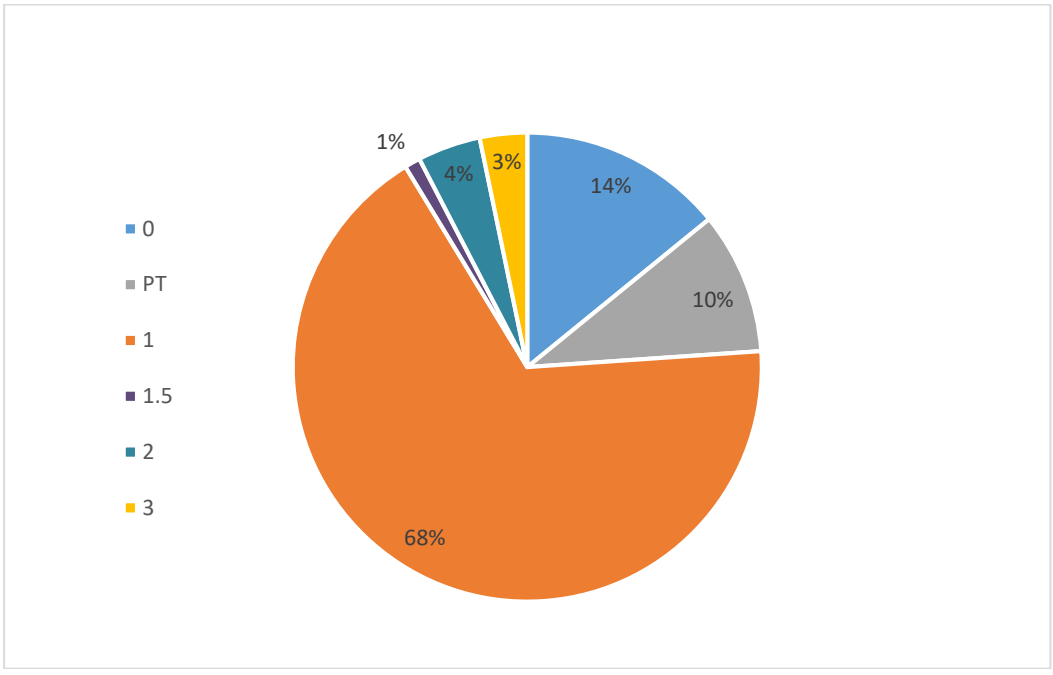

Figure 5: Number of food technicians in centre

Teaching time at KS3

Following the same method as used in 2007, we asked respondents to tell us about the total hours of food teaching students at their centre received in KS3. Technology subjects are often taught in rotation through the year, e.g., one half-term per subject, so asking centres to indicate total hours seemed the simplest approach to capturing the complex timetabling.

Table 1 shows that 60% of centres offered 41 hours or more of food teaching (both practical and theoretical) during KS3. For most of these centres, at least 50% of teaching time was dedicated to practical cookery (55% of total respondents to this question). This corresponded closely to the practical cookery teaching time (52%) reported in 2007 for centres offering more than 41 hours total teaching time.

Table 1: KS3 teaching time (n=92)

	Total hours teaching in KS3				
	10-20 hrs	21-40 hrs	41-60 hrs	61+ hrs	Total
% practical					
75% or more	2.2%	6.5%	6.5%	3.3%	18.5%
66%	6.5%	7.6%	5.4%	12.0%	31.5%
50%	6.5%	10.9%	20.7%	7.6%	45.7%
33%	0	0	2.2%	2.2%	4.3%
25% or less	0	0	0	0	0
Total	15.2% (n=14)	25.0% (n=23)	34.8% (n=32)	25.0% (n=23)	100% (n=92)

KS4 options and the new 9-1 GCSE

The majority of respondents (90.1%) said that their centre would be offering the 9-1 GCSE in Food Preparation and Nutrition, and 64.8% of those said they would not offer any other food qualifications at KS4. Of the 29.7% who were planning to offer other food qualifications in addition to the 9-1 GCSE, responses revealed that these were mostly Level 1 and 2 vocational courses, but a number of other offerings were mentioned, such as ASDAN FoodWise, Basic Food Hygiene certificate, and in-house skills courses.

6.6% said they would not offer GCSE Food Preparation and Nutrition, with 3.3% unsure. All of those (n=6) who were not offering the new GCSE said they would offer Hospitality and Catering Level 1 and 2 qualifications.

Figure 6 shows that the majority of respondents previously offered GCSE Home Economics: Food and Nutrition, with some offering multiple food qualifications.

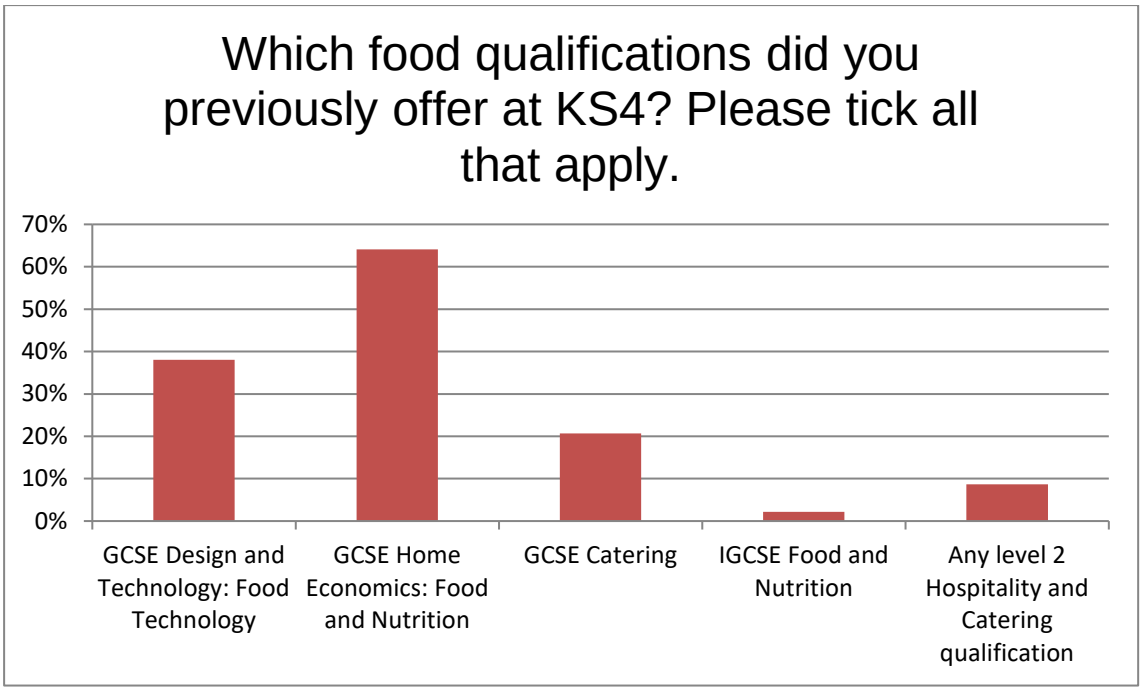

Figure 6: Which food qualifications did you previously offer at KS4?

Practical skills

Respondents generally felt that the emphasis on practical cookery skills at KS3 and KS4 was about right (Table 2), although a substantial minority felt practical cookery skills were still underemphasised at both KS3 and KS4.

Table 2: Please select how you personally feel about the emphasis on practical cookery skills

	Underemphasises practical cookery skills	Has the emphasis on practical cookery skills about right	Overemphasises practical cookery skills
KS3 National Curriculum	31.8%	68.2%	0.0%
KS4 9-1 GCSE syllabus	24.7%	71.6%	3.7%

A mixed picture emerged from the question on how the 9-1 GCSE syllabus had changed the emphasis on practical cookery at GCSE. Table 3 indicates that almost 70% of respondents felt that there was an increase or little difference in the opportunities for students to carry out practical cookery. Table 4 shows the responses to this question cross-tabulated with the information on their previously offered qualification. Here, it appears that respondents who previously offered GCSE Catering viewed the 9-1 GCSE as offering fewer opportunities for practical cookery. Conversely, those who previously offered GCSE Design & Technology or Home Economics: Food and Nutrition tended to see increased opportunities or little difference.

Table 3: To what extent do you feel that the new 9-1 GCSE syllabus has changed the emphasis on practical cookery?

Opportunities for students to carry out practical cookery have **reduced** from the previous syllabus I used	24.7
Opportunities for students to carry out practical cookery have **increased** from the previous syllabus I used	40.5%
There is little difference	29.2%
N/A	5.6%

Table 4: Cross-tabulations of 9-1 GCSE emphasis on practical cookery with previously offered qualification(s) with number of respondents in brackets

	Reduced	Increased	Little difference	N/A	Did not answer
GCSE D&T	22.9% (8)	40.0% (14)	34.3% (12)	0.0% (0)	2.9% (1)
GCSE Home Ec.	13.6% (8)	45.8% (27)	32.2% (19)	5.1% (3)	3.4% (2)
GCSE Catering	57.9% (11)	15.8% (3)	21.1% (4)	5.3% (1)	0.0% (0)
IGCSE Food and Nutrition	0.0% (0)	50.0% (1)	0.0% (0)	0.0% (0)	50.0%(1)
Any Level 2 Hospitality and Catering	25.0% (2)	0.0% (0)	37.5% (3)	37.5% (3)	0.0% (0)

There was an opportunity for respondents to add comments on the emphasis on practical cookery in the 9-1 GCSE. Most frequently mentioned were that the greater theory content and food science investigations took up more teaching time and reduced the available time to focus on practical cookery. Some respondents felt that the emphasis on food science made the qualification less accessible for lower ability students, although there were also positive comments ("the scientific aspect of the new 9-1 GCSE has been really well received by students" and "higher skill levels are going to be acknowledged for the more able pupils"). There were also positive comments on the 3 hour practical assessment, which was seen as giving an opportunity to tackle more challenging dishes compared to previous qualifications.

Concerning the transition to the new 9-1 GCSE, around three-quarters of respondents expected the skills taught and the ingredients used to change to some extent from those of their previous qualification (Table 5). Combined with those who expected skills and ingredients to change a great deal, almost all teachers anticipated the new qualification having a notable impact on practical cookery in schools. The comments on this question mainly focused on the requirements introduced for dealing with meat and fish, which affect the skills and ingredients used. Generally, comments were favourable towards the introduction of a wider range of ingredients.

Table 5: If you are offering the new 9-1 qualification, do you expect the skills taught, or the ingredients used, to change from those of your previous qualification?

	A great deal	To some extent	Not much

Skills taught	20.6%	76.5%	2.9%
Ingredients used	18.2%	75.8%	6.1%

Progression
Following reform of both GCSE and A levels, we took the opportunity to find out how respondents felt about the withdrawal of the A level food qualification. A significant number were concerned by the lack of an A level qualification (Figure 7).

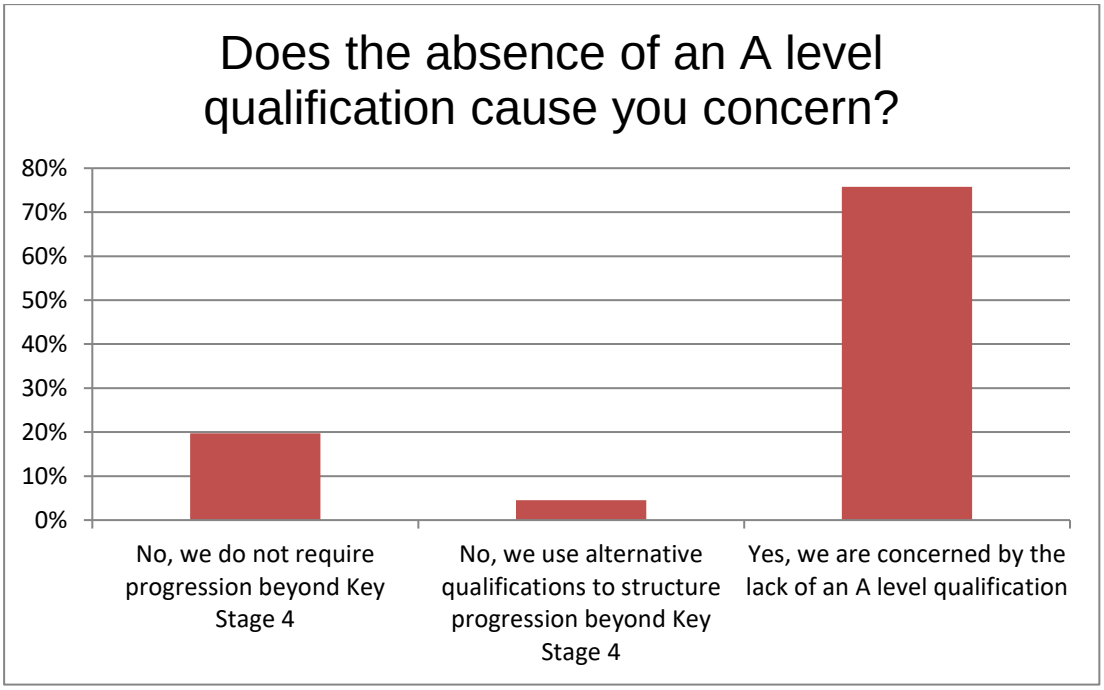

Figure 7: Absence of Advanced level qualification

Additional comments on this question brought up a range of concerns including:

- lack of progression route to HE / careers such as Nutritionist, Dietician or Food Teacher
- no progression route results in weaker uptake at GCSE
- undermines the value of the subject at GCSE by implying it's not rigorous enough to warrant an A level
- other qualifications do not 'fill the gap' left by withdrawal of A level – L3 emphasis on catering skills, EPQ not ideal
- food specialists needed more than ever with increasing obesity levels
- frustration for teachers, students and parents – an A level would be popular

These findings correlate with responses to the Department of Education's consultation on reforms to Design and Technology AS and A level, which reported that 85% (n=1049) of respondents referred specifically to the removal of food technology from the suite. An overview of the comments received on the consultation showed the same concerns being voiced in relation to progression to food-related higher education and careers, the role of food specialists in the nation's health and how catering-focused qualifications are not a suitable substitute for the A level. (Department for Education, 2016).

Cooking skills and ingredients

One of the key aspects of the 2007 study was the fine-grain detail we collected about the skills and ingredients being used in practical cookery lessons, and this information was again collected from respondents in 2017.

Cooking skills
We asked respondents to indicate how frequently the listed cooking skills were used by students in practical lessons at both KS3 and KS4. Respondents were asked to base their judgements on student groups over the last two years using the following categories:

- Very often – all (or nearly all) students will carry out this procedure on several occasions during the Key Stage.
- Often – all students have the opportunity to carry out this procedure, and most will do so at least once during the Key Stage.
- Occasionally – the opportunity exists to carry out this procedure and a few students do so, but it is relatively infrequent.
- Never – no students have carried out this procedure during the past two years.

The following tables have been colour coded and reordered to reflect the frequency of each activity according to respondents. In each line, the highest frequency response from the options is coloured dark blue with white text. The second most frequent response is coloured mid blue with white text, the third light blue with black text and the least frequent response pale blue with black text.

There is a list for KS3 (Table 6) and one for KS4 (Table 7): they are each divided into three sections: high, mid and low frequency activities. Highest frequency skills appear at the top of the table and lowest at the bottom.

As both KS3 and KS4 ingredients and skills were grouped together as a single question for each ingredient/skill, small amounts of missing data occur in the percentages, where a respondent has answered for one key stage and not the other. Rounding to one decimal place also occasionally pushes total percentages over 100%.

Table 6: Frequency of cooking skills used by KS3 students in practical lessons

KS3 skills	Very often	Often	Occasionally	Never
Preparing vegetables (peeling, cutting)	78.7%	20.0%	1.3%	0.0%
Boiling (eggs, vegetables, rice, pasta)	29.3%	52.0%	16.0%	2.7%
Preparing raw meat (washing, cutting)	36.0%	33.3%	28.0%	0.0%
Preparing fresh fruit	28.0%	44.0%	25.3%	1.3%
Making a Bolognese type sauce	20.3%	46.0%	24.3%	9.5%
Making a pizza base using fresh ingredients (scone or bread based)	20.0%	38.7%	37.3%	4.0%
Bread making (using fresh ingredients)	17.3%	40.0%	33.3%	8.0%
Making a roux-based sauce	18.9%	37.8%	32.4%	9.5%
Making scones (sweet or savoury)	18.7%	36.0%	36.0%	9.3%
Topping a pizza base (fresh or ready made) with fresh/tinned products	24.0%	30.7%	36.0%	9.3%
Stir frying	13.2%	40.8%	38.2%	7.9%
Making curry	13.5%	39.2%	32.4%	12.2%

Making hot puddings (crumble, apple charlotte, etc.)	13.2%	31.6%	46.1%	9.2%
Pastry making using fresh ingredients – shortcrust	14.7%	29.3%	41.3%	14.7%
Baking cakes (any)	9.3%	34.7%	50.7%	5.3%
Making soup (from fresh ingredients)	13.5%	25.7%	31.1%	27.0%
Making any other savoury sauce	8.0%	28.0%	34.7%	26.7%
Making biscuits using the creaming method	10.8%	25.7%	36.5%	25.7%
Making quiche/flan/savoury pie using ready-made (or student pre-made) pastry	8.0%	28.0%	42.7%	20.0%
Making biscuits using the rubbing in method	5.3%	29.3%	44.0%	20.0%
Preparing green salad	10.7%	18.7%	41.3%	28.0%
Preparing coleslaw, potato salad, Waldorf salad, etc.	6.8%	21.6%	46.0%	24.3%
Shallow frying	4.0%	25.0%	48.7%	23.7%
Using egg as a raising agent, egg whites, meringue	4.0%	15.8%	36.8%	39.5%
Pastry making using fresh ingredients – puff, choux, other	6.7%	13.3%	22.7%	54.7%
Grilling	4.0%	15.8%	57.9%	21.1%
Making fresh pasta	2.7%	13.3%	32.0%	48.0%
Stewing (fruit)	6.8%	10.8%	40.5%	41.9%
Making a sweet pie using ready-made (or student pre-made) pastry	4.0%	10.7%	40.0%	44.0%
Making and using batter (for sweet or savoury dishes)	0.0%	14.5%	46.1%	39.5%
Tenderising and marinating meat	1.3%	10.7%	41.3%	42.7%
Poaching (eggs, fish, meat)	0.0%	10.7%	25.3%	61.3%
Making an emulsion (salad dressing, mayonnaise, etc.)	1.4%	8.1%	36.5%	50.0%
Making smoothies	1.3%	9.2%	40.8%	47.4%
Steaming (vegetables or fish)	0.0%	9.2%	21.1%	67.1%
Preparing raw fish (washing, cutting)	1.4%	5.4%	37.8%	52.7%
Making gravy	2.7%	4.0%	20.0%	72.0%
Making toasted sandwiches/toast	0.0%	6.6%	40.8%	51.3%
Roasting	0.0%	6.7%	30.7%	61.3%
Making cold puddings (mousse, trifle, etc.)	1.3%	4.0%	32.0%	61.3%
Making soup (from tinned ingredients)	0.0%	5.3%	16.0%	77.3%
Preparing sandwiches	0.0%	4.0%	21.1%	72.4%
Scrambling eggs	1.3%	4.0%	32.9%	61.8%
Making milk-based puddings (e.g. rice pudding)	0.0%	2.6%	13.2%	81.6%
Making ice-cream	0.0%	2.7%	20.3%	75.7%
Braising/casseroling	0.0%	2.7%	17.3%	78.7%
Making egg-based puddings (e.g. baked custard)	1.3%	1.3%	23.7%	73.7%
Making custard (from powder)	0.0%	2.6%	17.1%	80.3%
Deep frying	0.0%	1.3%	9.2%	88.2%
Pressure cooking	0.0%	0.0%	1.3%	96.1%
Making fondue (sweet or savoury)	0.0%	0.0%	6.6%	93.4%

Table 7: Frequency of cooking skills used by KS4 students in practical lessons

KS4 skills	Very often	Often	Occasionally	Never
Preparing vegetables (peeling, cutting)	80.0%	16.0%	0.0%	0.0%
Preparing raw meat (washing, cutting)	60.0%	33.3%	4.0%	0.0%

Boiling (eggs, vegetables, rice, pasta)	41.3%	36.0%	17.3%	0.0%
Pastry making using fresh ingredients – shortcrust	24.0%	53.3%	16.0%	1.3%
Bread making (using fresh ingredients)	26.7%	48.0%	21.3%	0.0%
Making a roux-based sauce	25.7%	47.3%	23.0%	0.0%
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Making curry	20.3%	39.2%	37.8%	0.0%
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Making a Bolognese type sauce	21.6%	36.5%	39.2%	0.0%
Stir frying	14.5%	42.1%	34.2%	1.3%
Making fresh pasta	10.7%	45.3%	37.3%	2.7%
Making any other savoury sauce	16.0%	40.0%	41.3%	1.3%
Making an emulsion (salad dressing, mayonnaise, etc.)	13.5%	36.5%	47.3%	0.0%
Topping a pizza base (fresh or ready-made) with fresh/tinned products	17.3%	29.3%	38.7%	12.0%
Baking cakes (any)	16.0%	30.7%	50.7%	0.0%
Shallow frying	9.2%	34.2%	52.6%	1.3%
Making hot puddings (crumble, apple charlotte, etc.)	13.2%	30.3%	50.0%	4.0%
Making soup (from fresh ingredients)	14.9%	29.7%	52.7%	2.7%
Preparing green salad	10.7%	28.0%	52.0%	6.7%
Tenderising and marinating meat	8.0%	29.3%	58.7%	1.3%
Making scones (sweet or savoury)	8.0%	25.3%	52.0%	6.7%
Making biscuits using the creaming method	12.2%	21.6%	56.8%	2.7%
Making biscuits using the rubbing in method	9.3%	24.0%	54.7%	5.3%
Making a sweet pie using ready-made (or student pre-made) pastry	10.7%	24.0%	46.7%	14.7%
Preparing raw fish (washing, cutting)	2.7%	31.1%	58.1%	5.4%
Grilling	5.3%	27.6%	61.8%	2.6%
Preparing coleslaw, potato salad, Waldorf salad, etc.	6.8%	24.3%	58.1%	6.8%
Making and using batter (for sweet or savoury dishes)	4.0%	25.0%	65.8%	1.3%
Making cold puddings (mousse, trifle, etc.)	8.0%	18.7%	64.0%	6.7%
Stewing (fruit)	5.4%	17.6%	56.8%	17.6%
Making gravy	5.3%	16.0%	49.3%	25.3%
Steaming (vegetables or fish)	2.6%	15.8%	64.5%	11.8%
Making egg-based puddings (e.g. baked custard)	6.6%	14.5%	72.4%	4.0%
Roasting	5.3%	14.7%	64.0%	13.3%
Poaching (eggs, fish, meat)	1.3%	14.7%	69.3%	12.0%
Braising/casseroling	5.3%	10.7%	57.3%	24.0%
Scrambling eggs	0.0%	7.9%	50.0%	32.9%
Making milk-based puddings (e.g. rice pudding)	4.0%	9.2%	56.6%	26.3%
Making ice-cream	2.7%	6.8%	58.1%	28.4%
Making smoothies	4.0%	6.6%	43.4%	43.4%
Making custard (from powder)	2.6%	7.9%	46.1%	40.8%
Making toasted sandwiches/toast	0.0%	4.0%	26.3%	61.8%
Making fondue (sweet or savoury)	1.3%	2.6%	15.8%	73.7%
Deep frying	2.6%	2.6%	55.3%	36.8%
Making soup (from tinned ingredients)	1.3%	2.7%	26.7%	66.7%

Preparing sandwiches	0.0%	2.6%	21.1%	73.7%
Pressure cooking	2.6%	0.0%	18.4%	76.3%

We then took the ranked skills lists for both KS3 and KS4 and compared them to the equivalent lists from the 2007 report[2]. In doing this, we were able to look at how the frequency of skills used has changed. In Table 8 and Table 9, the column labelled 'Change' shows whether a particular skill has increased or decreased in frequency of use compared to 2007. Those skills at the top of the list have the greatest increase in frequency, while those at the bottom have shown the sharpest decline in frequency.

Table 8: Change in frequency of skills used by KS3 students between 2007 and 2017

KS3 Skills list	**Rank position**		
	2007	**2017**	**Change**
Poaching (eggs, fish, meat)	39	28	+11
Making a roux-based sauce	17	7	+10
Preparing raw meat (washing, cutting)	11	3	+8
Making curry	18	11	+7
Pastry making using fresh ingredients – puff, choux, other	29	22	+7
Making soup (from fresh ingredients)	21	15	+6
Making fresh pasta	30	24	+6
Making gravy	38	32	+6
Roasting	40	34	+6
Stir frying	15	10	+5
Making quiche/flan/savoury pie using ready-made (or student pre-made) pastry	23	18	+5
Making and using batter (for sweet or savoury dishes)	31	27	+4
Bread making (using fresh ingredients)	9	6	+3
Making any other savoury sauce	19	16	+3
Making milk-based puddings (e.g. rice pudding)	41	38	+3
Making ice-cream	42	39	+3
Making a Bolognese type sauce	7	5	+2
Steaming (vegetables or fish)	32	30	+2
Preparing raw fish (washing, cutting)	33	31	+2
Preparing vegetables (peeling, cutting)	1	1	0
Boiling (eggs, vegetables, rice, pasta)	2	2	0
Deep frying	43	43	0
Pressure cooking	44	44	0
Making fondue (sweet or savoury)	45	45	0
Preparing fresh fruit	3	4	-1
Preparing coleslaw, potato salad, Waldorf salad, etc.	20	21	-1
Stewing (fruit)	24	25	-1
Making a sweet pie using ready-made (or student pre-made) pastry	25	26	-1
Scrambling eggs	36	37	-1
Making scones (sweet or savoury)	6	8	-2
Pastry making using fresh ingredients – shortcrust	10	13	-3
Making biscuits using the creaming method	14	17	-3
Braising/casseroling	37	40	-3
Topping a pizza base (fresh or ready made) with fresh/tinned products	5	9	-4
Making hot puddings (crumble, apple charlotte, etc.)	8	12	-4
Making toasted sandwiches/toast	27	33	-6

[2] The following skills were not included in the Tables 8 and 9 because there was no equivalent in the 2007 data: shallow frying; using egg as a raising agent, egg whites, meringue; tenderising and marinating meat; making an emulsion and making soup from tinned ingredients.

Making egg-based puddings (e.g. baked custard)	35	41	-6
Making biscuits using the rubbing in method	12	19	-7
Preparing green salad	13	20	-7
Grilling	16	23	-7
Making smoothies	22	29	-7
Making cold puddings (mousse, trifle, etc)	28	35	-7
Making custard (from powder)	34	42	-8
Baking cakes (any)	4	14	-10
Preparing sandwiches	26	36	-10

Table 9: Change in frequency of skills used by KS4 students between 2007 and 2017

KS4 Skills list	**Rank position**		
	2007	**2017**	**Change**
Pastry making using fresh ingredients – puff, choux, other	27	8	+19
Making fresh pasta	33	14	+19
Making quiche/flan/savoury pie using ready-made (or student pre-made) pastry	22	9	+13
Bread making (using fresh ingredients)	17	5	+12
Making gravy	36	31	+5
Scrambling eggs	42	37	+5
Preparing raw meat (washing, cutting)	6	2	+4
Topping a pizza base (fresh or ready made) with fresh/tinned products	20	16	+4
Making any other savoury sauce	18	15	+3
Roasting	37	34	+3
Making fondue (sweet or savoury)	46	43	+3
Making a roux-based sauce	8	6	+2
Making a sweet pie using ready-made (or student pre-made) pastry	26	24	+2
Preparing coleslaw, potato salad, Waldorf salad, etc.	29	27	+2
Making a pizza base using fresh ingredients (scone or bread based)	12	11	+1
Making ice-cream	40	39	+1
Preparing vegetables (peeling, cutting)	1	1	0
Pastry making using fresh ingredients – shortcrust	4	4	0
Making curry	10	10	0
Making scones (sweet or savoury)	21	21	0
Making and using batter (for sweet or savoury dishes)	28	28	0
Poaching (eggs, fish, meat)	35	35	0
Making milk-based puddings (e.g. rice pudding)	38	38	0
Deep frying	44	44	0
Boiling (eggs, vegetables, rice, pasta)	2	3	-1
Preparing green salad	19	20	-1
Preparing raw fish (washing, cutting)	24	25	-1
Making egg-based puddings (e.g. baked custard)	32	33	-1
Making toasted sandwiches/toast	41	42	-1
Pressure cooking	45	46	-1
Preparing fresh fruit	5	7	-2
Steaming (vegetables or fish)	30	32	-2
Braising/casseroling	34	36	-2
Making custard (from powder)	39	41	-2
Preparing sandwiches	43	45	-2
Stir frying	9	13	-4
Making soup (from fresh ingredients)	15	19	-4
Making a Bolognese type sauce	7	12	-5

Stewing (fruit)	25	30	-5
Making cold puddings (mousse, trifle, etc)	23	29	-6
Making hot puddings (crumble, apple charlotte, etc.)	11	18	-7
Making biscuits using the creaming method	13	22	-9
Making biscuits using the rubbing in method	14	23	-9
Making smoothies	31	40	-9
Grilling	16	26	-10
Baking cakes (any)	3	17	-14

Ingredients

As with the previous section, respondents were asked to indicate how frequently students used the listed ingredients in practical lessons at both KS3 and KS4. The same frequency categories were provided: very often; often; occasionally; never and lists created in the same format as for skills. Overall, the lists show more frequent activities at the top and those attempted less often at the bottom.

Table 10: Frequency of use of ingredients by KS3 students in practical lessons

KS3 ingredients	Very often	Often	Occasionally	Never
Onions	65.7%	25.7%	7.1%	1.4%
Dry baking ingredients (flour, sugar, baking powder, oats, etc.)	70.6%	19.1%	10.3%	0.0%
Eggs	49.3%	38.8%	11.9%	0.0%
Herbs/spices - dried	57.4%	27.9%	14.7%	0.0%
Milk	43.3%	38.8%	17.9%	0.0%
Oils (olive oil, sesame oil, etc.)	41.8%	37.3%	19.4%	1.5%
Carrots	30.0%	47.1%	21.4%	1.4%
Fresh fruit (any)	44.1%	30.9%	25.0%	0.0%
Cheddar, red Leicester, double Gloucester cheese	20.9%	53.7%	25.4%	0.0%
Pasta (dried or fresh)	42.7%	30.9%	25.0%	1.5%
Other flavourings (soy, vinegars, garlic, etc.)	31.3%	41.8%	23.9%	1.5%
Tinned tomatoes	32.9%	40.0%	25.7%	2.9%
Margarine (hard or soft)	26.9%	44.8%	26.9%	1.5%
Potatoes	27.1%	41.4%	25.7%	5.7%
Herbs/spices - fresh	27.9%	39.7%	27.9%	4.4%
Tomato puree/ready-made passata	27.1%	41.4%	31.4%	1.4%
Fresh (raw) meat - other cuts of chicken	19.4%	44.8%	32.8%	3.0%
Rice, couscous, etc.	32.4%	29.4%	33.8%	4.4%
Fresh green vegetables (broccoli, cabbage, kale, sprouts, fresh peas/beans, courgette, etc.)	18.6%	42.9%	37.1%	2.9%
Butter	25.4%	32.8%	35.8%	6.0%
Fresh (raw) meat - any mince	23.5%	33.8%	35.3%	7.4%
Dried fruit (any)	20.6%	30.9%	45.6%	2.9%
Other fresh vegetables (cauliflower, sweet potato, aubergine, swede, turnip, parsnip, etc.)	8.6%	32.9%	50.0%	10.0%
Fresh tomatoes	5.7%	30.0%	57.1%	10.0%
Fresh (raw) meat - other cuts of beef	10.5%	17.9%	28.4%	43.3%
Frozen peas	1.4%	25.7%	62.9%	10.0%
Cooked meat	3.0%	20.9%	62.7%	13.4%
Pulses/chickpeas, etc.	3.0%	20.9%	56.7%	19.4%

Fresh (raw) meat - sausages	1.5%	22.4%	44.8%	31.3%
Tinned fruit	7.4%	16.2%	57.4%	19.1%
Cream	7.5%	16.4%	56.7%	20.9%
Hard vegetable fat/lard	11.8%	10.3%	35.3%	42.7%
Meat alternatives - Quorn, tofu, etc.	4.5%	17.9%	58.2%	20.9%
Soft cheese (Primula, Philadelphia)	1.5%	19.1%	54.4%	25.0%
Fresh (raw) meat - other cuts of pork	7.5%	10.5%	35.8%	43.3%
Cucumber	4.3%	17.1%	62.9%	17.1%
Chocolate (as a flavouring ingredient, topping, decoration)	2.9%	16.2%	64.7%	16.2%
Other hard cheese	0.0%	17.7%	51.5%	30.9%
Celery	2.9%	14.3%	67.1%	17.1%
Lettuce	2.9%	14.3%	60.0%	24.3%
Tinned fish - tuna	4.5%	9.0%	70.2%	16.4%
Fresh fish	1.5%	11.9%	32.8%	53.7%
Other frozen vegetables	2.9%	8.6%	62.9%	25.7%
Fresh (raw) meat - any other	4.5%	6.0%	44.8%	46.3%
Fresh (raw) meat - other cuts of lamb	0.0%	7.5%	38.8%	52.2%
Nuts (any)	2.9%	4.4%	32.4%	60.3%
Stilton, Brie, Camembert cheese	0.0%	4.4%	36.8%	58.8%
Tinned vegetables	0.0%	4.3%	48.6%	47.1%
Baked beans	1.4%	1.4%	34.3%	62.9%
Tinned fish - other	0.0%	1.5%	39.4%	59.1%
Tinned meat	0.0%	1.5%	10.5%	88.1%
Cottage cheese	0.0%	1.5%	27.9%	70.6%

Table 11: Frequency of use of ingredients by KS4 students in practical lessons

KS4 ingredients	Very often	Often	Occasionally	Never
Eggs	56.7%	38.8%	3.0%	0.0%
Onions	67.1%	27.1%	5.7%	0.0%
Dry baking ingredients (flour, sugar, baking powder, oats, etc.)	64.7%	26.5%	7.4%	0.0%
Oils (olive oil, sesame oil, etc.)	43.3%	44.8%	10.5%	0.0%
Herbs/spices - dried	58.8%	27.9%	11.8%	0.0%
Milk	47.8%	38.8%	11.9%	0.0%
Carrots	41.4%	44.3%	12.9%	0.0%
Other flavourings (soy, vinegars, garlic, etc.)	43.3%	41.8%	13.4%	0.0%
Potatoes	38.6%	45.7%	14.3%	0.0%
Fresh fruit (any)	45.6%	36.8%	16.2%	0.0%
Cheddar, red Leicester, double Gloucester cheese	22.4%	59.7%	16.4%	0.0%
Fresh (raw) meat - any mince	27.9%	50.0%	14.7%	0.0%
Herbs/spices - fresh	33.8%	44.1%	20.6%	0.0%
Fresh (raw) meat - other cuts of chicken	35.8%	41.8%	14.9%	1.5%
Pasta (dried or fresh)	44.1%	32.4%	23.5%	0.0%
Rice, couscous, etc.	35.3%	38.2%	20.6%	1.5%
Tinned tomatoes	34.3%	38.6%	22.9%	1.4%

Fresh green vegetables (broccoli, cabbage, kale, sprouts, fresh peas/beans, courgette, etc.)	30.0%	42.9%	25.7%	0.0%
Margarine (hard or soft)	28.4%	43.3%	22.4%	1.5%
Tomato puree/ready-made passata	28.6%	38.6%	27.1%	1.4%
Butter	28.4%	37.3%	32.8%	0.0%
Other fresh vegetables (cauliflower, sweet potato, aubergine, swede, turnip, parsnip, etc.)	22.9%	40.0%	35.7%	0.0%
Dried fruit (any)	20.6%	36.8%	41.2%	0.0%
Fresh (raw) meat - other cuts of beef	14.9%	32.8%	46.3%	1.5%
Fresh tomatoes	8.6%	38.6%	48.6%	1.4%
Cream	11.9%	31.3%	55.2%	0.0%
Pulses/chickpeas, etc.	7.5%	32.8%	52.2%	3.0%
Meat alternatives - Quorn, tofu, etc.	6.0%	29.9%	56.7%	1.5%
Chocolate (as a flavouring ingredient, topping, decoration)	8.8%	27.9%	61.8%	0.0%
Fresh (raw) meat - other cuts of pork	13.4%	20.9%	49.3%	11.9%
Hard vegetable fat/lard	10.3%	25.0%	47.1%	16.2%
Frozen peas	5.7%	28.6%	61.4%	2.9%
Soft cheese (Primula, Philadelphia)	2.9%	29.4%	60.3%	5.9%
Cucumber	4.3%	27.1%	57.1%	8.6%
Fresh fish	4.5%	25.4%	59.7%	6.0%
Fresh (raw) meat - sausages	1.5%	26.9%	55.2%	13.4%
Lettuce	2.9%	24.3%	55.7%	14.3%
Cooked meat	0.0%	23.9%	58.2%	11.9%
Other hard cheese	2.9%	25.0%	66.2%	4.4%
Celery	2.9%	22.9%	65.7%	5.7%
Fresh (raw) meat - other cuts of lamb	1.5%	22.4%	61.2%	10.5%
Fresh (raw) meat - any other	3.0%	16.4%	56.7%	16.4%
Tinned fruit	11.8%	13.2%	60.3%	13.2%
Tinned fish - tuna	3.0%	17.9%	64.2%	10.5%
Other frozen vegetables	4.3%	18.6%	60.0%	17.1%
Stilton, Brie, Camembert cheese	0.0%	19.1%	67.7%	11.8%
Tinned fish - other	0.0%	9.1%	51.5%	33.3%
Nuts (any)	4.4%	10.3%	42.7%	42.7%
Cottage cheese	0.0%	8.8%	47.1%	41.2%
Tinned meat	0.0%	6.0%	19.4%	70.2%
Tinned vegetables	1.4%	2.9%	58.6%	35.7%
Baked beans	1.4%	1.4%	37.1%	58.6%

As with the skills frequencies, the ranked lists of ingredients were compared with those from 2007. Table 12 and Table 13 show whether a particular ingredient has increased or decreased in frequency of use[3]. Those ingredients at the top of the list have the greatest increase in frequency of use, while those at the bottom have shown the sharpest decline in frequency of use.

Table 12: Change in frequency of use of ingredients by KS3 students between 2007 and 2017

KS3 Ingredients list	**Rank position**		
	2007	**2017**	**Change**

[3] The following ingredients were not included in the Tables 12 and 13 because there was no equivalent in the 2007 data: oils; other flavourings; margarine; butter; cucumber; celery; lettuce; Stilton etc.; cottage cheese.

Fresh (raw) meat - other cuts of beef	37	21	+16
Pulses/chickpeas, etc.	38	24	+14
Fresh (raw) meat - other cuts of chicken	26	14	+12
Fresh (raw) meat - other cuts of pork	42	31	+11
Fresh fish	45	35	+10
Herbs/spices - dried	12	4	+8
Herbs/spices - fresh	20	12	+8
Fresh (raw) meat - sausages	33	25	+8
Rice, couscous, etc.	22	15	+7
Other fresh vegetables (cauliflower, sweet potato, aubergine, swede, turnip, parsnip, etc.)	25	19	+6
Frozen peas	28	22	+6
Carrots	11	6	+5
Fresh (raw) meat - other cuts of lamb	43	38	+5
Fresh (raw) meat - any mince	21	17	+4
Fresh green vegetables (broccoli, cabbage, kale, sprouts, fresh peas/beans, courgette, etc.)	19	16	+3
Cream	30	27	+3
Onions	3	1	+2
Cheddar, red Leicester, double Gloucester cheese	10	8	+2
Potatoes	13	11	+2
Meat alternatives - Quorn, tofu, etc.	31	29	+2
Soft cheese (Primula, Philadelphia)	32	30	+2
Fresh (raw) meat - any other	39	37	+2
Eggs	4	3	+1
Hard vegetable fat/lard	29	28	+1
Tinned meat	44	43	+1
Milk	5	5	0
Fresh fruit (any)	7	7	0
Cooked meat	23	23	0
Baked beans	41	41	0
Dry baking ingredients (flour, sugar, baking powder, oats, etc.)	1	2	-1
Tinned tomatoes	8	10	-2
Dried fruit (any)	16	18	-2
Tinned fruit	24	26	-2
Other frozen vegetables	34	36	-2
Tinned fish - other	40	42	-2
Pasta (dried or fresh)	6	9	-3
Tomato puree/ready-made passata	9	13	-4
Nuts (any)	35	39	-4
Tinned vegetables	36	40	-4
Fresh tomatoes	14	20	-6
Other hard cheese	27	33	-6
Tinned fish - tuna	18	34	-16
Chocolate (as a flavouring ingredient, topping, decoration)	15	32	-17

Table 13: Change in frequency of use of ingredients by KS4 students between 2007 and 2017

KS4 Ingredients list	**Rank position**		
	2007	**2017**	**Change**
Fresh (raw) meat - other cuts of beef	32	20	+12
Fresh (raw) meat - other cuts of pork	36	26	+10

Herbs/spices - fresh	19	11	+8
Hard vegetable fat/lard	35	27	+8
Herbs/spices - dried	11	4	+7
Fresh fish	37	30	+7
Cheddar, red Leicester, double Gloucester cheese	14	9	+5
Fresh (raw) meat - other cuts of lamb	39	34	+5
Fresh (raw) meat - any other	40	35	+5
Fresh (raw) meat - other cuts of chicken	16	12	+4
Pulses/chickpeas, etc.	27	23	+4
Other fresh vegetables (cauliflower, sweet potato, aubergine, swede, turnip, parsnip, etc.)	22	18	+4
Carrots	9	6	+3
Potatoes	10	7	+3
Fresh (raw) meat - any mince	13	10	+3
Cream	25	22	+3
Frozen peas	31	28	+3
Tinned fish - other	42	39	+3
Tinned meat	44	41	+3
Eggs	3	1	+2
Onions	4	2	+2
Fresh green vegetables (broccoli, cabbage, kale, sprouts, fresh peas/beans, courgette, etc.)	18	16	+2
Fresh (raw) meat - sausages	33	31	+2
Rice, couscous, etc.	15	14	+1
Dried fruit (any)	20	19	+1
Milk	5	5	0
Fresh fruit (any)	8	8	0
Other frozen vegetables	38	38	0
Baked beans	43	43	0
Tinned vegetables	41	42	-1
Dry baking ingredients (flour, sugar, baking powder, oats, etc.)	1	3	-2
Chocolate (as a flavouring ingredient, topping, decoration)	23	25	-2
Meat alternatives - Quorn, tofu, etc.	21	24	-3
Cooked meat	29	32	-3
Fresh tomatoes	17	21	-4
Tomato puree/ready-made passata	12	17	-5
Soft cheese (Primula, Philadelphia)	24	29	-5
Other hard cheese	28	33	-5
Tinned fruit	30	36	-6
Nuts (any)	34	40	-6
Pasta (dried or fresh)	6	13	-7
Tinned tomatoes	7	15	-8
Tinned fish - tuna	26	37	-11

Issues which affect practical cookery

Ingredients

Figures 8, 9 and 10 show responses to questions about the difficulties associated with ingredients for practical cookery. As these were repeated questions from the 2007 survey, the figures show a comparison of responses with 2017.

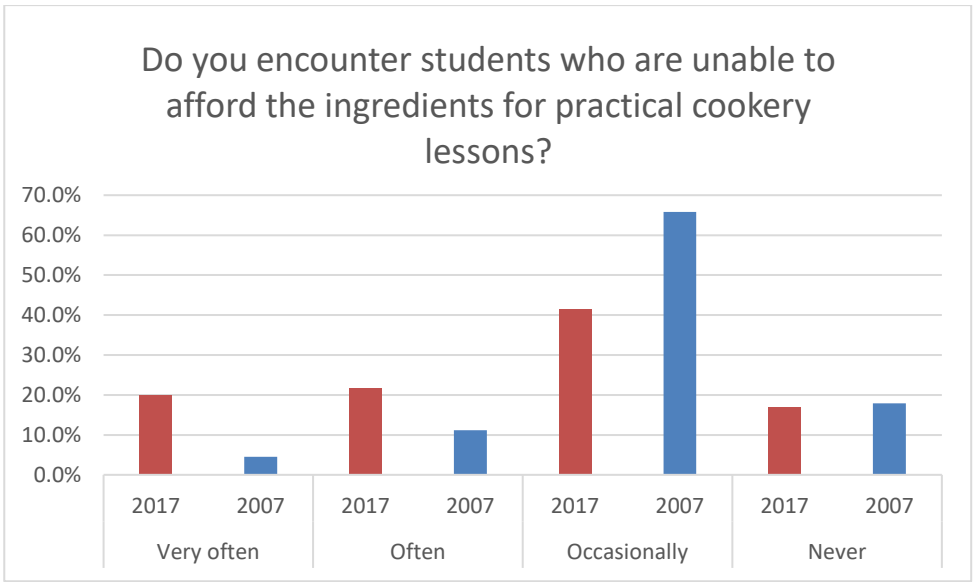

Figure 8: Frequency of students unable to afford ingredients, 2017 and 2007

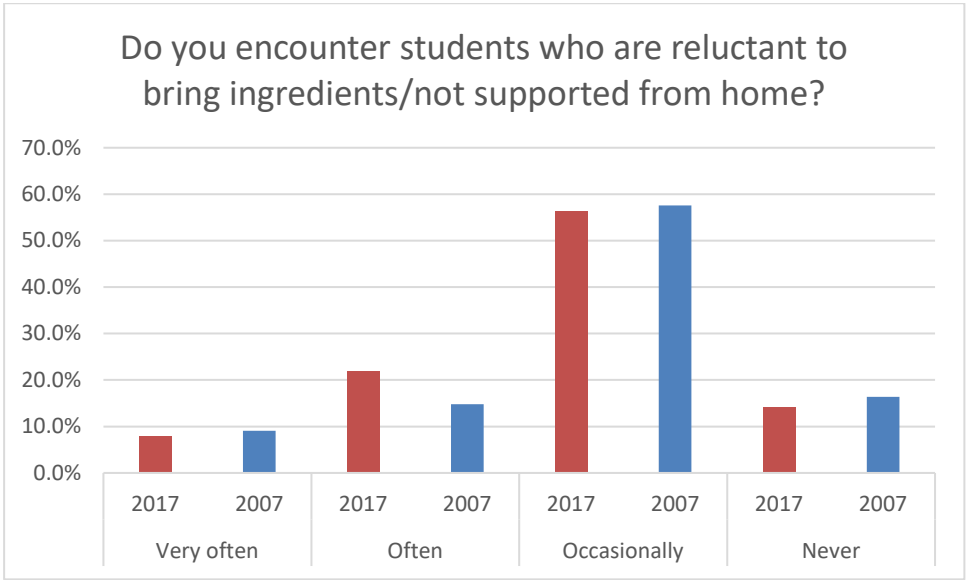

Figure 9: Frequency of students reluctant to bring ingredients/not supported, 2017 and 2007

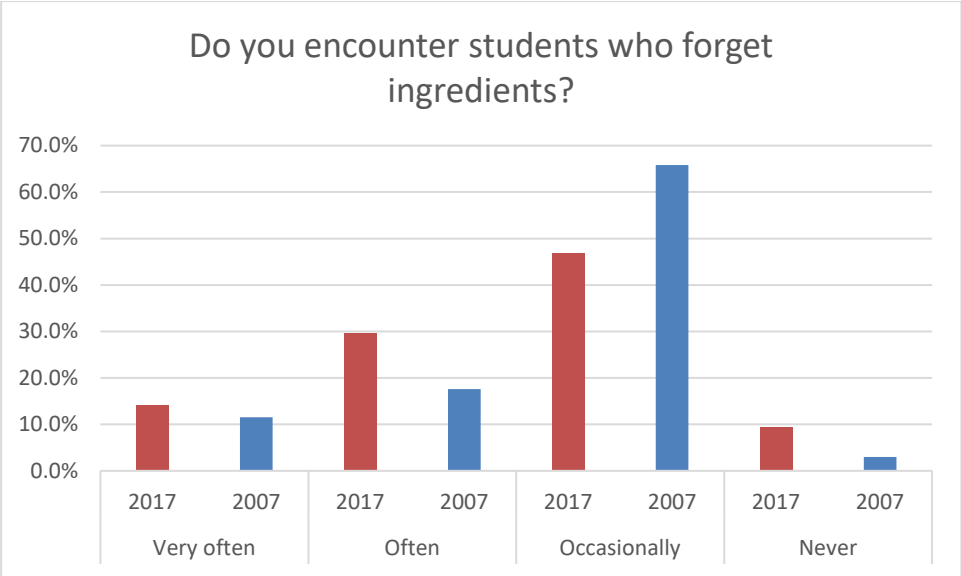

Figure 10: Frequency of students who forget ingredients, 2017 and 2007

We also asked three further questions relating to ingredients, which we introduced following teacher responses to the 2007 questionnaire. These related to students/families having to buy in 'store cupboard basic' ingredients and students with allergies or other reasons for making food choices (Figures 11, 12 and 13).

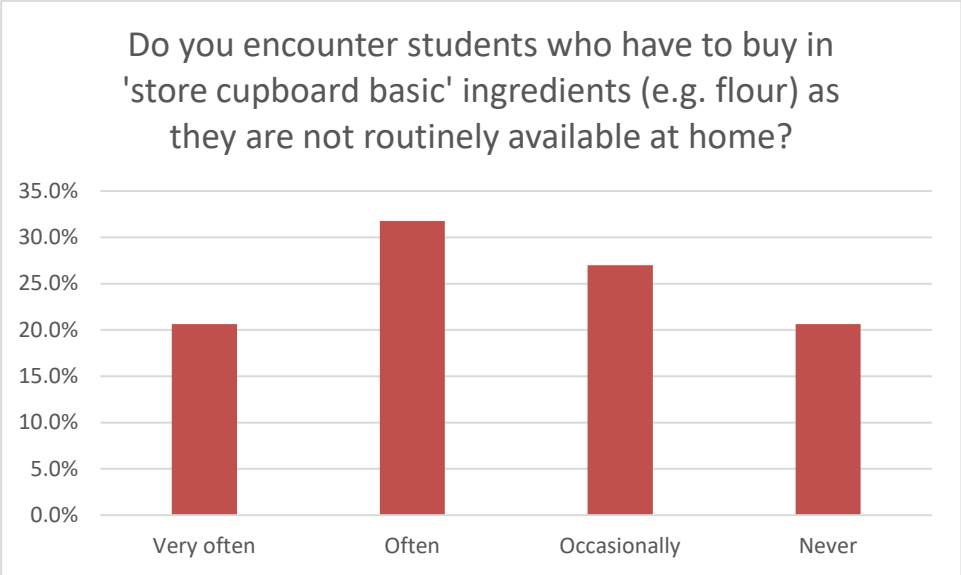

Figure 11: Frequency of students buying in basic ingredients

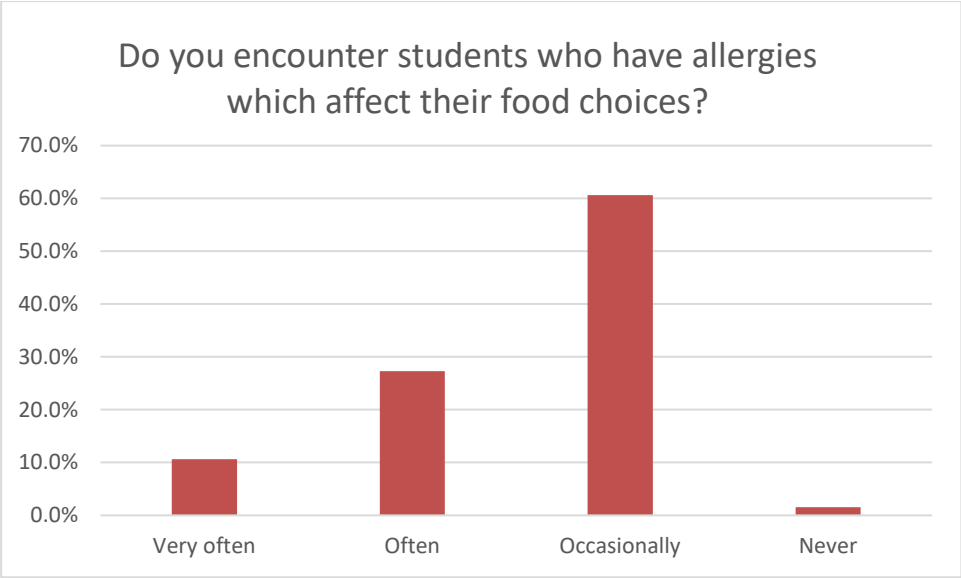

Figure 12: Frequency of students with allergies affecting food choices

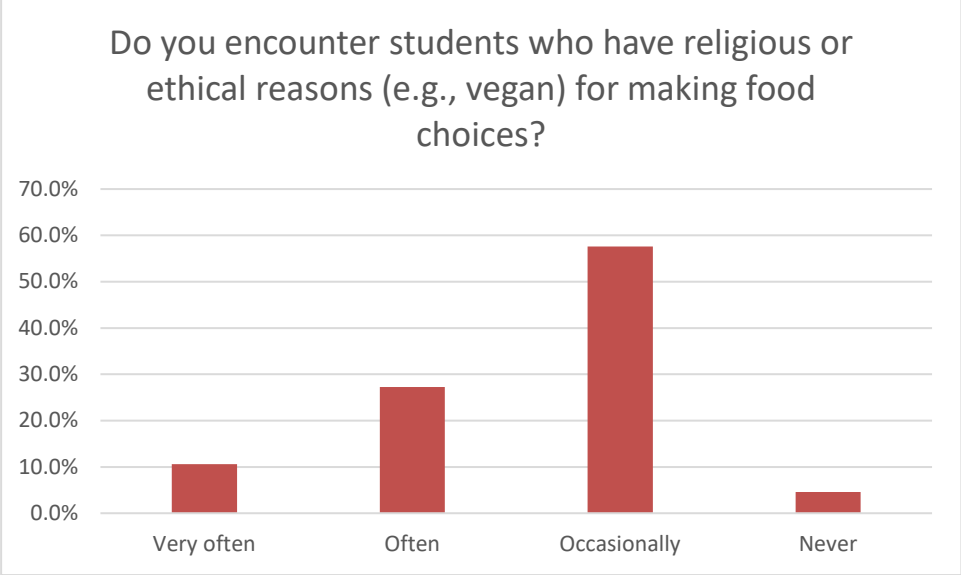

Figure 13: Frequency of students with religious or ethical reasons for making food choices

These six questions throw up some interesting insights. Cost is clearly a growing issue as Figure 8 shows an increase since 2007 in how often respondents are encountering students unable to afford the ingredients for practical cookery.

Figure 13 may point to challenges in delivering the new specification, with over a third of respondents often or very often encountering students with food choices that may be at odds with the specification emphasis on meat and fish.

The comments on this section showed that some schools circumnavigate the issue of students forgetting to bring ingredients by buying in bulk and asking for a voluntary contribution. Schools which have a high proportion of students receiving the pupil premium may encounter families unable to afford ingredients and move to a 'school buys ingredients' model. This approach might also go some way towards preventing any stigma associated with the lack of funds from families.

Another obstacle highlighted in the comments is the lack of support for students from home stated by some respondents, which goes beyond the affordability of ingredients. Some respondents reported encountering a reluctance to pay for food that wouldn't be eaten at home, unwillingness on the part of students to take food home, and issues such as not having scales to weigh ingredients, along with 50% of respondents reporting often or very often encountering students whose families lack basic store-cupboard ingredients to bring from home.

Centre provisions for practical cookery

One of the overwhelming themes to emerge from the 2007 questionnaire was the lack of time for teaching practical cookery and responses to the 2017 survey show that this continues to be one of the biggest problems faced by teachers and technicians. Figure 14 shows that the time available, space, equipment, group size and cost of ingredients all affect the teaching of practical cookery.

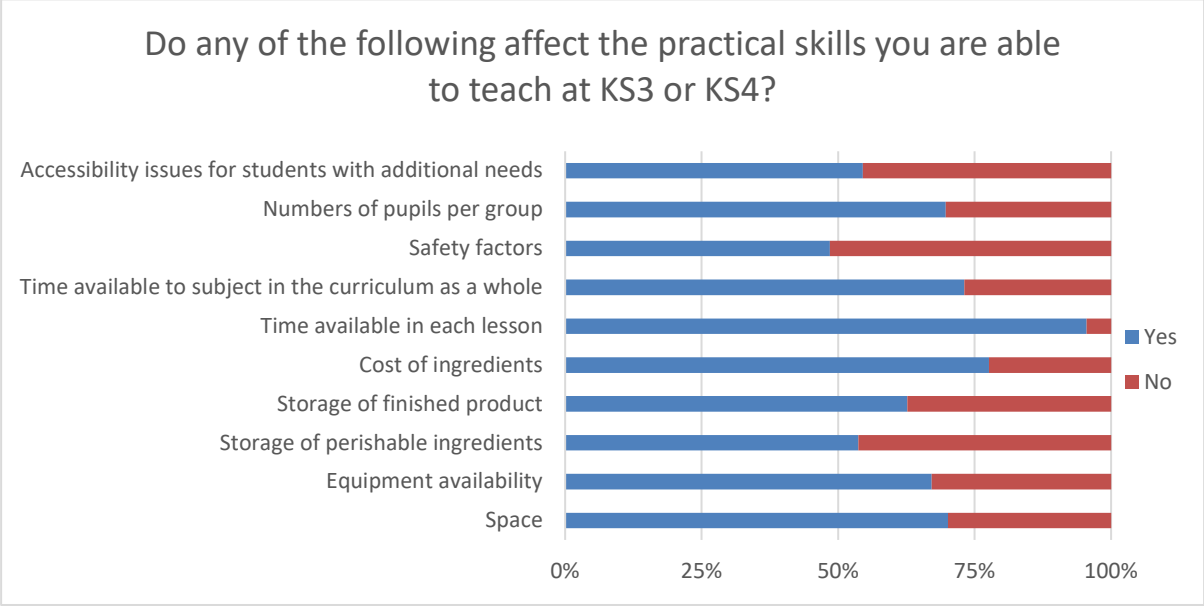

Figure 14: Restrictions on practical skills teaching

There were many additional comments relating to this question, a selection of which have been grouped thematically below.

1 hour lessons/timetabling

"You need a double lesson to be able to cook effectively and practise skills properly."
"1 hour lessons rely on over running into break and lunch times."
"One hour lessons for both key stages dramatically reduces recipes I can cook with students."
"Roasting or braising are difficult to use in a 1 hour lesson."

Cost
"Recipes have to be designed to suit the needs of the pupils, to help 'persuade' parents to buy the ingredients (knowing that they won't be wasted on food that is not enjoyed)."
"Cost of whole chickens, fish, may be a problem for some students."
"Reliant on parents providing ingredients, therefore can't risk anger and waste by asking them to bring in foods such as fresh fish."

Pupil numbers/space
"Often too many students in [the] room."
"Number of pupils – impacts hugely on safety and can lead to splitting the class, one half cooking one week, one the next."
"My room is designed for a maximum of 12 pupils. We have up to 20 pupils per group."
"… you have groups of up to 28 and only equipment and cookers for 20 pupils."
"Safety is an issue with large class numbers."
"I fight for keeping the groups at 20."

Storage/equipment
"If you teach 5 practical classes in a day and 20 students in a class there is a lot of food to store."
"Only three fridges, no blast chiller."
"Unable to cook with high risk foods as limited fridge space."
"Specialist equipment such as food processors are expensive, so we only have one or two in the department, and therefore have to limit their use."
"I have to bring in my own equipment from home."

Many of these issues were raised by respondents in 2007, so in 2017 we sought to find out what facilities were available at centres (Table 14). The majority of respondents to this question reported sufficient cookers and workspace for a full class, while just under a quarter had facilities for half classes. Over a quarter of centres had dishwashers. However, with pressures such as 1 hour lessons and insufficient space already having an impact on teaching, it is not surprising that clearing away and washing up were reported as having an impact on time available for practical work (Table 15).

Comments here touched on the health and safety aspects of efficient clearing up and some conflicting views on whether clearing away should be part of assessed work, or completed outside of assessment time limits.

Table 14: Facilities at centre

Do the facilities at your centre for teaching practical cookery include:	
Sufficient cookers to fully meet requirements for a full class?	69.4%
Sufficient workspace to fully meet requirements for a full class?	67.7%
Sufficient cookers to meet requirements for a half class (i.e. split-half lessons)?	22.6%
Sufficient workspace to meet requirements for a half class (i.e. split-half lessons)?	22.6%
Fridges?	82.3%
Dishwashers for washing up?	27.4%

Table 15: Impact of clearing away and washing up

To what extent does the need to allow time for clearing away and washing up impact negatively upon time available for students to cook?	
Significantly	55.2%
To some extent	37.3%
Not at all	7.5%

We also followed up on a question from 2007 on changes in centres' facilities for teaching practical cookery (Table 16). Comparing these figures with the equivalent question responses from 2007, a similar figure had seen their facilities expand (20%), while 56% said their facilities had remained the same between 2002 and 2007. The number reporting diminished facilities dropped from 22% in 2007 to 3% in 2017. The reasons for this are not clear; it could represent an increased recognition of the value of facilities by schools, or it could reflect a situation where schools have seen their facilities diminished to the point where they cannot diminish any more.

Table 16: Facilities for teaching practical cookery skills

During the past 5 years, have your centre's facilities for teaching practical cookery skills:	
Expanded?	20.9%
Remained the same?	76.1%
Diminished?	3.0%

We asked respondents whether their school had a cooking or healthy eating club and if so, whether students had the opportunity to carry out practical cookery, and what type of cookery took place.

The results in Figure 15 show that the proportion of schools offering such clubs has increased considerably since 2007 and that the majority of those clubs offered students the chance to prepare hot and cold food.

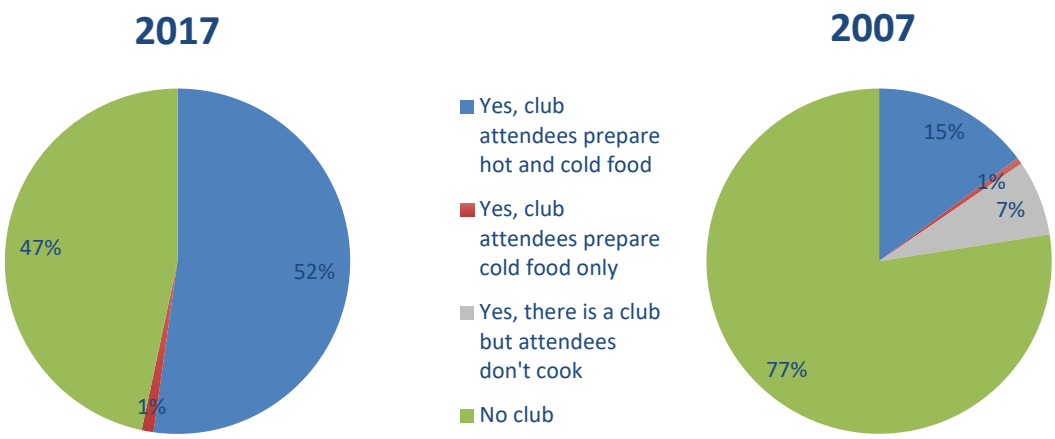

Figure 15: Does your school have a cooking or healthy eating club or similar?

Student skills

The questionnaire then moved on to student skills and knowledge with the aim of gaining some insight into any changes that may have been seen in the decade since the last questionnaire (Table 17).

Table 17: In your opinion, have there been changes in the practical cookery skills and experience that your students obtain from sources outside the school (e.g., at home)?

	Declined	Increased	Stayed the same
Over the last 5 years	56.7%	10.5%	32.8%
Over the last 10 years	59.3%	8.47%	32.2%

The majority of respondents reported a steady decline in the skills and experience students obtain from sources outside school, as did respondents to the 2007 survey, which suggests this has been happening for the last 20 years.

In response to comments from respondents to the 2007 questionnaire, another question was added to glean information on the practical skills possessed by students. In 2007, a number of respondents referred to the challenges to practical teaching presented by issues such as students being unfamiliar with using knives. These challenges caused frustration when practical sessions were already under time pressure and teachers coping with larger than ideal groups.

The 2017 data (Figure 16*)* shows that these issues continue to have an impact, particularly in terms of students being unfamiliar with basic kitchen procedures and raw ingredients, with around 20% of respondents reporting that they very often face each of these challenges. Poor cutlery-handling and unfamiliarity or nervousness about using a cooker also feature as a challenge often experienced (38% and 44%, respectively).

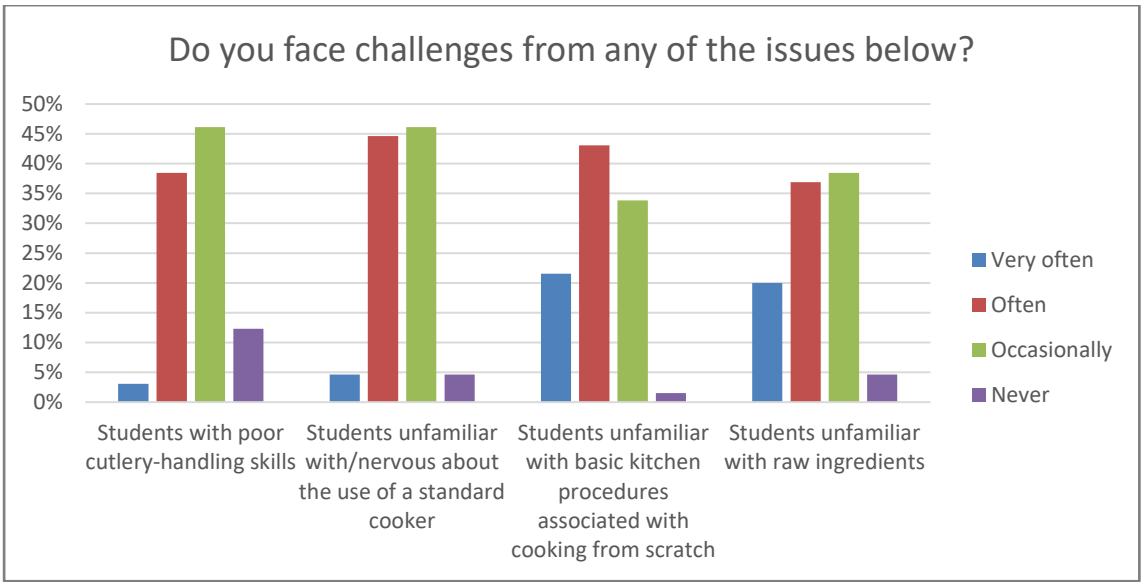

Figure 16: Students' practical cookery skills

Turning to the food knowledge of KS3 and KS4 students, there are some interesting comparisons between the 2017 and 2007 data (Table 18 and Table 19). Although fairly evenly split in 2017 on whether today's students have a better knowledge of nutritional theory than previous generations, this is a marked improvement on the 2007 data, where nearly three-quarters of respondents thought they did not have better knowledge.

The perceived decline in practical skills obtained from outside school is also referred to here, with 84% believing today's students do not have better knowledge of practical skills. Reversing the results from 2007, only 36% of respondents felt that today's students had better skills to read packaging, a drop from 74% in 2007. However, there was an increase in the percentage of respondents who believed that their current students had better knowledge of human nutrition than previous generations; up from 15% in 2007 to 39% in 2017.

There were mixed views in the comments from respondents on this section. Some cited the impact of the KS1 and KS2 curriculum on growing awareness of nutrition and healthy choices ("5 a day is widely understood," "Students are more health aware and come from primary school with greater awareness"), as well as the popularity with families of television programmes such as *Masterchef* and *The Great British Bake Off*[4]. However, respondents reported that with parents working full-time, cooking from scratch was no longer widely practised and the use of convenience foods had grown ("they supplement family meals with pre-manufactured ingredients, e.g., pasta sauce or buy ready meals").

Table 18: Knowledge of KS3 and KS4 students, 2017

In your opinion, do today's students overall have better knowledge than previous generations of the following:	Yes	No
Nutritional theory (e.g., food groups)?	51.6%	48.44%
Practical cookery skills?	15.6%	84.38%

[4] Both of these television programmes are very popular competitive cooking programmes in the UK, in which home cooks and home bakers compete to avoid elimination. Great British Bake Off, now in its 10th year had viewing figures of 5.7 million for the first episode of the 2019 series.

Skills to read packaging?	36.5%	63.49%
The physical processes of human nutrition?	39.1%	60.94%

Table 19: Knowledge of KS3 and KS4 students, 2007

In your opinion, do today's students overall have better knowledge than previous generations of the following:	Yes	No
Nutritional theory (e.g., food groups)?	27.6%	72.4%
Practical cookery skills?	6.9%	93.1%
Skills to read packaging?	74.1%	25.9%
The physical processes of human nutrition?	14.6%	85.4%

Final comments from respondents

We provided space at the end of the survey for respondents to add any further comments relating to practical cookery in schools. The range of responses here covers many of the issues already identified: the impact of ingredient costs, the many pressures experienced by food teachers and technicians in terms of time, facilities and coping with the decline in skills of students beginning KS3. One theme to emerge which was not covered by the questionnaire was the impact of EBacc and Progress 8 measures on food at KS3 and KS4. Responses suggest that teachers feel that food teaching is valued even less in schools, with funds and training budgets diverted to other subjects which contribute to performance measures. There were, however, some positive comments reflecting enthusiasm for the new specification and optimism for the value of the subject: "all can cook irrespective of family finances…all can make progress regarding acquisition of skills."

Discussion

We can see the impact of the new specification in the skills and ingredients lists. Certain ingredients, generally those associated with baking, have fallen in terms of frequency of use. Could we also be seeing an effect of the initiatives to encourage pupils to make healthy choices and improve their knowledge of nutrition? The fact that baking cakes and biscuits has fallen so considerably, despite the popularity of programmes such as *The Great British Bake Off*, would suggest that possibility. Another possibility is that the new specification means that baking cakes does not fulfil enough of the required skills. Teachers presumably are creating lessons to encompass as many skills and ingredients as possible, e.g., making chicken pie would allow pupils to practice cutting meat, cutting vegetables, making pastry, making a roux, pan cooking and oven baking in one item.

The key theme which has emerged from the 2017 questionnaire is how little has changed since 2007, in terms of the situation in schools for teachers delivering practical cookery through the food curriculum. Those delivering food education are still struggling with time pressures for practical cookery, unsuitable class sizes, declining skills of students and a lack of support for students from home. In addition, some respondents report competing with other subjects for funding and status within their centre amid a perception that the subject is becoming less valued. The withdrawal of an A level route entirely, although largely beyond the scope of this study, is likely to promote effects which have yet to be seen at KS4. We can

speculate that the effects might include fewer students opting for the GCSE, because there is no natural progression along a traditional academic route to an A level. This may, in the years to come, impact upon some centres' funding for cookery facilities.

The findings from our study provide a level of granular evidence which tallies well with the more general findings from the Food Education Learning Landscape teacher research (Jamie Oliver Food Foundation, 2017), which evaluated food education for 5-14 year olds following the introduction of the compulsory Cooking and Nutrition curriculum (British Nutrition Foundation, 2017).

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Appendix A: The questionnaire

This research study is being carried out by the Research Division of Cambridge Assessment. Cambridge Assessment is the parent organisation of OCR and a department of the University of Cambridge.

We are interested in the views of teachers and technicians at KS3 and KS4 on how practical cookery is taught in schools. The following questions should take around 20-30 minutes to answer. Your responses will help us to understand the impact of recent initiatives on the teaching of practical cookery.

All the information you provide to Cambridge Assessment will be handled by the research team in accordance with the provisions of the Data Protection Act. Any data used in reports to members of the Cambridge Assessment Group and in the public domain will be anonymised. Participation is voluntary and you are free to withdraw at any time without giving a reason. If you have any questions, please email me. If you would prefer a paper copy to fill in, please contact Jo Ireland.

If any question does not apply to you or your centre, for any reason, please leave it blank.

* To continue to the survey, please select:

- ◯ I am a food teacher/technician in a secondary school in England and am happy for my anonymous responses to be used.
- ◯ I am not a food teacher/technician in a secondary school in England, but wish to continue with the survey. I am happy for my anonymous responses to be used.

Thank you.

Gill Elliott
Research Division
Cambridge Assessment
1 Hills Road
Cambridge
CB1 2EU

You and your centre

Please enter your centre details. This information will only be used to determine the range of centres taking part in the study. We will not identify individuals or centres in our report.

Centre number:

Centre name:

How many of the following does your centre have?

Specialist teachers of food

Food technicians

Number of years you have taught/acted as technician for cookery skills (Home Economics, Food Technology, Catering, practical cookery):

You and your centre

On average, how many hours of food lessons will students have in total throughout years 7 to 9?

- ◯ 10-20 hours
- ◯ 21-40 hours
- ◯ 41-60 hours
- ◯ 61 and above

Of your teaching time for cookery, what approximate proportion consists of practical cookery (the preparation and/or cooking of a dish)?

- ◯ 75% or more
- ◯ 66%
- ◯ 50%
- ◯ 33%
- ◯ 25% or less

You and your centre

Will your centre offer the 9-1 GCSE in Food Preparation and Nutrition?

- ◯ Yes
- ◯ No
- ◯ Not sure

Will your centre offer any other food qualifications at KS4 ?

- ◯ Yes
- ◯ No
- ◯ Not sure

If yes, please specify:

Which food qualifications did you previously offer at KS4? Please tick all that apply.

- ☐ GCSE Design and Technology: Food Technology
- ☐ GCSE Home Economics: Food and Nutrition
- ☐ GCSE Catering
- ☐ IGCSE Food and Nutrition
- ☐ Any level 2 Hospitality and Catering qualification

Does your school have a cooking or healthy eating club or similar?

- ◯ Yes
- ◯ No

You and your centre

Do students who attend a healthy eating club or similar have the opportunity to carry out practical cookery?

- ◯ Yes - both hot and cold food
- ◯ Yes - cold food only
- ◯ No

Emphasis on practical cookery

Please select how you personally feel about the emphasis on practical cookery skills.

	Underemphasises practical cookery skills	Has the emphasis on practical cookery skills about right	Overemphasises practical cookery skills
KS3 National Curriculum	◯	◯	◯
KS4 9-1 GCSE syllabus	◯	◯	◯

To what extent do you feel that the new 9-1 GCSE syllabus has changed the emphasis on practical cookery at GCSE?

- ◯ Opportunities for students to carry out practical cookery have **reduced** from the previous syllabus I used
- ◯ Opportunities for students to carry out practical cookery have **increased** from the previous syllabus I used
- ◯ There is little difference
- ◯ N/A

Please use the box below if you wish to expand upon your answers in this section.

Practical cookery skills

How many of the following cooking skills are carried out by students in practical lessons?
Please tick one box for each item at KS3 and KS4 (i.e. two responses per row). Guidelines are given below on how to interpret the categories. Please base your judgements on student groups over the past two years.

Very often - all (or nearly all) students will carry out this procedure on several occasions during the Key Stage.
Often - all students have the opportunity to carry out this procedure, and most will do so at least once during the Key Stage.
Occasionally - the opportunity exists to carry out this procedure and a few students do so, but it is relatively infrequent.
Never - no students have carried out this procedure during the past two years.

	Very often at KS3	Often at KS3	Occasionally at KS3	Never at KS3	Very often at KS4	Often at KS4	Occasionally at KS4	Never at KS4
Boiling (eggs, vegetables, rice, pasta)	☐	☐	☐	☐	☐	☐	☐	☐
Steaming (vegetables or fish)	☐	☐	☐	☐	☐	☐	☐	☐
Grilling	☐	☐	☐	☐	☐	☐	☐	☐
Poaching (eggs, fish, meat)	☐	☐	☐	☐	☐	☐	☐	☐
Stir frying	☐	☐	☐	☐	☐	☐	☐	☐
Shallow frying	☐	☐	☐	☐	☐	☐	☐	☐
Deep frying	☐	☐	☐	☐	☐	☐	☐	☐
Roasting	☐	☐	☐	☐	☐	☐	☐	☐
Braising/casseroling	☐	☐	☐	☐	☐	☐	☐	☐
Pressure cooking	☐	☐	☐	☐	☐	☐	☐	☐
Scrambling eggs	☐	☐	☐	☐	☐	☐	☐	☐
Preparing sandwiches	☐	☐	☐	☐	☐	☐	☐	☐
Making toasted sandwiches/toast	☐	☐	☐	☐	☐	☐	☐	☐

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	Very often at KS3	Often at KS3	Occasionally at KS3	Never at KS3	Very often at KS4	Often at KS4	Occasionally at KS4	Never at KS4
Preparing vegetables (peeling, cutting)	☐	☐	☐	☐	☐	☐	☐	☐
Preparing raw meat (washing, cutting)	☐	☐	☐	☐	☐	☐	☐	☐
Tenderising and marinating meat	☐	☐	☐	☐	☐	☐	☐	☐
Preparing raw fish (washing, cutting)	☐	☐	☐	☐	☐	☐	☐	☐
Preparing green salad	☐	☐	☐	☐	☐	☐	☐	☐
Preparing coleslaw, potato salad, waldorf salad, etc.	☐	☐	☐	☐	☐	☐	☐	☐
Preparing fresh fruit	☐	☐	☐	☐	☐	☐	☐	☐
Making soup (from fresh ingredients)	☐	☐	☐	☐	☐	☐	☐	☐
Making soup (from tinned ingredients)	☐	☐	☐	☐	☐	☐	☐	☐
Making a Bolognese type sauce	☐	☐	☐	☐	☐	☐	☐	☐
Making curry	☐	☐	☐	☐	☐	☐	☐	☐
Making fresh pasta	☐	☐	☐	☐	☐	☐	☐	☐
Making a roux-based sauce	☐	☐	☐	☐	☐	☐	☐	☐
Making gravy	☐	☐	☐	☐	☐	☐	☐	☐
Making any other savoury sauce	☐	☐	☐	☐	☐	☐	☐	☐
Making an emulsion (salad dressing, mayonnaise, etc)	☐	☐	☐	☐	☐	☐	☐	☐

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	Very often at KS3	Often at KS3	Occasionally at KS3	Never at KS3	Very often at KS4	Often at KS4	Occasionally at KS4	Never at KS4
Making biscuits using the creaming method	☐	☐	☐	☐	☐	☐	☐	☐
Making biscuits using the rubbing in method	☐	☐	☐	☐	☐	☐	☐	☐
Making scones (sweet or savoury)	☐	☐	☐	☐	☐	☐	☐	☐
Pastry making using fresh ingredients – shortcrust	☐	☐	☐	☐	☐	☐	☐	☐
Pastry making using fresh ingredients – puff, choux, other	☐	☐	☐	☐	☐	☐	☐	☐
Bread making (using fresh ingredients)	☐	☐	☐	☐	☐	☐	☐	☐
Making a pizza base using fresh ingredients (scone or bread based)	☐	☐	☐	☐	☐	☐	☐	☐
Topping a pizza base (fresh or ready made) with fresh/tinned products	☐	☐	☐	☐	☐	☐	☐	☐
Making quiche/flan/savoury pie using ready-made (or student pre-made) pastry	☐	☐	☐	☐	☐	☐	☐	☐
Making a sweet pie using ready-made (or student pre-made) pastry	☐	☐	☐	☐	☐	☐	☐	☐

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	Very often at KS3	Often at KS3	Occasionally at KS3	Never at KS3	Very often at KS4	Often at KS4	Occasionally at KS4	Never at KS4
Baking cakes (any)	☐	☐	☐	☐	☐	☐	☐	☐
Stewing (fruit)	☐	☐	☐	☐	☐	☐	☐	☐
Making and using batter (for sweet or savoury dishes)	☐	☐	☐	☐	☐	☐	☐	☐
Making hot puddings (crumble, apple charlotte, etc.)	☐	☐	☐	☐	☐	☐	☐	☐
Making custard (from powder)	☐	☐	☐	☐	☐	☐	☐	☐
Making cold puddings (mousse, trifle, etc)	☐	☐	☐	☐	☐	☐	☐	☐
Making milk-based puddings (e.g. rice pudding)	☐	☐	☐	☐	☐	☐	☐	☐
Making egg-based puddings (e.g. baked custard)	☐	☐	☐	☐	☐	☐	☐	☐
Using egg as a raising agent, egg whites, meringue	☐	☐	☐	☐	☐	☐	☐	☐
Making smoothies	☐	☐	☐	☐	☐	☐	☐	☐
Making ice-cream	☐	☐	☐	☐	☐	☐	☐	☐
Making fondue (sweet or savoury)	☐	☐	☐	☐	☐	☐	☐	☐

Practical cookery ingredients

Please indicate how frequently each of the following food items are used by students in practical cookery sessions. Please tick one box for each item at KS3 and KS4 (i.e. two responses per row). Once again, please base your judgements on student groups over the past two years.

	Very often at KS3	Often at KS3	Occasionally at KS3	Never at KS3	Very often at KS4	Often at KS4	Occasionally at KS4	Never used at KS4
Onions	☐	☐	☐	☐	☐	☐	☐	☐
Potatoes	☐	☐	☐	☐	☐	☐	☐	☐
Carrots	☐	☐	☐	☐	☐	☐	☐	☐
Fresh green vegetables (broccoli, cabbage, kale, sprouts, fresh peas/beans, courgette, etc.)	☐	☐	☐	☐	☐	☐	☐	☐
Other fresh vegetables (cauliflower, sweet potato, aubergine, swede, turnip, parsnip, etc.)	☐	☐	☐	☐	☐	☐	☐	☐
Frozen peas	☐	☐	☐	☐	☐	☐	☐	☐
Other frozen vegetables	☐	☐	☐	☐	☐	☐	☐	☐
Baked beans	☐	☐	☐	☐	☐	☐	☐	☐
Tinned tomatoes	☐	☐	☐	☐	☐	☐	☐	☐
Tinned vegetables	☐	☐	☐	☐	☐	☐	☐	☐
Tomato puree/ready-made passata	☐	☐	☐	☐	☐	☐	☐	☐
Lettuce	☐	☐	☐	☐	☐	☐	☐	☐
Cucumber	☐	☐	☐	☐	☐	☐	☐	☐
Celery	☐	☐	☐	☐	☐	☐	☐	☐
Fresh tomatoes	☐	☐	☐	☐	☐	☐	☐	☐

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	Very often at KS3	Often at KS3	Occasionally at KS3	Never at KS3	Very often at KS4	Often at KS4	Occasionally at KS4	Never used at KS4
Fresh (raw) meat - any mince	☐	☐	☐	☐	☐	☐	☐	☐
Fresh (raw) meat - other cuts of beef	☐	☐	☐	☐	☐	☐	☐	☐
Fresh (raw) meat - other cuts of pork	☐	☐	☐	☐	☐	☐	☐	☐
Fresh (raw) meat - other cuts of chicken	☐	☐	☐	☐	☐	☐	☐	☐
Fresh (raw) meat - other cuts of lamb	☐	☐	☐	☐	☐	☐	☐	☐
Fresh (raw) meat - sausages	☐	☐	☐	☐	☐	☐	☐	☐
Fresh (raw) meat - any other	☐	☐	☐	☐	☐	☐	☐	☐
Meat alternatives - Quorn, tofu, etc.	☐	☐	☐	☐	☐	☐	☐	☐
Cooked meat	☐	☐	☐	☐	☐	☐	☐	☐
Pulses/chickpeas, etc.	☐	☐	☐	☐	☐	☐	☐	☐
Tinned meat	☐	☐	☐	☐	☐	☐	☐	☐
Tinned fish - tuna	☐	☐	☐	☐	☐	☐	☐	☐
Tinned fish - other	☐	☐	☐	☐	☐	☐	☐	☐
Fresh fish	☐	☐	☐	☐	☐	☐	☐	☐

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	Very often at KS3	Often at KS3	Occasionally at KS3	Never at KS3	Very often at KS4	Often at KS4	Occasionally at KS4	Never used at KS4
Eggs	☐	☐	☐	☐	☐	☐	☐	☐
Milk	☐	☐	☐	☐	☐	☐	☐	☐
Cream	☐	☐	☐	☐	☐	☐	☐	☐
Butter	☐	☐	☐	☐	☐	☐	☐	☐
Margarine (hard or soft)	☐	☐	☐	☐	☐	☐	☐	☐
Oils (olive oil, sesame oil, etc.)	☐	☐	☐	☐	☐	☐	☐	☐
Hard vegetable fat/lard	☐	☐	☐	☐	☐	☐	☐	☐
Cheddar, red Leicester, double Gloucester cheese	☐	☐	☐	☐	☐	☐	☐	☐
Stilton, Brie, Camembert cheese	☐	☐	☐	☐	☐	☐	☐	☐
Other hard cheese	☐	☐	☐	☐	☐	☐	☐	☐
Soft cheese (Primula, Philadelphia)	☐	☐	☐	☐	☐	☐	☐	☐
Cottage cheese	☐	☐	☐	☐	☐	☐	☐	☐

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	Very often at KS3	Often at KS3	Occasionally at KS3	Never at KS3	Very often at KS4	Often at KS4	Occasionally at KS4	Never used at KS4
Dry baking ingredients (flour, sugar, baking powder, oats, etc.)	☐	☐	☐	☐	☐	☐	☐	☐
Pasta (dried or fresh)	☐	☐	☐	☐	☐	☐	☐	☐
Rice, cous cous, etc.	☐	☐	☐	☐	☐	☐	☐	☐
Herbs/spices - dried	☐	☐	☐	☐	☐	☐	☐	☐
Herbs/spices - fresh	☐	☐	☐	☐	☐	☐	☐	☐
Other flavourings (soy, vinegars, garlic, etc.)	☐	☐	☐	☐	☐	☐	☐	☐
Fresh fruit (any)	☐	☐	☐	☐	☐	☐	☐	☐
Dried fruit (any)	☐	☐	☐	☐	☐	☐	☐	☐
Tinned fruit	☐	☐	☐	☐	☐	☐	☐	☐
Chocolate (as a flavouring ingredient, topping, decoration)	☐	☐	☐	☐	☐	☐	☐	☐
Nuts (any)	☐	☐	☐	☐	☐	☐	☐	☐

Practical cookery skills and ingredients

If you are offering the new 9-1 qualification, do you expect the skills taught, or the ingredients used, to change from those of your previous qualification?

	A great deal	To some extent	Not much
Skills taught	◯	◯	◯
Ingredients used	◯	◯	◯

If you would like to expand on your answers to the questions about skills and ingredients, please do so below.

Practical factors affecting teaching of practical cookery in schools

There are inevitably constraints upon which skills can be effectively taught in lessons on school property. In your opinion, do any of the following affect the practical skills you are able to teach at KS3 or KS4?

	Yes	No
Space	○	○
Equipment availability	○	○
Storage of perishable ingredients	○	○
Storage of finished product	○	○
Cost of ingredients	○	○
Time available in each lesson	○	○
Time available to subject in the curriculum as a whole	○	○
Safety factors	○	○
Numbers of pupils per group	○	○
Accessibility issues for students with additional needs	○	○

Other (please specify)

If you have selected 'yes' to any of the above, please give examples of particular skills/procedures affected, or of food items you are unable to cook with.

Practical cookery facilities

During the past 5 years, have your centre's facilities for teaching practical cookery skills:

- ◯ Expanded?
- ◯ Remained the same?
- ◯ Diminished?

Do the facilities at your centre for teaching practical cookery include (please tick all that apply):

- ☐ Sufficient cookers to fully meet requirements for a full class?
- ☐ Sufficient workspace to fully meet requirements for a full class?
- ☐ Sufficient cookers to meet requirements for a half class (i.e. split-half lessons*)?
- ☐ Sufficient workspace to meet requirements for a half class (i.e. split-half lessons)?
- ☐ Fridges?
- ☐ Dishwashers for washing up?

*We define split-half lessons as those where a proportion of the class remains in one location and write up or prepare notes whilst the remaining students cook. At the next lesson the roles are reversed.

Practical factors affecting teaching of practical cookery in schools

To what extent does the need to allow time for clearing away and washing up impact negatively upon time available for students to cook?

- ◯ Significantly
- ◯ To some extent
- ◯ Not at all

Please add any comments you have on the impact of practical factors upon the successful teaching of practical cookery (e.g. facilities, school structure, length of lessons).

Students' skills and attitudes, and support from home

In your opinion, have there been changes in the practical cookery skills and experience that your students obtain from sources outside school (e.g. at home)?

	Skills and experience have declined	Skills and experience have increased	Skills and experience stayed much the same
Over the last 5 years	○	○	○
Over the last 10 years	○	○	○

Do you encounter students who:

	Very often	Often	Occasionally	Never
Are unable to afford the ingredients for practical cookery lessons?	○	○	○	○
Are reluctant to bring ingredients/not supported from home?	○	○	○	○
Forget ingredients?	○	○	○	○
Bring bought ready prepared ingredients (e.g. grated cheese)?	○	○	○	○
Have to buy in 'store cupboard basic' ingredients (e.g. flour) as they are not routinely available at home?	○	○	○	○
Have allergies which affect their food choices?	○	○	○	○
Have religious or ethical reasons (e.g. vegan) for making food choices?	○	○	○	○

Do you face challenges from any of the issues below?

	Very often	Often	Occasionally	Never
Students with poor cutlery-handling skills	○	○	○	○
Students unfamiliar with/nervous about the use of a standard cooker	○	○	○	○
Students unfamiliar with basic kitchen procedures associated with cooking from scratch	○	○	○	○
Students unfamiliar with raw ingredients	○	○	○	○

In your opinion, do today's KS3 and KS4 students**overall** have a better knowledge of:

	Yes	No
Nutritional theory (e.g. food groups) than previous generations?	○	○
Practical cookery skills than previous generations?	○	○
Skills to read packaging than previous generations?	○	○
The physical processes of human nutrition than previous generations?	○	○

If you would like to expand on your answers relating to students' skills and attitudes and support from home, please do so here.

Does the absence of an A level qualification cause you concern?

- ◯ No, we do not require progression beyond Key Stage 4
- ◯ No, we use alternative qualifications to structure progression beyond Key Stage 4
- ◯ Yes, we are concerned by the lack of an A level qualification

If yes, please state the reasons why.

If you have any other comments on the issues covered in the questionnaire, please use this space.