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## EXAMINATIONS RESEARCH

# Cookery examined – 1937-2007: Evidence from examination questions of the development of a subject over time

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## Introduction

The teaching of cookery skills in UK schools has become the subject of much debate in recent years. Like its counterpart, needlework, the subject has a history of social change and gender bias. In the early twentieth century, when school examinations began to become widespread, both subjects were highly used in a domestic context. In other words, they were life skills, for at least some part of the population. Initially, undoubtedly, both cookery and needlework were subjects undertaken by girls, in the same way as woodwork and metalwork were 'for' boys. In the 1970s and

early 1980s there was more integration of boys to the subjects. However, as school subjects, they became increasingly a minority option by both sexes, until they almost disappeared altogether in the 1980s.

As we approach the end of the first decade of the twenty first century, needlework remains a minority option at GCSE, mostly taken by girls (across all awarding bodies in 2006, 45,950 girls took the textiles option of Design & Technology GCSE as opposed to 1,515 boys) and is no longer necessary to any individual as a 'life skill' – nobody suggests that the 21st century family should return to making a substantial number of their own clothes, as was commonly the case into the 1950s at least.

Cookery, however, has been the subject of a recent backlash, with increasing calls for a return to 'traditional' home cooking, with its allied skills of budgeting and planning. The concern has been driven by a number of issues and campaigns – obesity, crises in the NHS, animal welfare debates, environmental concerns surrounding packaging and wasteful food management and the key issue of the long term effects on human health of a diet based largely upon heavily processed foods. As a result, concern is growing that the skills necessary to prepare nutritious well-balanced meals from fresh ingredients have been lost to large parts of the population in a domestic context, and are at critical point within schools.

The purpose of this article is to take a step back from the increasingly heated debates surrounding the state of the UK's diet, and use evidence from the questions set at GCSE over the years in one examination board to look at how the subject has evolved within schools over the years.

The terminology used to describe the subject has changed significantly during the years. As far as possible, in this report, the terms used are those used commonly in schools to describe the subject. Therefore, 'cookery' is used to describe the school subject taught from the 1940s until the 1980s. From the 1990s onward, 'food' has been used as a common generic term to describe the subject – e.g. job advertisements can ask for a 'teacher of food', and is used in this context within this report. Examinations are referred to by their title.

There has been a great deal of debate upon this subject, records of which are mostly contained within newspaper articles. Academic research into the subject is less readily available, although it does exist. Dena Attar's book on gender effects of the subject (Attar 1990) and the Moray House College of Education study into how attainment should be assessed within home economics (Cumming *et al.*, 1985) are prime examples. However, little of this literature considers the important question of how cookery examinations have changed over the past few decades. Bearing this in mind the focus of this article is how cookery examinations have evolved over the past seventy years.

## Historical background

The first record that the Cambridge Assessment archive<sup>1</sup> has for cookery is in 1929, when it appears at School Certificate. In 1927 only needlework and hygiene are listed. Undoubtedly in this era it was a subject for girls only. Indeed at this time it was only a part of a subject – the School Certificate subject of housecraft allowed students to choose two subjects from four – needlework, laundrywork, cookery and housewifery. Cookery became a subject in its own right with the advent of the O level in 1951.

During the 1950s, 60s and 70s the examination title remained as 'cookery', in this board at least, although the term 'domestic science' was being used in schools and introduced an element of technicality with the use of the word 'science'. Was this an attempt to remove the 'life skill' element and create an academically oriented face to the subject? In the late 1970s the school subject was renamed again, 'home economics', and arguably changed focus from 'teaching working class children the basics

of service' to making 'basic and unattractive things with the cheapest possible ingredients' (Purvis, 2007). The title 'home economics', again, uses a term (economics) suggestive of academic rigour.

During the latter part of the twentieth century home economics began to find a place in the craft, design and technology (CDT) suite of subjects, which encompassed electronics, engineering and graphics, as well as wood and metal work and needlework (then called textiles and dress). In the mid 1980s there was consternation when the draft criteria for the subject were rejected by the Secretary of State for Education, because of disagreement about how the new course should be taught and what it should contain (Christian-Carter, 1985). In 1990, according to Geoffrey Thompson of the National Association for Teachers of Home Economics and Technology (reported in Purvis, *ibid*), the subject of Home Economics was close to being abolished as a method of cutting educational costs. The solution – hard fought by supporters of the subject – was to ensure that it was contained within the newly created D&T suite, because that was compulsory on the curriculum. Thus 'food technology' became one of the four areas (food, textiles, resistant materials [woodwork & metalwork] and systems [electronics and more]) within the D&T curriculum when the National Curriculum was set up in 1992, and it continues in this form to the current day. However, an alternative home economics qualification has also remained available via several awarding bodies throughout these same years.

Much of the catalyst for the current focus on food in schools came from a TV series – 'Jamie's School Dinners', which aired in 2005 (Channel Four Television, 2005). In the programme, chef Jamie Oliver highlighted the poor state of school dinners in the UK and attempted to change the eating habits of schoolchildren in specific schools. The programme was to a greater extent responsible for a widespread change to the provision of food in schools, including the reduction of 'junk' food availability and an increase in fresh healthy produce (BBC news online, September 2005). The impact of the series was not only a change to school meals but a more widespread concern, about the choices that students and their parents were making about food. It was felt that not only were students being fed over-processed food at school, they were not being educated – either at school or at home – about healthy diets or about fresh ingredients, and what to do with them.

A number of other studies have highlighted a growing crisis in cookery skills/food choices of young people. A study carried out in Scotland emphasised the decline in skills (Horne & Kerr, 2003, reported in McBeth, 2005). In March 2006 Ofsted produced a report on the effectiveness of provision in secondary schools for food technology. It was based upon a survey of thirty secondary schools which taught food technology. The report acknowledged that there had been many concerns raised with inspectors and government officials about the teaching of food in the curriculum in the years preceding the study and, specifically, that the D&T based food technology course emphasised knowledge of food processing and manufacturing at the expense of traditional family cookery. Both the Design and Technology Association (DATA, 2005) and the Children's Food Campaign (Children's Food Campaign, 2006) have advocated the maintenance of food within the curriculum as a matter of priority. 'Every Child Matters: Change for Children' (HM Government, 2005), cited the rights of children to lead a healthier life and to develop skills for living. As a result, provision in schools will change from 2008. In the Design and Technology Association briefing paper for members (DATA, 2007) which summarises the changes, the introduction states that:

<sup>1</sup> Cambridge Assessment currently comprises three awarding bodies: OCR, CIE and ESOL. In the past examinations were presented under other names – MEG (Midland Examining Group) and UCLES (University of Cambridge Local Examinations Syndicate). Additionally, other awarding bodies have merged with UCLES, including UODLE, OCSEB and EMREB (see Raban, 2008 for more details). The examination papers discussed in this study are taken from OCR, MEG and UCLES.

*For those of you that have been in teaching for a number of years, it has been a long struggle for the value of food teaching in a broad education to be recognised and to become highest priority in our schools.*

*This year sees a number of essential education programmes uniting to change the future of children's health and well-being to reinforce the changes that have taken place through 'Jamie's School Dinners'.*

A new KS3 programme of study is described by QCA (QCA, 2007), with the goals of teaching, 'a broad range of practical skills, techniques, equipment and standard recipes' to learn to 'carry out a broad range of practical cooking tasks safely and hygienically', to study healthy eating models and balanced diet, and to learn about 'the characteristics of a broad range of ingredients, including their nutritional, functional and sensory properties'.

At KS3, in the revised National Curriculum, food was not compulsory, although resistant materials, systems and control were. This raised concerns from the Design and Technology Association, not least because of the potential for gender inequality. In January 2008 Ed Balls, the Secretary of State for Children, Schools and Families, announced that from 2011 all schools must offer a food technology curriculum at KS3, with the allied training of 800 new cookery teachers (DCSF, 2008).

'Licence to Cook' is a compulsory cooking entitlement for each student. This will be brought into schools from September 2008, although those schools offering food at KS3 will automatically meet the criteria imposed, which match the KS3 programme of study goals. 'Licence to Cook' will be run by a consortium of three associations: the British Nutrition Foundation, Design and Technology Association and Specialist Schools and Academies Trust.

At KS4 changes are also planned. Awarding Bodies will be required to use the same core competencies to underpin specifications as used at KS3 and 'Licence to Cook'. This is likely to mean less focus on industrial processes at GCSE.

To what extent can Cambridge Assessment provide evidence with which to inform this debate? Table 1a shows the nature and structure of qualifications offered at age 16 by OCR and its predecessors every tenth year from 1937 to 1987, during the period when a single qualification existed. Table 1b continues the table from 1987 to 2007 with the home economics qualification and Table 1c with the D&T food technology qualification. Tables 2a–c provide example questions from the examinations, arranged in the same way. The tables show the information that could be obtained from the question papers – the nature of questions and the structure of the paper. Information about marks allowed, weightings of papers and the marking of individual questions is not contained within the tables, because it was unobtainable for most examinations prior to the 1970s and 1980s.

## Discussion

### Evolution of the examination

A number of similarities – and differences – between the examinations become apparent when the tables are studied. There is a clear and distinct evolution of the subject, when we look at the structure of the examination.

In the 'early' years – the 1930s and 1940s – the qualification was only available as an optional part of the wider subject of 'housecraft', which

included laundry-work, dressmaking and general housewifery, as well as cookery. Each of the options was presented as a separate section of the written paper, and had a separate practical examination, and therefore candidates taking this option took a single written examination in cookery, and a practical component. Questions on the cookery section of the written paper covered areas including menu planning, choosing particular ingredients, the advantages of different methods of cooking, describing common cookery terms, questions related to practical cookery and nutrition. The practical session involved a planning session, followed by a practical cookery examination, in which candidates were required to prepare a number of dishes that might commonly be served in the home environment. There was no evidence about whether the costs of ingredients for examinations (or for lessons generally) were met by the candidates or the school, or were in some way centrally funded.

From the 1950s to the 1970s (the O level era) the subject formed an entire qualification. The practical examination continued in the same format as in previous years (a planning session, followed by a practical cookery examination, in which candidates were required to prepare a number of dishes that might commonly be served in the home environment), albeit with the planning session being given greater time allowance with every successive decade. The theory paper covered questions about equipment and shopping patterns, as well as cooking methods and terms, menu planning, nutrition and ingredients.

In the 1980s and 1990s there was considerable change. Two different qualifications were available from the 1990s – home economics and D&T food technology. Although both are described here, D&T food technology had a far greater number of candidates – in this awarding body in 1997 34,067 students took food technology and 25,047 home economics, in 2006 the figures were 20,935 and 3,261 respectively. These figures not only illustrate the decline of home economics by comparison with food technology, but also the very significant decline in numbers overall between 1997 and 2006.

- In home economics, a wider variety of types of questions were introduced to the written papers. Although short answer questions continued to feature in the first section of the paper, they were augmented by multiple choice questions. A section of the paper devoted to data response questions (of which two were presented and one had to be answered) was introduced, and also a section comprising free response questions (again, candidates had to answer one from a choice of two). The practical examination changed from a timed session cooking essentially domestic recipes, to a set of investigations where candidates were required to explore theoretically a 'food based problem', before cooking a number of dishes related to the problem.
- In D&T food technology in the 1990s candidates had to complete a written paper on core D&T content (not related to food). A second written paper assessed the food technology element of the paper and had to complete a piece of coursework for both core content and food content. By 2007 this had evolved to two written papers, both on food content and a coursework component which required the design, investigation, creation and evaluation of a food product which was suitable for mass marketing. As well as producing the product itself, candidates were required to consider packaging and labelling, as well as target market.

The topic areas covered on the written papers of both the home economics and food technology examinations have broadened from

**Table 1a: The nature and structure of examinations offered by OCR and its predecessors (MEG/ UCLES) every tenth year from 1937 to 1987**

	<i>Structure of written paper</i>	<i>Practical paper/coursework</i>
<b>1937</b> Half a School Certificate subject; <b>Subject title:</b> Housecraft <b>Paper details:</b> 1 section of written paper 1 practical paper	45 minutes for the cookery section. One written paper section (presented in combination with Laundrywork, Housewifery & Needlework). Two questions to be answered from a choice of three. Questions multi-part.	Two and a quarter hours. One task allotted to the candidate. No preparation time indicated, nor any indication of candidate having advance notice of dishes to be cooked. Tasks included the preparation of three to five dishes.
<b>1947</b> Half a School Certificate subject; <b>Subject title:</b> Housecraft <b>Paper details:</b> 1 section of written paper 1 practical paper	One hour for the cookery section. One written paper section (presented in combination with Household Management & Needlework). Between two and four questions to be answered from a choice of five. Questions multi-part.	One hour planning session. Candidates were given the test allocated to them, and planned what they wished to cook. They had to draw up a plan of work and a list of ingredients. All work was handed in at the end of the planning session and was returned to them at the examination. Candidates had to keep to their written plan of work during the examination, which lasted two hours. Tasks mostly contained three main dishes, plus a small accompaniment – i.e. a drink, or a sauce. Two hours were allowed to complete the task.
<b>1957</b> O Level <b>Subject title:</b> Cookery <b>Paper details:</b> 1 written paper 1 practical paper	Single two hour theory paper. Five questions to be answered. Questions were divided into two sections. Section A (where candidates were advised to spend 25% of time) had a choice of 2 longish answers; candidates had to answer one. Section A questions were often (but not always) synoptic in nature, containing a requirement to describe the scientific/nutritional background to a given situation and then to plan meals accordingly. e.g. <i>State in detail the importance of protein in the maintenance of good health. What important points should be borne in mind when choosing protein foods for:</i> (a) elderly people; (b) vegetarians? Plan meals for one day for an elderly couple living on a pension and underline the foods which are good sources of protein.	One hour <b>and ten minute</b> planning session. A choice of two tests was given to each candidate, and they had ten minutes in which to choose which one to take. Candidates then spent one hour preparing a plan of work and a shopping list. Everything was handed in at the end of the planning session and was returned to them at the examination. Candidates had to stick to their written plan of work and might not bring any additional notes (except recipe book). Tasks contained three or four main dishes – sometimes more smaller dishes. Two and a quarter hours allowed for cooking.
<b>1967</b> O level <b>Subject title:</b> Cookery <b>Paper details:</b> 1 written paper 1 practical paper	Section B had 6 multi-part question choices of which candidates had to answer four.	One hour <b>and a quarter</b> planning session.  Otherwise as 1957 above
<b>1977</b> O level <b>Subject title:</b> Cookery <b>Paper details:</b> 1 written paper 1 practical paper	Section B had 6 multi-part question choices of which candidates had to answer four.	One hour <b>and a half</b> planning session.  Otherwise as 1957 above
<b>1987</b> Joint O level/CSE <b>Subject title:</b> Home Economics: Food & Nutrition. <b>Paper details:</b> 1 written paper 3 practical assignments	2 hour theory paper presented as two sections. Books containing <i>recipes only</i> were permitted. Section A consisted of ten compulsory short answer/multiple choice questions. Section B presented two structured, two data-response and two free response questions. Three questions had to be attempted, one from each part.	Three practical assignments. First assignment: a food based problem with one factor, set by teacher. Second assignment: a piece of investigation, set by teacher. Third assignment: a complex problem with two main factors, chosen by the candidate from three assignments set by the Board. Each of these carried out within 2 hours and 15 minutes, spread over 2 weeks, (1 hour planning, 1 hour executing (usually a week later) and 15 minutes evaluating).

**Table 1b: The nature and structure of examinations offered by OCR in Home Economics: Food & Nutrition from 1997 to 2007**

	<i>Structure of written paper</i>	<i>Practical paper/coursework</i>
<b>1997</b> GCSE <b>Subject title:</b> Home Economics: Food. <b>Paper details:</b> 1 written paper 3 practical assignments 2 hour theory paper presented as two separate sections.	Section A consisted of ten compulsory short answer/multiple choice questions. Section B presented two structured, two data-response and two free response questions. Three questions had to be attempted, one from each part.	Three practical assignments. First assignment: a food based problem with one factor. Second assignment: a piece of investigation. Third assignment: a complex problem with two main factors, chosen by the candidate from three assignments set by the Board. Each of these carried out within 2 hours and 15 minutes, spread over 2 weeks, (1 hour planning, 1 hour executing (usually a week later) and 15 minutes evaluating).
<b>2007</b> GCSE <b>Subject title:</b> Home Economics: Food. <b>Paper details:</b> 2 written papers comprising 1 Foundation and 1 Higher tier. 3 practical assignments	One theory paper to be taken by each candidate. All questions on both papers are compulsory. Both papers contain short answer, structured, data response and free response questions.	Three tasks: One investigative task – 12–14 hours. Two resource tasks 'short focused tasks with the emphasis on the implementation of practical skills'. Each task should take 2–3 hours, and it is expected that 'a number' are conducted throughout the course, but only two be submitted for the assessment.

**Table 1c: The nature and structure of examinations offered by OCR in D&T Food Technology from 1997 to 2007**

	<i>Structure of written paper</i>	<i>Practical paper/coursework</i>
<b>1997</b> GCSE <b>Subject title:</b> Design & Technology Syllabus A: Food Technologies <b>Paper details</b> 1 written paper 2 coursework tasks Plus 3 other syllabuses available within D&T suite.	Two compulsory theory papers. Part A: Core (basic tier 45 minutes each, standard tier 1 hour each & higher tier 75 minutes each) contained compulsory structured questions on the core content. Part B: Compulsory structured questions on the optional content.	Two coursework tasks, each taking around 20–30 hours to produce. <b>One piece of work must demonstrate the use of construction materials i.e. wood, metal, plastic, clay and components.</b> <b>The other piece of work must demonstrate the use of one other material, chosen from graphic media, food or textiles.</b> No specimen/exemplar assignments could be found. Evidence of achievement was taken from design folders and the artefact.
<b>2007</b> GCSE <b>Subject title:</b> D&T: Food Technology <b>Paper details:</b> 4 written papers, comprising 2 Foundation and two higher tier. Coursework.	Two theory papers to be taken by each candidate. Foundation tier candidates had 1 hour for each paper, higher tier candidates had 1 hour 15 minutes. Papers 1/2 contained a product analysis question on any theme. Papers 3/4 contained a product analysis on the published theme for the year, which for 2007 was 'frozen food'. All papers contained short answer/data response type questions.	The coursework consisted of the creation of a three dimensional product, plus a portfolio of supporting material. The portfolio must include the identification of a consumer need, the formulation of a design brief to meet that need, research into and around the brief, the generation of ideas and development of a product, plus evidence of the evaluation and testing of the finished product. The specification recommends a maximum of 40 hours work to be spent on the coursework.

**Table 2a: Example questions 1937–1987**

<i>Year</i>	<i>Example questions from the written paper(s)</i>	<i>Example assignments from the practical/coursework</i>
1937	Compare and contrast boiling and steaming as methods of cooking vegetables. Which do you consider the better method? Give reasons for your choice.	Make a pulse soup; show two ways of cooking batter, one as a savoury and one as a sweet; make some scones.
1947	Enumerate the advantages of steaming as a method of cooking. By means of labelled diagrams, show <b>three</b> methods of steaming. Give <b>two</b> examples of foods which may suitably be steamed in each of the ways illustrated.	Show your skill in cookery by using batter, short crust pastry, and the creaming method to prepare three dishes. A suitable sauce should be served with one of the dishes.
1957	What do you understand by the term 'edible offal'? Name <b>four</b> examples and state <b>one</b> method of cooking suitable for each. Give clear directions for the preparation, cooking, and serving of a dish containing liver or kidney suitable for a quickly prepared midday meal. What would you look for in choosing the liver or kidney?	Prepare and serve a special tea for the headmistress and two visitors to your school. It should consist of dainty sandwiches (two savoury fillings), scones, tea and also a Victoria sandwich and a few small cakes, both made from one basic mixture.
1967	What is meant by 'fermentation'? Give the ingredients for and method of making a loaf of bread, using $\frac{1}{2}$ lb flour. What are the changes which take place while the loaf is baking?	a) Prepare a two-course family dinner for three people. The main course should show an interesting method of cooking inexpensive meat and the preparation, cooking and serving of a fresh green vegetable. b) Make some interesting biscuits (using not more than 4oz. flour) and serve them on a tray with coffee.
1977	a) What advantages are there in making and baking in large quantities? b) Give the basic recipe for making: bi. shortcrust pastry using 400g or 500g (1lb) flour; bii. a creamed mixture using 200g or 250g ( $\frac{1}{2}$ lb) self-raising flour. c) describe briefly how each mixture could be used to make <b>three</b> different dishes.	a) Prepare, cook and serve a two course mid-day meal for a family of three, one of whom is on a light diet after an illness. b) Use some seasonal fruit to make a small quantity of jam or make some lemon curd.
1987	(Section B – free response): Your headteacher is concerned about the amount of so-called 'junk food' eaten by young people today. Evaluate the part 'junk food' plays in their diet and comment on the need for thinking carefully about food and health.	Third assignment: The use of convenience food in our diet is increasing. a) suggest dishes which show the sensible use of convenience food. b) As part of your planning explain how the dishes you have chosen take this point into consideration. c) Draw a chart to show how you would compare a home-made dish with the same convenience food dish. d) Make a selection from your choice in (a). e) Evaluate the outcome.

**Table 2b: Example Home Economics questions 1997–2007**

Year	Example questions from the written paper(s)	Example assignments from the practical/coursework
1997 Home Economics: Food	(free response): <i>Technology has brought about considerable changes for the consumer. Using the following headings, together with your own ideas, explain how the consumer has gained from these changes.</i> a) <i>In the range of food available.</i> b) <i>At the supermarket checkout.</i>	(from specimen assignments) <i>Children need a balanced diet in order to grow up in good health. Prepare a selection of dishes suitable for children under 5 years.</i> a) <i>What are the essential requirements of a child's diet?</i> b) <i>Write about the dietary needs of children including any special information.</i> c) <i>Suggest some suitable dishes and make a selection which you could prepare giving your reasons for choice.</i> d) <i>Plan a course of action.</i> e) <i>Carry out your plan.</i> f) <i>Evaluate the whole assignment.</i>
2007 Home Economics: Food & Nutrition	(common question to both tiers): <i>Food eaten at school is an important part of a teenager's diet. Describe the nutritional requirements of teenagers. Explain how schools can help meet these requirements in the provision of food and drink.</i>	Resource task <i>Low fat spreads are often used for spreading onto toast or onto bread when making a sandwich.</i> a) <i>Plan a test to look at the spreadability of low fat spreads compared to margarine or butter.</i> b) <i>Carry out the test.</i> c) <i>Evaluate which is the most suitable and why.</i>

**Table 2c: Example D&T Food technology questions 1997–2007**

Year	Example questions from the written paper(s)	Example assignments from the practical/coursework
1997 Design & Technology Syllabus A	(Part B, basic tier): <i>Sauces and toppings are often used to make fish dishes attractive to young children. Give <b>three</b> reasons why sauces and toppings make fish dishes more appealing. Name a suitable sauce for a child's fish dish. List the ingredients and explain the process needed to make it.</i>	Coursework requirements. <i>One piece of work must demonstrate the use of construction materials i.e. wood, metal, plastic, clay and components.</i> <i>The other piece of work must demonstrate the use of one other material, chosen from graphic media, food or textiles.</i>
2007 D&T Food Technology	Paper 2 – Higher tier. <i>A food manufacturer produces a savoury flan in a test kitchen. The basic ingredients are listed below [list of pastry ingredients &amp; list of filling ingredients]. Describe one different performance characteristic (function) for each of the following ingredients when used in the savoury flan. (i) plain flour, (ii) fat, (iii) egg.</i> <i>Further research by the food manufacturer has identified a gap in the market for a new type of savoury flan. The new savoury flan should meet the following specification: reflects a culture or a country; combines a variety of different textures in the filling; is attractive in appearance. Complete the chart to describe how the basic ingredients could be adapted to meet the specification.</i> <i>Identify one pre-manufactured component which could be used in the new product. Give <b>two</b> benefits to a manufacturer of using pre-manufactured components. Give <b>one</b> limitation to a manufacturer of using pre-manufactured components.</i>	The coursework consisted of the creation of a three dimensional product, plus a portfolio of supporting material. The portfolio must include the identification of a consumer need, the formulation of a design brief to meet that need, research into and around the brief, the generation of ideas and development of a product, plus evidence of the evaluation and testing of the finished product.

those seen in the O level era, incorporating questions on manufacturing processes, marketing, packaging and labelling, as well as those topics seen in the past, such as nutrition.

Tiering was not applied to this subject by this awarding body until 1997, when the relatively new food technology specification had three tiers for the written paper: Basic (grades G–C), Standard (grades E to A) and Higher (grades D–A\*). The home economics examination in 1997 was not tiered. In 2007 two tiers were in place for the written paper of both food technology and home economics examinations.

### Implications for the future

The review of cookery qualifications over the years indicates several very stable eras when the qualifications continued in the same format for several decades. There is also clear evidence of how and when changes were made to the way in which the subject was assessed. The current concern about the teaching of cookery in schools centres upon the

allegation that students today do not have the skills necessary to create nutritious balanced meals from fresh ingredients in a domestic context. Reviewing the evolution of GCSE and predecessor qualifications does not prove whether this is the case or not, but it does enable us to contextualise the allegation, and assess broadly how, within the context of assessment at 16+, the subject has changed.

It can clearly be seen that cookery qualifications at age 16 have changed over the years to reflect changing social trends in provision of food in the home. For example, written examinations in the UK contain more questions about dietary needs, and fewer asking students to describe 'how to make' a particular recipe, and coursework consists of food based 'problems' often focussed upon a single ingredient, or nutritional need. Ultimately, however, each era has reflected social tendencies of the time, and the manufacturing element of the later era, which forms a large part of the food technology examination, has been in keeping with a society which uses processed food frequently in everyday life.

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## CRITICAL THINKING

# Critical Thinking – a definition and taxonomy for Cambridge Assessment

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## Introduction

The main aim of this research activity was to create a Cambridge Assessment definition<sup>1</sup> and taxonomy<sup>2</sup> for Critical Thinking.

There are a vast number of Critical Thinking definitions in the literature (e.g. Ennis, 1996; Fisher and Scriven, 1997; Paul, 1992), which are highly varied and often multi-faceted. The construct of Critical Thinking is hotly debated, with a number of key battlegrounds. The implications of such differing conceptions reach out beyond academic journals. They impact upon educationalists in a number of practical ways, such as devising the best training or delivery model for Critical Thinking; designing and delivering valid assessments which are authentic and which nurture good Critical Thinking skills in students.

For these reasons, and others listed below, Cambridge Assessment aspired to have a definition of its own:

### Cambridge Assessment as the expert

Cambridge Assessment has 20 years of experience in testing Critical Thinking, unrivalled by any other body within the UK. In order to

capitalise upon this experience, it seems sensible to have a definition, or clear sense of the construct that we say we are measuring, so we can be sure that our measures are valid and that we are making valid inferences from these assessments.

### Coherence

It is important that, across Cambridge Assessment's existent Critical Thinking offerings, there is a coherent understanding of the usage of the term and the construct being measured. This should also be true of any assessments or qualifications developed in the future.

Currently, Cambridge Assessment has five, long term, extant products (see Figure 1): BMAT, TSA, CIE Thinking Skills AS/A level, OCR AS/A Level Critical Thinking and OCR AEA Critical Thinking, all of which share a common ancestor, namely MENO. However, each of them has a slightly different evolutionary history, tests differing aspects and subsets of Critical Thinking, and is used for different purposes and candidate types.

Additionally, there is a newer qualification, namely CIE's H2 Knowledge and Inquiry, which includes a Critical Thinking paper. This is less obviously a descendent of MENO, though it does necessarily involve analysis and evaluation of arguments. Equivalent to A-level, it was developed specifically for Singapore's stronger candidates in order to enhance skills needed for university.

1 Definition: 'stating the precise nature of a thing'

2 Taxonomy: a term, now commonly borrowed from the biological sciences meaning 'dealing with the description, identification, naming, and classification of organisms'