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Licence to Cook: The Death Knell for Food Technology?

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Abstract

The current debate regarding the rising incidence of obesity in the UK is of concern to the general public and many government agencies. The long term effect will impact on the whole population and the future of our children. This paper discusses the Licence to Cook programme introduced in September 2007 as the government's response of an 'entitlement to cook' for all pupils. Essentially, it requires that all pupils learn basic cooking skills through dedicated lessons in food preparation techniques, diet and nutrition, hygiene and safety and wise food shopping. This paper considers the implications of the introduction of the programme on schools and the potential impact on the current food technology curriculum within design and technology.

Initially, in Part 1 the paper briefly describes the background to the Licence to Cook programme and how it was introduced during 2007/8. It outlines the intended aims and the teaching resources produced for the programme in Year 1. Part 2 of the paper considers the relationship of the programme to food technology and recent development in design and technology curriculum requirements. A mapping exercise is used to highlight areas where the programme addressed curriculum requirements and gaps where potential problems could arise. Findings for the evaluation of Year 1 of the programme and the critique suggest that there are potential problems related to curriculum time, resources, progression across the age phases and compliance with the design and technology requirements. Part 3 draws an analogy between the survival of a subject in the school curriculum with the survival of a species within an ecological niche in the natural world. In Part 4 an alternative approach is suggested where links are made with other curriculum areas such as Personal, Social and Health Education (PSHE) (wellbeing) and science in order to establish a different niche for the Licence to Cook programme. This would require a combined approach where teachers plan and work as team and are led by a food technology specialist. This would ensure that the 'entitlement to cook' for all pupils is achieved but not at the expense of good quality work in food technology and its relationship with design and technology.

Key words

obesity, entitlement to cook, Licence to Cook, food technology, secondary

Part 1: Background

The rising prevalence of obesity is a major issue for the UK. The Report 'Healthy Weight, Healthy Lives: A Cross-Government Strategy for England' (DH and DCSF, 2008, pvii) comments 'that two thirds of adults are either overweight or obese, and without action this could rise to almost nine in ten adults and two-thirds of children by 2050'. Similarly, the Foresight 'Tackling Obesities: Future Choices Project Report' indicates that over half the UK adult population could be obese by 2050 (2007, p5). The government's decision to include an 'entitlement to cook' in the curriculum was in direct response to the growing concern about obesity in the population. Essentially, this means that every pupil at Key Stage 3 (11-14 years) and 4 (14 -16 years) can learn basic cooking skills through dedicated lessons in food preparation techniques and related theory. The programme ensures that all pupils in this age range have the opportunity to learn practical cooking skills together with knowledge of diet, nutrition, hygiene and safety and wise shopping www.licencetocook.org.uk. The research question addressed in this paper is 'does the craft based approach embedded in the Licence to Cook programme undermine food technology's contribution to design and technology education?' This is addressed through an exploration of the programme, an analysis against the revised Key Stage 3 programmes of study for design and technology (www.qca.org.uk/curriculum), to be introduced in September 2008 and an associated discussion.

Aims of the Licence to Cook programme

The programme is funded by the Department for Children, Schools and Families (DCFS) and is run jointly by the Specialist Schools and Academies Trust (SSAT), the Design and Technology Association, and the British Nutrition Foundation (BNF). It aims to support all secondary schools in providing pupils aged 11- 16 years with the entitlement to cook by

learning practical cooking skills and related theory. This, it is intended, will be embedded into the curriculum using the revised programmes of study for design and technology at Key Stage 3 and revised Food Standards Agency (FSA) core competencies www.food.gov.uk. In addition, the programme aims to provide local, alternate provision for those schools that do not have practical cooking facilities or do not offer food technology at Key Stage 3. Accreditation is completed online by teachers and requires three observations, three online tutorials for basic cooking skills and two online tutorials for each of the three theory learning areas.

Programme outline and resources

The BNF took a leading role in developing a wide range of online resources that were trialled in schools by experienced food teachers known as lead practitioners. Table 1 outlines the resources and the programme. Essentially, it requires sixteen one hour practical cooking lessons. The minimum time allocation for the other three learning areas is eight hours with three one hour face-to-face sessions and five hours for online tutorials. It is suggested that one hour should be spent on each of these learning areas. Further details of the programme and resources can be seen on www.licencetocook.org.uk

Overview of the Licence to Cook Program

The programme intends that pupils learn how to make simple, nutritious meals, cook a range of basic dishes and meals and apply aspects of nutrition, wise shopping and hygiene in food choice and cooking.

The minimum entitlement for all students is for:

- **16 hours of basic cooking** of 16 structured units delivered through three progressive modules. Containing cooking activities, supported by teacher guidance, recipes, photographs, writing frames and PowerPoint presentations;
- **Three hours of learning about diet and nutrition, wise food shopping and hygiene and safety.** Supported by face-to-face lesson suggestions
- **Five hours for nine on-line differentiated interactive tutorials** based on the four learning areas, or the equivalent (worksheets, presentations).

Learning Area	What Happens?
Basic Cooking Skill	<ul style="list-style-type: none"> • 16 x 1 hour hands-on cooking sessions, delivered through 3 progressive modules • 3 teacher observations of students' practical work • 3 on-line tutorials
Diet and Nutrition	<ul style="list-style-type: none"> • 1 x 1 hour face-to- face session • 2 on-line tutorials
Wise Food Shopping	<ul style="list-style-type: none"> • 1 x 1 hour face-to- face session • 2 on-line tutorials
Hygiene and Safety	<ul style="list-style-type: none"> • 1 x 1 hour face-to- face session • 2 on-line tutorials

Teaching Resources

Each of the 16 cooking sessions has the following support provided:

- extensive teacher guidance;
- suggested recipes, although schools can use their own;
- recipe writing frames;
- worksheets;
- PowerPoint presentations of the recipes being made.

An evaluation of the first year of the programme has been completed but as yet the findings are not in the public domain. As a result it will not be referred to in this paper.

Part 2: Relationship with food technology

Food technology was introduced under the umbrella of National Curriculum Design and Technology in England in 1990 (DES). Pupils in design and technology 'combine practical and technological skills with creative thinking to design and make products and systems that meet human needs' www.qca.org.uk/curriculum. The revised design and technology programmes of study at Key Stage 3 include resistant materials, systems and control and at least one of food or textiles product areas. Essentially, food technology covers an understanding of the nutritional, physical, chemical and sensory properties of food materials and how to apply this knowledge in developing food products. A number of key concepts underpin the study of design and technology, including food technology. They are designing and making; cultural understanding; creativity and critical evaluation. The key processes are the essential skills and processes pupils should learn to make progress. The range and content section outlines the subject breadth drawn upon when teaching the key concepts and processes. Food technology includes a broad range of practical skills, techniques and standard recipes, and the ability to plan and carry out safely a broad range of

practical cooking skills. Knowledge is required of healthy eating models related to a balanced diet and knowledge and understanding of the characteristics of ingredients including functional, nutritional and sensory. Finally, pupils should be offered a range of curriculum opportunities integral to their learning of the subject and that enhance their engagement with the concepts, processes and content.

Concerns have been raised regarding the relationship between pupils 'learning to cook' and food technology. A report evaluating the effectiveness of provision in secondary schools for food technology within the design and technology noted that 'confusion about the basic aims of food technology underlies some of the weaknesses in the curriculum' (Ofsted, 2006a, p 5-6). The report drew on inspection evidence collected by HMI between 2003 and 2005 and data from Ofsted's section 10 inspection database. It continues, 'there is a (more) fundamental clash, on the one hand, between teaching about healthy eating and how to cook accordingly and, on the other hand, developing food products to be marketed to meet consumer needs'. 'In essence, a tension exists between teaching about food to develop skills for living and using food as a means to teach the objectives of design and technology'. In addition, the Annual Report of Her Majesty's Chief Inspector of Schools 2004/05 on Design and Technology in secondary schools (Ofsted, 2006b, p6) commented that 'in many schools, pupils need more opportunities to learn the practical skills of buying, cooking and storing food. However, this should be linked to the underlying nutritional knowledge needed for them to be able to choose to eat healthily. Essentially, such learning needs to be well secured before pupils embark on more abstract and industrially oriented courses in food technology'.

It can be seen from the overview of the Licence to Cook programme (Table 1) that pupils do learn practical or 'life' skills and make links with healthy eating. The findings for the evaluation of the programme indicate that considerable progress has been made to meet the aims and objectives in Year 1. However, a number of issues are highlighted as in Year 2 more schools and less experienced teachers become involved. The SSAT, Design and Technology Association, and BNF have carefully devised the Licence to Cook Programme to meet some of the requirements of the Programme of Study for design & technology with regard to food. Hence the two key questions are to what extent do the resources developed for Licence to Cook meet these requirements and to what extent did schools use the resources in ways which indicated that these requirements were, or could be met? These questions have to be answered in the context of good design and technology practice, which was not the intention in Year 1

of the programme, in which the designing and making of products play a significant part in the way the subject is both taught and assessed.

In addition to the review of the programme, a critique of the content of the Trial Licence to Cook programme was completed. In the Teachers' Guide (Resources from Licence to Cook Training CD, March 2008, p12) the audit of food skills and knowledge covered by the programme was mapped against the revised Key Stage 3 design and technology programme of study and it identified major gaps. (as the Licence to Cook programme only covers part of the KS3 requirements) Within the key concept of designing and making these include the ability to apply knowledge of materials and production processes to design products, the impact of products and systems on the quality of life and exploring past design. None of the key concepts of cultural understanding, creativity and critical evaluation are addressed. The only Key Process covered is 'plan and organise activities and then shape, form, mix, assemble and finish materials, components or ingredients'. In the Range and Content the needs and health of the user, fitness for purpose and constructional and aesthetic issues are restricted to the meals for the family and there is no clarification of the term 'family'.

The programme is strongest at developing and using of broad range of 'craft' based practical skills, techniques, use of equipment and standard recipes. Health and hygiene, health eating models, knowledge of nutrition and a balanced diet are well covered, but not an understanding of the functional properties of foods that are necessary to make sound design decisions in food technology. Essential elements of Key Stage 3 design and technology are missing. Although, there are a number of focused practical tasks, the skills and understanding covered are not clarified and, because of the omission of design and make assignments, how they would be integrated into the curriculum. The preferred approach will be for pupils to work individually rather than in teams, there are no links to the work of designers and makers, the use of ICT to capture or generate images or contexts, uses outside the classroom and the production of multiple products.

These omissions indicate that using eight hours of a typical allocation per term of fourteen hours of food technology for the Licence to Cook programme in Years 7, 8 and 9, as recommended in the DRAFT Teachers' Guide, would have a serious impact on the quality and depth of food technology taught at Key Stage 3. If the recommendations were followed then the following will be omitted. An understanding the properties of food so that pupils can make design decisions in developing food products (food science) and an understanding

of the developing range of modern food materials. Hence food will be effectively removed as a material within design and technology as envisaged by the new orders at Key Stage 3. The programme has a very positive and successful role to play as the means of teaching cooking to feed the family but the curriculum time recommended and its lack of preparation for enabling pupils to make design decisions, would it can be argued, seriously compromises food technology at Key Stage 3 and hence inevitably and progressively at Key Stage 4 if it is taught within food technology. It would not build on good practice in food technology in the primary phases and there would be a lack of sound curriculum progression.

A 'Briefing paper on secondary food education' (Resources from Licence to Cook Training CD, 2007) was provided for the lead practitioners on suggested changes in the teaching of food. These include the removal of paper based designing, sketching, graphic techniques such as CAD/CAM, complex systems and control and long projects on a single product development and production theme. Concerns have been expressed regarding the appropriateness for food technology of a range of these issues (Rutland, 2006). However, a long project with a theme can be effective if the pupils experiment with a wide range of products and processes before further developing a chosen design idea to meet the brief. The omission of product analysis of ready made product would reduce the learning potential for pupils to explore existing products as required by the design and technology programmes of study.

The removal of product development for a cook chill market and volume production at Key Stage 3 to be replaced by 'designing and making meals for my family' would be restrictive. It does not take into account users needs in a wider sense and an understanding of industrial practices. Similarly, the removal of developing knowledge and understanding of materials, components and smart materials would impact on the pupils' ability to make sound design decisions in their food technology (Rutland et al, 2005). Pupils in a modern food technology course, as part of design and technology, needs to engage with the approaching revolution in food production techniques and food products through such things as nanotechnology, known as nanofoods (Renton, 2006) and 'victimless' meat, beef, pork or chicken brought off the shelf (Midgely, 2008). It is an important entitlement in terms of producing citizens with a voice about healthy eating. The current issue of sustainability is touched upon but has limited treatment, by virtue of the time available and does not meet the depth required in food technology. For example, though food miles are mentioned there is no consideration of the Fair trade versus air miles dilemmas. Essentially, it would be very

difficult for curriculum planners to fit coherently all the omissions into the suggested six remaining hours for food technology in each year at Key Stage 3.

Part 3: Survival within the curriculum – an ecological analogy.

Hutchinson (1957) described an ecological niche as all of the physical, chemical and biological conditions required by a species for survival, growth and reproduction. He further clarified this in terms of the 'realised' niche concept, which takes into account the pressure from, and interactions with, other organisms (e.g. superior competitors), which force a species to occupy a niche that is narrower than this, and to which they are mostly highly adapted. We can describe the niche occupied by food technology within the curriculum as residing within the design and technology habitat and co-existing with the other focus areas each occupying their own niche. In the past curriculum revisions of design and technology have not significantly changed this ecological landscape. The realised niches were essentially unaltered. The introduction of the Licence to Cook programme can be seen as a competitor for resources located within the niche occupied by food technology. The key resource here is time. Without sufficient curriculum time a subject cannot maintain a robust existence within the curriculum. As argued above, the advice given to teachers regarding the time required for successful implementation of Licence to cook is so great that it leaves the niche occupied by food technology with much less time than it requires to meet its statutory requirements as a 'design & technology' subject. The logical conclusion of this ecological analogy is that the successful predation of time by Licence to Cook will ultimately lead to the extinction of food technology. Taking the ecological analogy further a key question is 'Is it possible to find an alternative niche for Licence to Cook, one that does not compromise the niche already occupied by food technology'?

Part 4: Establishing an alternative niche for Licence to Cook.

In September 2008 food technology within design and technology will continue to be optional at Key Stage 3. However, during Year 1 of the programme there has been a change in the situation as it is intended that food technology will become compulsory in 2011. A press statement: Compulsory cooking lessons for all young people <http://www.dfes.gov.uk> by the Secretary of State Ed Balls on 22nd January 2008 states that:

'Food technology will be a compulsory Key Stage 3 curriculum entitlement for every 11-14 year old from September 2011 -

with food technology lessons, involving practical cooking lessons and classes on diet, nutrition, hygiene and healthy food shopping. The new secondary curriculum, announced last year and introduced this September, deliberately focuses on practical cooking skills and knowledge and less on food manufacturing processes, packaging and marketing'.

The implications of this statement are that food technology, as a compulsory element of design and technology, will be the preferred vehicle for the delivery of the 'entitlement to cook' for all pupils.

The findings of this paper indicate that schools could integrate the programme into their schemes of work for food. However, there were concerns regarding the current timetable allocation and resources to successfully support the aims of the Licence to Cook programme and design and technology concurrently. The critique of the contents of the programme against the revised programmes of study at Key Stage 3 highlight that there are considerable 'gaps' in design and technology content that are not covered. Omissions, that overall have the potential to cause problems regarding sufficient curriculum time, resources, progression across the age phases and compliance with the design and technology requirements.

Overall the answer to the research question 'does the craft based approach embedded in the Licence to Cook programme undermine food technology's contribution to design and technology education?' must be 'yes'. The extent of this undermining will vary from school to school but in some cases it could be so serious that it leads to the demise of food technology at Key Stage 4.

The ecological analogy suggests the provision of an alternative niche. This could be provided by a combined approach making links between the Licence to Cook programme and Personal, Social and Health Education (PSHE), (personal well-being) and science as identified in the mapping exercise. In PSHE this would address the programmes of study related to accessing information on healthier life styles, making informed choices about safety, health and well being and the contribution of a balanced diet to personal wellbeing. In science the programme of study concerned with growth and how health can be affected by diet would be addressed. In this approach teams of teachers from a range of disciplines, coordinated by a food technology specialist responsible for planning and assessment, would deliver the entitlement across Key Stage 3 and 4. The practical lessons, emphasising 'craft skills' would require a suitable food teaching room and be taught by the food specialist, or other teachers who have an interest and the required expertise to teach such lessons. The online teaching

resources in the Licence to Cook programme could be accessed by pupils, and taught by relevant teachers, in rooms with a suite of computers.

Conclusions

This paper has presented an overview of Year 1 of the Licence to Cook programme and carried out a mapping exercise of content against the revised design and technology programmes of study. It has identified potential problems and made suggestions on how they could be addressed. A key question is whether 'cooking' or a craft based approach for food are central concerns in debates about obesity. They may appear to provide a route to resolve the problem, but there are wider issues related to the impact of, for example the use by society of processed and modern foods and sustainability, which are the province of food technology. Food technology teachers have made considerable progress since the introduction of the National Curriculum Design and Technology in 1990. They have a long held belief in the relevance of their subject for the development of 'life skills' for their pupils. However, would a return exclusively to teaching meal planning, including the needs of individuals in the family, invalid cookery, vegetarian cookery, marketing and table laying (Abbey and Macdonald, 1968), be appropriate for pupils in twenty first century? It is of utmost importance that ensuring pupils achieve their 'entitlement to cook' is not at the expense of continuing high quality work in food technology. Currently, this requires clarification of the content of food technology as a dynamic, forward looking subject in our schools.

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