ASSESSMENT and
QUALIFICATIONS
ALLIANCE

General Certificate of Secondary Education

Design and Technology
(Food Technology)
3542/3552

Report on the Examination

2007 examination – June series

Coursework

Coursework

Introduction

Teachers and candidates continue to put a lot of work into the GCSE Design and Technology (Food Technology) specification. However, the quality of work at the top end of the mark range, although very good this year, included fewer examples of exceptional work. There was, nonetheless, challenge demonstrated in the work seen and evidence of high quality.   Where centres are achieving success with candidates of all abilities this is due to effective teaching and learning.

Administration and Documentation

Administration was generally completed well; however, the following issues remain:

- very late submission of centre mark sheets
- very late return of sample after the request from the moderator
- centres with twenty or fewer candidates entered are not sending the folders of all candidates with Centre Mark Sheets to the moderators by 5 May, as per the instructions
- many matrix errors, despite the free cd-rom which was sent to all centres providing an interactive spreadsheet upon which matrix marks could be calculated
- omission of Centre Declaration Sheets
- folders not put in order of merit causing a lot of extra work and time for the moderator
- more examples this year of loose sheets and folders submitted with pages not in order
- a number of split parcels caused by lack of care and attention to the packaging.

It is important that centres complete all aspects of the coursework unit correctly, as this ensures that the moderators can understand the processes undergone by candidates more quickly and easily, thus facilitating moderation.

The following are intended to give a view of some of the positive aspects of candidates' coursework and also some areas for development.

Standards

- Centres have used and referred to AQA exemplar materials well.
- Where centres had also attended autumn meetings, advice given was seen to be being implemented.
- The quality of internal standardisation was variable.
- Some centres are marking some low ability candidates severely. For example, in many centres the very bottom candidate had been given an exceptionally low grade for making when there was evidence in the folder and teacher annotation for at least two products being made.
- Where the AQA standard had not been met this was often as a result of over-rewarding 'making'.
- Assessment criteria were not always used as a 'best fit'.
- The marking of the Quality of Written Communication very variable.
- Centres who do not have the full range of abilities in their cohort are often either too harsh or too lenient in their marking – it is vital that centres refer to the standardising material sent out by AQA.

Folders

- There is still concern among the moderating team about the amount of time being spent by candidates on constructing folders.
- In general, the quantity of work in folders has reduced. However, candidates still continue to produce too much research, much of which is not actual relevant. There have been fewer notes and less direct copying out of books but candidates and teachers still seem to feel more secure with quantity and size of folders.
- Some excellent use of ICT has been seen, but there are still many centres where the use of ICT is almost absent.
- Presentation of work is variable with some candidates using space on pages well, while others use large fonts or writing and leave very large areas of pages unused.
- Far too many time plans / flowcharts were presented in many folders, often one per making activity. This is not necessary.
- Where candidates demonstrate their thought process, work is usually at least satisfactory and provides clear evidence of the design process. Where candidates are unclear of the process, they rarely produce a folder which 'tells the story' of their designing and making.
- Many folders were in the wrong order to tell the story of the product development.
- There are often gaps in the folders of middle ability candidates or the folder comes to an abrupt end. With more attention to these areas, candidates could improve their grades.
- There needs to be evidence in folders which demonstrates how decisions have been made about the design and production of a food product. Decision-making is a vital part of the process. It should be the result of good research and evaluation and must be recorded.
- There was evidence of excellent use of digital photography.
- Although photographic evidence in folders is not an AQA requirement there has been a significant increase in the use of photographs, which is extremely useful to the moderation process. Many of the images were included at relevant points in the process of making, not just included as evidence of the end product.
- Candidates at the top end of the ability range continue to produce some very good / professional design folders.
- Excellent evidence of industrial practices that was more focused this year. Candidates are relating industrial practices to their final product and not simply including lots of theoretical notes.
- The lower end of the ability range is attempting some industrial practices, which is encouraging to see.
- Knowledge of the functions of ingredients was more evident in folders this year.
- There was significant evidence of candidates being misled by centres to produce:
    - irrelevant research
    - unnecessary recording of methods of making
    - HACCP and QC for design ideas.

Design Briefs

- Some centres still continue to give very long and indirect design briefs, causing confusion and resulting in candidates producing unnecessary research and other information. Design briefs should be appropriate and realistic.
- Some design briefs fail to excite or challenge candidates.
- Some candidates began their work by giving details about the *final* product.
- Where 'unique' briefs were given, this added variety.

Research and Analysis

This continues to be a weak area.

- Often, too much research resulted in candidates losing sight of the relevant information they had gathered.
- There is still a real need to ensure that research is relevant and that candidates make use of what they already know. Summaries of findings are required rather than vast quantities of facts which they neither require nor use. Results from questionnaires and surveys are rarely used once gathered.
- Analysis of research is crucial to the writing of design criteria and generation of ideas. When candidates have spent so long and completed so many pages on research they still gain little credit if they do not analyse their findings. In some cases candidates seem to feel they have to summarise how useful the methods are, rather than providing a summary of the information which they have gathered.
- It was encouraging to see some centres carrying out practical work at the research stage. This is a good strategy to keep the less motivated candidates engaged throughout the project.
- A recipe / method is not required for each idea / making opportunity. Candidates waste too much time copying out recipes. This is particularly evident at the lower / middle end of the ability range. More time should be devoted to evaluating what they have made and how this information can be used to inform the next stage of their designing, not writing out recipes.

Design Criteria and Ideas

- Design criteria have improved however there is still a lack of using research to inform criteria and design ideas being evaluated against criteria.
- Less evidence of annotated sketches, drawings.
- More evidence of just recipes and methods without comments.
- Presentation of ideas needs to focus on how successful the product would be in relation to the brief and what opportunities there are for development. Nutritional analysis is only needed as part of the evaluation of design ideas when the criteria have a nutritional or dietary point.

Development of a solution

- There was a significant lack of product specifications this year. Lack of a product specification prevents evaluation of developments.
- Often product specifications repeat design criteria.
- Although centres are getting to grips with the idea of developing a product, there are still issues relating to development.
- Food is a material which provides lot of opportunity for changing, adapting, substituting, altering proportions, using different methods, comparing, altering cooking methods, trying out different storage methods, producing different finishes, etcetera.
- Although there has been more evidence of development this year, this continues to be simple modifications to the prototype resulting in the quantity of development being minimal. Higher ability candidates must produce significant evidence of development. The type of development should be challenging and complex.
- Development continues to improve, but centres should encourage their candidates, particularly those at the top end, to carry out more investigation and experimental work. Candidates should be encouraged to carry out small-scale investigations and experiments

where several small samples are compared against each other, for example different types of pastry made and shaped to find the best casing for a savoury product. Candidates might compare shortcrust, filo, own made puff and standard component puff etcetera.

- More able candidates are good at listing the functions of ingredients as they appear in a recipe. However, they are less good at commenting upon the impact that changing the type, amount and ratio has on the outcome.
- For average ability candidates there should be some evidence of modifying and changing.
- For lower ability candidates, development is likely to be weak or not done.

Making

- Making continues to be marked generously.
- Overall the quantity of 'making' has increased.
- More able candidates were producing excellent production plans.
- There was some outstanding work in terms of quality of outcomes from some centres. However, in too many centres moderators saw poor quality outcomes which were highly rewarded. There continues to be a lack of challenge in the products which are made. This applies across the whole ability range.
- Some centres still continue to spend too little time on 'making' – for a 40 hour project with 'making' carrying a weighting of two thirds of the final project mark it would be appropriate to devote at least half the project time to 'making'. (This is intended as a guide and not a Specification requirement).
- Candidates are providing evidence of 'making' in the following ways:
  - using existing recipes to make products at the research stage.
  - carrying out product analysis – this is a very good way to show 'making' provided the product is relevant and the activity takes place at the appropriate point in the process.
  - making stand-alone recipes as design ideas.
  - carrying out developments of their chosen idea.
  - carrying out storage tests at various stages of the development.
  - making the final developed idea.
  - organising and using sensory evaluation.
  - using standard components at the manufacturing stage to mirror what happens in industry.
  - providing photographic evidence of the process and the outcomes in folders.
  - recording making activities in folders.

Candidate Record Forms (CRFs)

A big thank you to all those teachers who have spent so much time, effort and thought in completing the CRFs by writing comments which support the quality and standard of their candidates' work.
- Annotation is most helpful when:
  - teachers give specific comments.
  - different information to what is already written in the assessment criteria is provided.
  - reference is made to work in folders.
  - words like excellent, very good, good, satisfactory, unsatisfactory, poor, very poor are used.
  - teachers use comments indicating aspects about individual products and giving a qualitative view of each product.
  - quality of specific methods, skills are given.
  - information about the quality of the sensory testing is provided saying how the candidate used this information.
  - do not include personal comments about candidates.

- the 'making box' has been completed well and gives a clear view of the quantity of making which has taken place. (It is easier to get this view when the 'making' list is completed by the teacher and not the candidate!)

- The majority of centres have used the correct CRF which now provides the opportunity for assessing different aspects of 'making' before coming to a final judgement.
- Commentary on the CRF, for making, continues to improve.
- Where CRFs are poor and lack comments there is often the same lack of evidence of making in folders.
- There are still significant discrepancies, in some centres, between the list of making on the CRF and evidence in some design folders. This is an area of concern.

Recommendations

- Provide candidates with exemplar material to explain how the thought process can be shown.
- Ensure that candidates have a short, direct design brief which is evident at the beginning of the folder.
- Have the courage to reduce the amount of effort and time spent on design work and devote this time to more challenging developments of the prototype.
- Ensure that a teacher led approach, if used, follows the accepted design and make process as in the specification.
- Restrict research at the beginning of the project to no more than two to three sides of A3 paper.
- Insist on a range of research which is relevant and not irrelevant research methods.
- Ensure all research is analysed in a way that is useful.
- Check that candidates understand the importance of design criteria. Ensure that all candidates have a design specification / criteria within their folder to which they can make constant reference.
- Teach candidates to generate ideas from design criteria and evaluate the suitability of these ideas against the criteria.
- Encourage candidates to produce product specifications.
- Omit time plans for each idea.
- Ensure sensory testing is rigorous and fair.
- Try to incorporate methods of sensory testing other than star profiles.
- Make sure that the final idea for development arises as a result of evaluation of ideas.
- Encourage more able candidates to carry out challenging complex development.
- Include further research as and when it is required throughout the design process.
- Apply knowledge and understanding of manufacturing methods, packaging materials and labelling requirements to the developed product.
- Ensure that HACCP is fully understood and applied to the final product rather than producing a health and hygiene checklist.
- Produce a plan for making / manufacture of the developed product and evidence of a specific HACCP procedure and Quality Control for that product.
- Omit a final evaluation, but ensure candidates include evaluations as they proceed in order to justify their decisions.
- Encourage candidates to provide more evidence of social, moral and environmental issues.
- When completing the 'making box' on the CRF give sufficient detail and clarity so a third party can understand what happened, e.g. what does 'decorations used' mean?

- Encourage candidates to evaluate and justify key areas within the project. Evaluation is a definite area for improvement. Particular areas for development within the project are:
  - o Evaluation / analysis of research. Candidates produce lots of useful research but in many cases fail to analyse their findings.
  - o Evaluation of design ideas. To allow the project to 'tell the product development story' candidates should be justifying which ideas they are taking to the prototype stage and why.
  - o Evaluation of prototypes quite often is only on sensory analysis grounds and little, if any, reference is made to the design criteria.
  - o Evaluation of development. This is a very poor area. Candidates often carry out some excellent development work then fail to explain / justify how they will use the development work to inform the final product. It is often difficult to see from where the final solution has come. Some candidates fail to use the development work in the production of the final solution.