

Moderators' Report/
Principal Moderator Feedback

Summer 2013

GCE Design & Technology (6FT04)
Paper 01 Commercial Design

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General Observations

Steady progress continues to be made with the A2 coursework, with clarity, detail and justification evident across the assessment criteria. The choice of design problem should have a real commercial use, where it is useful to a wider range of users beyond an individual.

An interesting range of commercial design work was presented on a wide variety of topics including vintage style food products, festival and street foods, farm shops and cafes, deli food boxes, pop up restaurants, menu kits/boxes, event foods and luxury food items for a specific point of sale. Coursework foods products are becoming more inventive as a wide range of cultural cuisines from around the world are being used as inspiration for commercial design projects. All centres submitted candidate's work that was potentially suitable for course requirements, with a range of levels of outcome.

Candidates are required to adopt a commercial design approach to their work, reflecting how a professional designer might deal with a design proposal and its resolution when working for a client/user group. This means that consultation between designer and client should take place at key points in the design/make process. Where this designer/client relationship was well developed, the whole design and make process was enhanced and justified. A client / user group must be integral within the coursework to allow focus and feedback throughout the coursework. Unfortunately, for some candidates, it was seen only as a necessity for meeting the requirements of the assessment criteria, and remained a passive activity, with little focus.

Administration

- As a guide, the A2 Commercial Design project should not exceed 30 pages of A3 paper.
- The quality of photographic evidence of the finished product(s) continues to be variable.
- A2 practical work must be technical, creative, challenging and demanding, showing accuracy and precision. It would benefit centres to consider the number of components within a food product when considering the challenge and demand of a product. A wide range of different components should be presented within a food product. The use of finishing techniques for the final presentation of food products is a prerequisite for high level making marks. The photograph in the CAB is the starting point of the moderation process for each candidate.
- Annotation in the CABs remains very helpful for moderation.
- Centre assessment was generally pleasing and there is evidence that most centres have a good understanding of the assessment criteria.
- The moderating team report that the overall presentation, layout, organisation and quality of the written A2 portfolios was of a very high standard and it is clear that centres are putting considerable time and effort into their teaching, to produce some outstanding work.

Section A: Research and analysis

There were a number of design briefs this year with no real commercial design approach to coursework, with family members being introduced as the client for the celebration event that was taking place in a domestic context, or presented as a contrived event with no real evidence of industrial application, client involvement or user group testing, and so did not meet the requirements of the specification.

Most candidates introduced the client /user group at the initial stage, and could identify how their client would be able to offer critical feedback at various stages during the design process. Many candidates utilised their client's knowledge and expertise by asking relevant, probing questions that enabled candidates to consider some of the technical implications for analysis and research. For example commercial equipment and facilities, safety, quality, time and temperature controls required for commercial manufacture, stock control and relevant sustainability issues for the product linked to the proposed use, venue or topic. Analysis should clarify design needs, to aid the selection and use of research.

There was much improvement on the selection, relevance and type of research activities conducted this year, with a trend towards succinct, purposeful research activities based upon the design brief, ensuring that information gathered was useful and relevant to the client /user group's needs, identified and finalised during the analysis. Research does not need to exceed three pages of A3 paper. Primary research techniques are paramount to the success of this section, and product analysis should be used extensively to direct the writing of the specification linked to technical information retrieved from the use of existing commercial products, annotated menus and event site visits, to uncover potential issues around food production and storage pertinent to the design brief, to aid the writing of the specification and to plan product design and development work. In most instances, disassembly needs to be for more than one product within a product range, to allow candidates to uncover the work of a professional designer and how they can solve a design need, by identifying the main technical considerations for these products, as well as identifying any potential problems and applying this information to their design work. Sustainability was addressed by most candidates.

A summary of the main findings of research is essential as it allows candidates to conclude their research in order to write a product specification that is relevant, meaningful and measurable.

Section B: Product specification

Most centres are now using the recommended headings (detailed in the Edexcel guidance document) to organise the product specification, presenting technical, realistic and measurable criteria and this is an improving section. From this, it was possible for candidates to justify their inclusion of specification points from the summary of research findings. Relevant sustainability issues were evidenced where existing product research had been used effectively in the previous section, however this remains an area requiring some attention by centres. The

specification must be informed by research findings and written in consultation with the client / user group to ensure that the criteria meet the needs identified earlier. Where candidates had ensured that their specifications were technical and measurable, testing and evaluating in section F was far more successful.

Section C: Design and development:

Design

The moderating team report on a continued improvement in this section, with many candidates managing to produce an initial brainstorm of ideas, followed by a range of 4-6 technical design ideas, including reasons for the selection, the working characteristics of ingredients, techniques and processes, third party feedback and development opportunities supported by research information, which address the needs identified in the specification. However, the annotation of this information varied enormously in depth and understanding. Challenge and complexity of food products must be established at this point to support making marks later in section E. It would benefit centres to consider the number of components within a food product when considering the challenge and demand of a product. At A2, a wide range of different components (a minimum of four) should be presented within a food product.

Client feedback, good quality photographic evidence and critical evaluation using the specification points must be included to access the higher marks. Weaker candidates tended to present irrelevant tick boxes, simple ingredients lists and methods of making with similar, simplistic design proposals and minimal communication of their design thinking, third party feedback or relevance to commercial design.

Many candidates' embraced flair and creativity in this section with some outstanding practical work applied to realistic and workable ideas, by creating food products with a wide range of skilful components, preparation, processing and finishing techniques, that was evidenced in their written portfolios as design decisions. This was rewarded with high marks.

Review

Most centres are now presenting this section in tabulated format, enabling easier comparison between products. Where this did not happen, it was more difficult to access the higher marks as candidates must objectively assess the suitability of each design idea for the intended purpose, analyse development opportunities, consolidate their review against the specification with client feedback and make some important development decisions. After this selection and rejection process, a summary is helpful to communicate which design idea is being taken forward to the development stage, and aids the 'design story'. Photographic evidence supported decision making. Simplistic tick boxes, number charts and bland statements of review were frequently examples of the lower marks in this assessment criterion.

Develop

Development means 'change', and this should be shown in candidates' work through their ability to use the results from the review and bring together the best or most appropriate features of their design ideas into a coherent and refined final design proposal that meets all of the requirements of the product specification and matches the client/user group needs. It is not acceptable to simply take an initial idea and make superficial changes to it and then present it as a final developed proposal.

Developments were mostly appropriate, but there were still some very cosmetic and simplistic developments with limited client involvement.

Evidence of three good quality developments that could be compared, reviewed and evaluated against the relevant design criteria, allowed candidates to demonstrate their technical knowledge and understanding of ingredients, components, techniques and processes within commercial design. Summaries in table form were effective at each stage of design and development.

As in previous years, the highest marks were awarded where the final developed design proposal was presented as either a manufacturing specification or final design proposal. This should be evaluated objectively against the points of specification and the client/user group needs to justify the design decisions taken and be recorded in detail by candidates. Client feedback should be referenced in detail at this point in order to justify and clarify final design details that may be compromises between the student's ideals and the client's preferences. There should be enough technical information (specific tolerances and dimensions) present to enable a skilled third party to manufacture the product as part of the commercial design methodology.

Communicate

A good range of communication techniques were used, and there has been an improvement in the amount of photographic evidence shown in coursework, which is now plentiful in most folders. However, some photographs were very small making it difficult to see the product clearly. Where the photos in the CAB were presented on photographic paper the quality was much better, and showed the work off to a better advantage. The clarity of the written communication was occasionally disappointing where headings and statements linking the process were missing. Generally, annotation was used to convey design and development work, with good explanation and detailed technical information. Google sketchup (CAD) and some highly technical drawing skills with rendering techniques were an enhancement to the design and develop sections. Most candidates presented a final design proposal with sufficient information to allow third party manufacture.

Section D

Planning

On the whole, this section has improved greatly with most candidates attempting detailed plans with consideration of realistic time scales, sequence of manufacture, quality control, safety checks and deadlines for the scale of production. Occasionally, some justification was lacking and checks were very repetitive with generic or vague statements and limited reference to critical control points, and this secured the lower range of marks.

A few candidates did plans for more than one product, or a test kitchen plan and a commercial plan, which must have been very time consuming and created unnecessary additional work.

Section E

Use of equipment

Once again, manufacture in the test kitchen varies enormously in terms of quality, technicality and complexity. Where candidates had selected simplistic, unchallenging practical work it was not possible to demonstrate their ability to use a range of equipment, even if this was with skill and accuracy. Health and safety issues and inherent risks pertinent to food handling or production were generally acknowledged through the production plan.

Quality

As in previous years, there was evidence of some very high level work seen containing many components and skills that allowed candidates to demonstrate creativity, flair, accuracy and precision. The importance of high quality photographic evidence throughout the design, development and manufacture work is obvious. Food styling, structure and quality of photographic evidence are making steady progress and many centres are adept at insisting that candidates comply with this requirement.

However, low level making processes lacking A2 technical skill or finishing techniques continues to be an issue. In many cases, the addition of an extra component or two could have turned an average product into something more skilful and interesting. Marking continues to be quite lenient in this section. Some work was presented and photographed very poorly. It was disappointing when the final product lacked the skills that had been trialled, developed and tested in the design and development stages.

Candidates who demonstrated their technical knowledge of techniques, ingredients, components and processes with annotation, clarity and justification with reference to their specification were rewarded with high marks.

Demanding high level practical skills and techniques with a quality finish continues to need focus for GCE A2 level.

Complexity/Demand

As before, this varied enormously, ranging from simplistic, unchallenging design and manufacture work to high level advanced skills, worthy of A2 level showing challenge, demand, accuracy and precision in their use and execution within food products. To access the higher marks for this criterion, a challenging food product should contain a minimum of four technical component parts to allow the candidates to demonstrate the range of technical skills needed for advanced level food technology.

Section F

Test and evaluate

Relevant, measurable points of the design brief/criteria must be objectively referenced, to achieve the top box marks, with third party feedback from the client and/or user group. A description and justification of a range of tests that will be used to check the performance or quality of the products must be included in this section. This might include a range of different sensory tests, storage life tests, transportation testing, viscosity tests, and tolerance testing against a manufacturing specification and nutritional analysis where relevant to the design brief. Candidates must use the information from client feedback, third party testing and evaluation to make suggestions for possible modifications and future improvements to the product, linked to the quality and/or performance of the product.

Where candidates had ensured that their specifications were technical and measurable in section B, testing and evaluating in section F was far more successful.

The link between Criterion B and F saw a marked improvement this year across all the work seen by moderators. Technical specification statements presented in criterion B could be used effectively to test the quality and performance of the final product, because they demonstrated technical detail (specific size/ weight) or were measurable (e.g. it must have a 3 day shelf life/ specific cost value) or were realistic (e.g. suitable for a user group).

Life cycle assessments (LCA) of the final design proposal presented a pleasing evaluation of the environmental impact of the product, and this was successful for many candidates where they had presented this information as a flow diagram evaluation throughout the products manufacture.

Grade Boundaries

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<http://www.edexcel.com/iwant to/Pages/grade-boundaries.aspx>

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