A-LEVEL

DESIGN AND TECHNOLOGY: PRODUCT DESIGN

7552/CE Non-exam assessment
Report on the Examination

7552
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Presentation and Administration.

Projects were generally well organised and in the most effective examples students presented their work in sections under headings of the design criteria or were colour coded. The number of sheets or slides that students completed often exceeded the 45 recommended by AQA. This could be significantly reduced with more careful management of the spaces on the sheet and a reduction in the font sizes used for the headings and written text.

In most cases, students provided very good evidence of modelling and making through clear photographs which greatly assisted moderation.

Best practice was where students used clear/large photographs and notes to show the skills and complexity of manufacture in the manufacturing process. Unfortunately, these were sometimes too small to see clearly. Where students were given the freedom to present their work in whatever format they wished, moderators saw some excellent practice. This year, students made excellent use of CAD software to produce photo realistic renderings, dimensioned and assembly drawings.

Candidate Record Forms in the main were well annotated by teachers which was helpful to show how marks had been awarded. Sadly, there were some centres who did not fully utilise the Candidate Record Forms and this really does hinder the moderation process.

Section A: Identify and investigate design possibilities

Where centres had fulfilled the assessment objectives the research was free flowing and natural. It allowed students to fully explore the concepts, generate their own ideas for research and having discussions with clients. Research pages such as location reports, product disassemblies, focus groups were all a pleasure to see and allowed students to drill down into the needs and wants of the clients. The folders that were successful also had generated concept ideas – it was felt by moderators that this also helped students establish what needed to be further investigated next in order to move the ideas and the project forward. With concept sketches, remember they are exactly that: quick, rough ideas. Some centres' concept ideas were excellent but at this stage of the design process they will have taken the students far too long.

There are still too many projects that state 'I want to make x, because I want one' rather than having a proper problem or justifications. It is really important that students use a genuine and real client and that students fully engage with them throughout the whole design and make project in order to be successful. This year there was too much generic research that is not relevant or pertinent to the projects selected. There was a lot of secondary research on existing products, material research and mood boards and generic class shop reports that were not justified or analysed back to the brief or client.

Section B: Producing a design brief and specification

The most successful design briefs were the result of carrying out a thorough investigation of the context and design problem. Too often this year the design briefs at the start of the folder were too generic and I would suggest to many centres that once they have worked through the research

with the clients, they firm up the working brief, to state their intentions to solve x problem for x client for x purpose. In many cases, it is vague, and the students are struggling to move on.

There were some very well-written specifications with justifications and links directly back to the research as to why this element is important. This included a range of measurable criteria that design ideas can be evaluated against and prototypes tested. The most effective specifications were fully explained with the criteria justified. Those who wrote a measurable specification in section B were able to use this throughout the rest of the sections in the NEA to evaluate against. There were some very good examples of this seen.

Section C: Development of design proposals

It is important for centres to note that folders are marked holistically and the design section presents opportunities for the marks to be awarded back into section A and Section E. It is also the section where the clients gets utilised less, which is a shame as those folders that did use their client were very successful in generating real design development and making justified and reflective ongoing changes to their designs.

Moderators observed some excellent modelling and testing through the use of Lego, card, foam and CAD. There was also some excellent experimentation and exploration of idea and concepts. It is important that centres document those concepts that work but also the failures as that is an important part of the design process. We want to see students justifying how they have overcome them or changed direction. In many cases, the process is too clinical and too contrived.

The inclusion of primary materials research and testing is encouraged in this section. Tests such as hardness, weathering etc are all welcome as this supports students in justifying material choices and allows for evaluative judgments to be made. This section is also ideal for carrying out investigations into how products could be made and how this can then feed into the planning and making for their final manufactured outcome.

In the lower end of folders, they have stated they are making x and they make x. No testing, experimenting, understanding dimensions or discussions with the client.

It is disappointing that only a few centres add dimension drawings/ orthographic drawings/ exploded drawings so that third-party manufacturing can happen, especially considering, if they are drawn correctly in CAD, these drawings can be created without a huge amount of additional work.

Section D: Development of design prototypes

Where manufacture happened, the traditional diary of manufacture was well executed. It was a little harder for those that did not manufacture, but we did see some well-planned intentions to manufacture. Given what all centres have been through the team saw some amazing final outcomes. It was a pleasure to see and really did showcase the best of Design and Technology.

As CAM is becoming more accessible, it is used to really good effect in making component parts for prototypes as well as modelling. It is really important that these processes are combined with hand and manual machining processes. Where students used a range of materials and

components, they were usually able to demonstrate a wider range of skills and add more complexity to their work.

Section E: Analysis and Evaluation

Students who used their clients all the way through the project and were actively involved in the justifications and the modifications achieved the higher marks. Not enough reflection is happening all the way through folders, in particular in the development section – this is key for students to allow them to make real and genuine design decisions and solve the initial problem.

Many students do carry out reviews against the specification and many think about modifications at the end, but don't reflect all the way through the folder.

Where testing can happen in context it really demonstrates the quality of design and a student's ability to problem solve and work with others. Too many centres do not do this, and the evaluation is superficial eg My client thinks the colour is nice.

The justifications for modifications for the prototype to be developed for different production techniques needs to be more than a description of injection moulding. In too many cases students have just lifted taught knowledge into the folder without justifications of why the information is being used.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the Results Statistics page of the AQA Website.