



## Course report 2019

Subject	Graphic Communication
Level	Advanced Higher

This report provides information on candidates' performance. Teachers, lecturers and assessors may find it useful when preparing candidates for future assessment. The report is intended to be constructive and informative and to promote better understanding. It would be helpful to read this report in conjunction with the published assessment documents and marking instructions.

The statistics used in this report have been compiled before the completion of any post-results services.

# **Section 1: comments on the assessment**

## **Project**

The most popular option was for candidates to choose a commercial and visual media graphics approach over the technical media graphics approach to their project, with very few candidates opting for a combined approach.

Although the project performed as expected, a few centres that were verified were found to be marking too generously across all sections of the project. This was usually towards the top end of the marks range, for example where the marking instructions may have been misinterpreted then there was a migration towards 'A' type marks — high 90s to the maximum of 120 marks.

Most candidates kept to the 20 page limit.

## **Question paper**

The question paper consists of a single section with a total of 80 marks. It includes both short and extended response questions, covering a variety of content.

The question paper performed as expected and no grade boundary adjustment was made for this component. Several topics from previous years featured in this year's question paper, namely 3D CAD modelling (CAD techniques and practices), use of design elements and principles (DTP techniques and practices), contemporary graphic communication technology (for example the impact of CFD testing in the manufacturing sector) and the graphic requirements of specific audiences (for example interpreting the needs of a young audience in the context of a webpage design). These topics featured strongly in the paper and will continue to do so in future years. Explaining the use of different file types, surveys, printing techniques and drawing types/conventions used on British Standards drawings also featured and will continue to do so.

## **Section 2: comments on candidate performance**

Overall, the level of performance was a little lower than expected, and some areas of concern are worth highlighting. Questions on 3D CAD modelling techniques — particularly in relation to dimensioning sketches and making appropriate use of modelling terms — were poorly answered. Similarly, questions related to the application of specific file types and built environment surveys were not answered well by most candidates. In contrast, the questions on printing techniques and practices, design elements and principles as well as those on digital testing methods were answered well by most candidates. A significant number of candidates did not attempt questions on the use of different file types in an online context; the use of a 'datum' in a technical graphic context; questions about 'conservations bodies' and 'architectural technicians'; and, to a lesser extent, the animation technique 'motion tweening'.

### **Areas that candidates performed well in**

#### **Project**

##### **Carrying out and using ongoing research**

This was again handled well by candidates this year, with some opting to display this in a separate section rather than having it occur naturally throughout the project.

##### **Producing a range of graphic ideas or concepts**

Many candidates demonstrated their use of techniques and technologies in this area to good effect, for example, Finite Element Analysis, 3D prints, mock ups, physical models. Some candidates used animation to good effect in this section.

##### **Producing a graphic solution**

Some candidates produced a good standard and quality of graphics in both technical graphics and commercial and visual media graphics. There was clear evidence of top quality graphics from some candidates.

##### **Producing a client presentation**

Some candidates who gained high marks in this section had used other methods apart from PowerPoint, for example videos for client presentations.

##### **Evaluating the solution and the process**

This area has continued to improve with most candidates providing a thorough evaluation of the project.

#### **Question paper**

##### **Question 2(c)**

Most candidates were able to explain the advantages and disadvantages of using animations compared with printed media in this context.

##### **Question 3(b)**

The advantages of using vector graphics over raster graphics for the large flag design was clear in most candidate responses. Almost all candidates understood that vector graphics

can be scaled without loss of resolution. Fewer candidates mentioned that the vector graphics, of the shapes found in this flag (Bezier curves) could be more easily edited or that smaller file sizes associated with vector graphics make communication, editing and saving a more efficient process.

### **Question 3(c) (i)**

Candidates were familiar with raster file types but less familiar with vector file types used in 3(c) (ii).

### **Question 3(f) (ii)**

This question was answered well by most candidates.

### **Question 4(a) (ii)**

Most candidates were able to explain how the 'underground survey' results impacted on the housing development. However, other building surveys were not as well understood.

### **Question 4(b) (i)**

Most candidates were able to explain how the 'quantity surveyor' could use the information in the related graphic, however how the 'architectural technician' and the 'conservation body' would use the information was less well understood.

### **Question 5(b)**

Most candidates identified the design elements and principles that were used in the infographic and how they enhanced communication with a younger target audience. Unfortunately, some candidates included answers that were not about element or principles, so candidates should be reminded to read questions carefully.

### **Question 5(d)**

Candidates understood the role of design elements and principles in creating emphasis on a feature within an image.

### **Question 5(e) (ii)**

Candidates described the purpose of digital testing methods well (rather than simply describing what the test was for) and related this to applications and professions.

## **Areas that candidates found demanding**

### **Project**

#### **Producing a graphic specification**

Some specifications created by candidates were lists of tasks for the candidate to complete. A valid specification should detail the particular graphics created for the audience and any specific features required.

Some candidates were unable to identify the graphic requirements and their correct formats, to meet the needs of the target audience.

## **Project planning**

For almost all candidates, their project planning made no reference to intermediate target setting. Candidates must demonstrate key targets, show how they will help achieve the requirements of the target specification, and specify the resources required at each stage.

In some cases, candidate created project plans, then deviated from them but did not update the plan.

Candidates who achieved high marks in this section typically included sub tasks within their project planning.

## **Using preliminary graphic techniques to communicate ideas**

In most cases, the preliminary graphic techniques were valid for creating a graphic solution. However, the quality demonstrated by a few candidates was poor and showed far more limited skill than would be expected at Advanced Higher, especially within technical graphics projects.

The detail required for the preliminary techniques section was carried out poorly by candidates for both technical graphics and CVMG projects.

## **Producing a range of graphic ideas or concepts**

Candidates found this area demanding. They did not demonstrate a range of possible graphic solutions to satisfy the needs of their chosen target audience(s) and did not show any development of their idea — linked to ongoing research — that would allow the creation of a valid graphical solution or solutions. Some of this could be linked to candidates attempting too wide a brief or taking on too many tasks.

Many candidates did not include relevant details to fully inform the development of further graphics in both technical graphics and CVMG projects.

## **Producing a graphic solution**

The technical graphic solutions produced by some candidates lacked significant details in terms of dimensions, scale, tolerances, and view types, required for the target audience.

Projects with an architectural focus typically lacked sufficient detail for construction or further work. This could be due to candidates trying to take on too much work, for example drawings for a whole building, which in most cases, for a candidate at this stage of their education may be too daunting.

Commercial and visual media graphics solutions lacked significant details in terms of screen resolution, paper size, file types, colour palettes, bleed, crop or registration information. The target audience would need this information to produce this graphic type.

## **Planning a client presentation**

The planning for the presentation did not refer to how the graphic solution would be suitable for the target audience. It became a presentation of the candidate's journey through the project which would only have been suitable for the assessor rather than the audience initially identified. The list of required resources often listed only hardware and ignored any software and/or file types etc.

Candidates who did well in this section included full details of any presentation content in relation to the audience requirements, provided an effective structure and layout and then went on to list all media or resources required.

### **Record of progress**

Very few candidates made effective use of the 'record of progress' entries or effective references to notes, comments or annotations from project design work. In many cases it was very poorly attempted and in some cases was retrospective.

### **Question paper**

#### **Question 1(b) (ii)**

Candidates' responses indicated they were not familiar with the purpose of a datum face either in the context of a British Standards drawing (so that parallel dimensioning can be used to remove the compound error inherent in chain dimensioning) or in terms of preparing for manufacture (so that dimensional accuracy can be checked from a single face).

#### **Question 1(c)**

Questions on 3D computer modelling continue to present difficulties for candidates. A significant number of candidates failed to pick up marks because there were insufficient dimensions in the profile sketch (note the position of the centre points of arcs is required for the correct shape of the profile). Some candidates' responses suggested they were not familiar with sketch constraints (such as tangent (sketch) constraint) and struggled to sequence the modelling processes to create the required result.

#### **Question 1(d)**

As with Question 1(c), candidates often failed to include enough dimensions to model the supporting arms accurately (particularly the total height of the helix or information on the number of rotations and the pitch). Candidates also struggled with correctly positioning and orientating the circle profile for the helix and using radial array to produce the second helix.

#### **Question 3(e) (i)**

There was some confusion between 'registration marks' and 'crop marks'. Although a significant number of candidates identified the purpose of registration marks (to ensure CMYK colours are aligned correctly during printing) fewer candidates were able to explain the importance of these marks in producing high quality, legible merchandise

#### **Question 3(g) (ii)**

Most candidates identified 'screen printing' as an appropriate method for printing on T-shirts but struggled to explain the reasons why. The best responses explained why it was appropriate by focusing on specific features of the images: clearly defined shapes, simple gradient or solid colour fills and bright colours.

#### **Question 4(b) (ii) and 4(b) (iii)**

As highlighted previously, the role of 'architectural technicians' and conservation bodies in building projects is not appreciated by most candidates. With a wide range of different creators and users of graphics listed in the Course Assessment Specification it is understandably difficult to understand their role in any significant depth. To address this, centres will notice that although the full range of creators and users can be audiences/clients

in the project, a smaller number will be asked about in the question paper. This step has been taken to encourage more depth in the responses to this type of question.

**Question 5(c) (ii)**

Most candidates could explain why the VRML file can be used to make websites more interactive. Fewer candidates understood the difference between video file formats: why MPEG may be used instead of QuickTime or WMV. Candidates need to understand not only the use of graphic file types but be able to discriminate between them.

**Question 5 (iii)**

Although there was an improvement in the understanding of digital testing techniques overall, candidates need to understand the limitations of such techniques, as this knowledge was not evident in many of the responses.

## Section 3: preparing candidates for future assessment

### Project

Teachers and lecturers should download and use the most up-to-date versions of the assessment materials and subject documentation, this is particularly important for next session as the project will incorporate both technical graphics and commercial and visual media graphics, and the project will be submitted to SQA for external marking. Centres should engage with the candidates at the outset of the project to ensure that realistic briefs are being set. All candidate evidence for the project must be submitted in hard copy.

Centres should make sure they meet the assessment conditions set out in the course specification for the project.

### Question paper

The importance of allocating time to direct teaching and formative assessment of Advanced Higher candidates cannot be over-emphasised. Candidate performance in the question paper indicates that candidates would benefit from direct teaching and support on the following topics:

- ◆ animation types (set up, creation, variety of applications, possible use by professionals)
- ◆ 3D CAD modelling plans (structure, terms and level of detail required)
- ◆ digital testing methods (set up, creation, variety of applications, possible use by professionals)
- ◆ analysis of British Standards drawings showing complex/moveable parts and multiple part assemblies
- ◆ printing methods (advantages and disadvantages, variety of applications, possible uses and target audiences)
- ◆ preparing for CAD/CAM (including 3D printing)

Candidates should be reminded of the importance of the following:

1. Creating a profile sketch **including all the dimensions**.
2. Identifying the **most appropriate modelling techniques** and using these **in the correct sequence**. For example, the best way of modelling the glass container was to use revolve, then use shell and finally then mirror to create the other half of the container. Although there are many ways of combining these commands to produce the desired result, candidates at this level should understand the most efficient way of modelling parts.
3. Ensuring that **sketches** used to illustrate responses **are as clear as possible**. Although it was encouraging to see candidates using sketches to support their responses in some cases the sketch quality was very poor.
4. **Including enough detail** in the description of a modelling technique. For example, a significant number of candidates when describing the shell command, failed to mention the surfaces to be removed or the wall thickness. Clearly this was a vital step to ensure the glass container was open at both ends and the glass was the specified thickness.



Centres should ensure candidates are familiar with the content of the course specification. If candidates are familiar with the topics and terms used in the course specification, including a wide range of graphics contexts, they are more likely to provide enough depth in their question paper responses.

Centres should remind candidates to use clear sketches and correct terms from the course specification. Candidates should also be reminded to clearly reference question numbers if they answer questions at the back of the question booklet and not to write on any supplementary sheets as these are not routinely scanned and are not made available to the marking team.

At Advanced Higher level candidates should have a reasonable level of understanding of the occupations which use and produce graphics. They should be aware of companies and individuals that use the design process in their work and, wherever possible, take opportunities to gain first-hand experience of their work. They should be encouraged to develop an appreciation of the creative industries, and the role of graphic communications in the design, manufacturing and built environment sectors. Any links that centres have established or developed through current initiatives (for example, Education for Life and Work and Developing the Young Workforce) as well as work experience placements could be very valuable to support candidates.

Centres need to be aware that the Advanced Higher course is a progression from the Higher Graphic Communication course and candidates should have access to the Higher Graphic Communication Course Specification, particularly the content related to 3D CAD modelling techniques, design elements and principles and British Standards and conventions.

## Grade boundary and statistical information:

### Statistical information: update on courses

Number of resulted entries in 2018	525
------------------------------------	-----

Number of resulted entries in 2019	506
------------------------------------	-----

### Statistical information: performance of candidates

#### Distribution of course awards including grade boundaries

Distribution of course awards	Percentage	Cumulative %	Number of candidates	Lowest mark
<b>Maximum mark</b>				
<b>A</b>	10.3%	10.3%	52	149
<b>B</b>	24.9%	35.2%	126	129
<b>C</b>	27.9%	63.0%	141	109
<b>D</b>	11.5%	74.5%	58	99
<b>No award</b>	25.5%	-	129	-

## General commentary on grade boundaries

SQA's main aim is to be fair to candidates across all subjects and all levels and maintain comparable standards across the years, even as arrangements evolve and change.

SQA aims to set examinations and create marking instructions that allow:

- ◆ a competent candidate to score a minimum of 50% of the available marks (the notional C boundary)
- ◆ a well-prepared, very competent candidate to score at least 70% of the available marks (the notional A boundary)

It is very challenging to get the standard on target every year, in every subject at every level.

Therefore, SQA holds a grade boundary meeting every year for each subject at each level to bring together all the information available (statistical and judgemental). The principal assessor and SQA qualifications manager meet with the relevant SQA head of service and statistician to discuss the evidence and make decisions. Members of the SQA management team chair these meetings. SQA can adjust the grade boundaries as a result of the meetings. This allows the pass rate to be unaffected in circumstances where there is evidence that the question paper has been more, or less, challenging than usual.

- ◆ The grade boundaries can be adjusted downwards if there is evidence that the question paper is more challenging than usual.
- ◆ The grade boundaries can be adjusted upwards if there is evidence that the exam is less challenging than usual.
- ◆ Where standards are comparable to previous years, similar grade boundaries are maintained.

Grade boundaries from question papers in the same subject at the same level tend to be marginally different year to year. This is because the particular questions, and the mix of questions, are different. This is also the case for question papers set by centres. If SQA alters a boundary, this does not mean that centres should necessarily alter their boundary in the question papers that they set themselves.