

National Qualifications 2006

Senior Moderator Report

Subject: **Graphic Communication**

Assessment Panel: **Technical Education**

The purpose of this report is to provide feedback to centres on moderation which has taken place within National Qualifications in this subject.

COMPONENT / COURSEWORK IN NATIONAL COURSES

COMPONENT/COURSEWORK MODERATED

Computer Graphics Folio at Intermediate 2
Thematic Presentation at Higher
3D modelling Presentation at Advanced Higher
Computer Graphics Presentation at Advanced Higher

FEEDBACK TO CENTRES

General comments:

Advanced Higher

There were fewer outstanding pieces of work this year; otherwise the standard appeared similar to last year. Once again there were a number of non-accepted centres, mainly due to not applying the assessment guidelines correctly. In most cases this is due to a lack of familiarity with the Assessment Guidelines issued. There are a few areas in the Assessment Guidelines that are being misinterpreted.

Higher

There were still too many Non-Accepted centres but there was also some excellent work. The number of centres using 3D modelling software continues to increase, but it has not resulted in an improvement in the quality of CAD drawings.

This year it was a concern that we had some of the greatest discrepancies in marking to date. The main reasons being generous marking and quite often marks being awarded when there was no evidence submitted.

There are still problems with the student records, as too many centres did not complete them properly or at all. Completing them properly should not be underestimated as it is for the benefit of candidates.

Intermediate 2

Most of the folios moderated were of a good standard again. Marking was also very good, but if anything slightly severe.

Important points to note:

Centres should read and apply the “Guidance on Assessment” documents. These are fine-tuned each year and therefore may contain changes from the previous year. A few centres used the incorrect documents this year. It is therefore extremely important that the teachers are familiar with the new documents when they become available in the autumn on the SQA website.

Presenting centres must also be sure that their software can fulfill all the requirements of the course prior to starting.

Important points to be aware of are:

- At Higher it needs to be reinforced that instruments, straight edges, tracing or other drawing aids **cannot** be used to assist in the manual freehand sketching. It is disappointing that these practices still continue.
- Manual sketching and DTP planning at Higher and planning & development at Advanced Higher must **not** be done retrospectively.
- Draughtmanship, annotation and correct application of BS conventions needs to be improved in CAD work across all 3 levels. This includes line thickness, sizes of dimensions, font sizes, fonts used, name boxes and borders.
- All CAD drawings (orthographic and pictorial) must be line drawings and not rendered. This also applies to those using 3D software.
- Candidates must take more care over the completion of the flyleaf/student record at each level. Even though there are no marks awarded for this it gives the candidate the opportunity to clarify how parts of a drawing /document were produced. This aids the moderation process and helps to ensure that the candidate receives maximum credit for their work.
- At Advanced Higher the description of modelling techniques needs to have more detail and clarity. Without this the model has no value, so it must be treated as crucial documentation for the awarding of marks.
- Centres need to be aware that when using 3D modelling packages at Advanced Higher that the Units require surface modelling.

Centres should make use of the exemplar material on the SQA website.

Advice on good practice and areas for further development:

Advanced Higher – Computer-Aided Graphic Presentation

Once again the final documents were of a high standard and in some cases beyond what is required. The weak areas remain in analysis or planning.

Analysis

This area is improving, but there are still areas of concern. Analysis of grid structure/type specification was particularly good with more centres following the format in the exemplar material. There were a large number of candidates who produced untidy work that was difficult to follow.

- Some centres are still not analysing the appropriate number of pages or two different publications.
- The major concern is still a lack of understanding of design principles and elements. As commented in previous years, the material for analysis must be carefully chosen to offer candidates the opportunity to demonstrate their knowledge and understanding of the use of these design factors. It should be noted that if there is no evidence of an element/principle being used on a page then there is no need to make comments for that page.
- On first impressions many candidates appeared to have written a fair amount, but on closer inspection it was discovered that the comments made did not relate to the element/principle and did not demonstrate an understanding of these. A greater concern was that on some occasions these candidates were being awarded close to maximum marks.

Planning and Development

Thumbnails continue to be disappointing:

- There was not enough evidence of consideration of alternative ideas, ideas being developed or creative use of design elements and design principles.
- Annotation was lacking and very few candidates commented on grid structure.

- There were still a number of cases where the only thumbnails produced were miniature versions of the final document and therefore clearly retrospectively produced.

Some candidates were producing thumbnails of no better quality or quantity than for Higher. Unfortunately this was not always reflected in the marks awarded. There were candidates, however, who produced excellent and well thought out thumbnails.

The **visuals** were better this year but those still not getting it right were making the same errors as last year:

- There was still evidence of visuals retrospectively traced from the final electronic version. This is disappointing as both thumbnails and visuals must be completed in full before the electronic version is started.
- A number of centres were producing visuals that were not accurately drawn. These were sketched and were basically a large thumbnail.
- Even though visuals should be full sized and manually produced, there were a number of scaled visuals and electronically produced versions.
- There were a number of candidates who did not produce the minimum number of visuals required.
- In some cases the visuals consisted of a basic layout indicating only basic text and graphic frames. There should be enough information to produce the electronic version i.e. details of page structure including dimensions, all fonts intended to be used, colour, graphics, etc. Too often there was a lack of annotation on the visuals and no sketched graphic items.

Due to the process of ongoing evaluation it is normal for there to be alterations/amendments in the electronic final piece compared with its visual.

Implementation and Presentation

This was the strongest element as the majority of the final publications produced were excellent. The quality of printing and presentation of the final documents was very professional. However, there were a few who did not do their document justice by printing on poor quality paper. There is a cost implication here but the quality of this final presentation is too important to be ignored.

There were still a number of centres that awarded marks for the electronic template but there was no evidence of it being produced.

The evaluations and modifications continue to be the poorest area with a few exceptions, but the marks awarded by centres tended to reflect this.

Candidate's lack of understanding of design elements and principles was the main issue. Just as with analysis it was evident that a large number of candidates do not have a grasp of these terms. The result was a lack of reference to these in the evaluation. This is a problem when the criteria for evaluating should be elements and principles.

Candidates who did not follow the appropriate planning process were unable to indicate and discuss any modifications made.

Advanced Higher - Computer-Aided 3D Modelling Presentation

Overall the models produced were complex and of a high standard, but in many cases the range of 5 modelling techniques was not being used. This was noticeably poorer this year and could be related to the number of centres changing to more up to date modelling software. It is the responsibility of both teachers and candidates to ensure that the software is appropriate and 5 techniques are used. There were occasions where candidates used animation software to produce excellent models but could not fulfill the requirements of the course.

There were also a number of candidates who were confused between modelling techniques and edits/modifications. As a result a number of candidates did not use five techniques from the list but were using modifications/editing as a modelling technique.

The most frustrating issue was once again that a large number of candidates did not fill in their student records adequately, making it hard for moderators to identify how marks were awarded for the various modelling techniques. In many cases they were not highlighting the examples of additional processes used and therefore losing marks.

The quality of orthographic and pictorial work produced from models has not improved. Most candidates are achieving Unit standard, but many are failing to pick up the additional marks. Other points of note were:

- Too many candidates do not produce drawings with facets removed, especially when using Inventor or Prodesktp.
- General draughtmanship tends to be poor as appropriate line thickness are not being used, scaling of hidden and centre lines is poor and the selection of font style and size is often poor. A number of candidates using “Inventor” are using default settings and are not altering the settings to produce better quality drawings. At Advanced Higher level this should be a basic skill that everyone should have.
- Some centres were awarding maximum marks for annotation where the candidate was using a default border and name box. The guidelines state that they must create their own.
- There were a few centres that submitted rendered pictorial views. These do not fulfill the requirements of pictorial CAD drawings. It states in the guidance documentation that pictorial views must be line drawings.
- There are very few examples of pictorial cutaways.
- There were some excellent scenes produced this year, but again many candidates did not clearly indicate details of how they applied materials and lights. Application of lights was the weakest part of this section. Candidates need to clearly describe in the student record, how the lighting was produced.

Some scenes were small bitmaps stretched to A4 or A3 size. These were pixilated and of a very poor quality and therefore not doing the candidate justice. Again if the hard copy does not show what has been done, the candidate must use the student record to support it.

Higher

Section A - Manual

- For the second year the quality of manual work appeared to drop with fewer sketching of high quality. This section is worth 1/3 of the total marks and therefore should be given the attention that it deserves.
- Tracing of CAD drawings and views produced using drawing instruments/straight edges in the freehand section is still a major problem. This has been highlighted every year but there are no signs that it is reducing. It is clearly stated in the “Guidance on Assessment” that this cannot be done but it still appears.
- There continues to be a lack of analytical sketching to show technical detail.
- The purpose of these sketches is to enable candidates to produce CAD drawings. In some cases the sketches had only a few dimensions and would have been of no use to assist in the production of the CAD drawings. Some candidates were still being awarded maximum marks though.
- There was some excellent DTP planning (thumbnails) but in general the quality is poor. Candidates are not considering various layouts or annotating the thumbnails. In addition the quality of the sketching tends to be poor.
- There was a slight improvement in the quality and detail of the visuals this year. Some visuals were of a standard above what is required. If there was any general criticism it would be that there was a lack of annotation. Unfortunately for every good visual there were two poor ones. They must be full size and instruments should be used if the candidate wishes to be accurate.

Section B - CAD

Generally the CAD work was again of a good standard but there were also examples that were of a very poor standard for Higher. Most candidates are now making a more appropriate choice of theme (item). There was a common theme of failings to Advanced Higher:

- As with Advanced Higher general draughtmanship, annotation and application of British Standards Conventions tends to be poor. This tended to be poorly done by candidates using 3D software.
- A number of centres using 3D modelling failed to remove facets in the pictorial views. This is clearly stated in the “Guidance on Assessment” document but is being missed. In addition a few also did not produce line drawings, but submitted rendered views instead. To achieve the marks for pictorial CAD they must be line drawings with facets and hidden detail removed, most of these centres were awarding up to maximum marks though.

Section C - Presentation

Rendering

- Again those using 3D modelling packages produced very high quality realistically rendered objects either within the package or by using a dedicated rendering package. However, it was difficult to confirm what materials and lights had been applied when candidates did not fill in the student record properly.
- The standard of rendering using a paint package ranged from excellent to extremely poor. When it was poor, there was a lack of appropriate tonal change or highlights. In addition the imported CAD drawing was still visible as outlines. Leaving outlines on rendered pictorial views was also common with centres using Inventor.

DTP

The DTP items were mostly very good.

Marking of the DTP items was much improved but there were still a few centres that were awarding maximum marks for very basic items with no columns. There were also a few centres not giving full credit for some excellent work. Points to note are:

- The quality of paper used by some centres did not help to enhance the DTP items. There was a significantly higher standard by those who did use photo quality paper.
- Many candidates do not put enough thought into size of fonts used. This can make a marked difference to the quality of the DTP piece.
- Even though design principles and elements are not formally assessed until Advanced Higher, these should still be considered at this level. These are fundamental for good design in DTP.

The additional promotional graphic

This was better this year. There are still too many centres not putting as much effort into this item and this is reflected in the quality. These centres also tended to mark generously.

Intermediate 2

Similar issues to last year were raised:

- Differentiation between a detailed orthographic and a component orthographic was better. There were a few candidates who did not do a component drawing.
- Many of those that did do a component orthographic had made a poor choice of item to draw i.e. the item lacked complexity and therefore the opportunity to include enough dimensions or line types.
- As with other levels, draughtmanship and use of BS conventions was poor.
- As with Higher a number of centres are now using 3D modelling packages to create their CAD and rendered drawings. Therefore the same issues regarding removing facets, producing line drawings and application of lights and materials were evident.