



Internal Assessment Report: Product Design

Assessment Panel: Technical Education

The purpose of this report is to provide feedback to centres on verification in National Qualifications in this subject.

National Units

Titles/levels of National Units verified

DF4V: Design Analysis — Intermediate 2 and Higher

DF4W: Developing Design Proposal — Intermediate 2 and Higher

DF4X: Manufacturing Products — Intermediate 2 and Higher

D130: Product Design Analysis — Advanced Higher

D131: Product Development — Advanced Higher

Feedback to centres

General comments

In total, 69 centres were verified. Twenty-four centres were visited in January, the rest were verified at the central event in April. Eighteen centres were verified in Unit DF4W, 47 in DF4V and one in DF4X. At Advanced Higher, two centres were verified in D130 and one centre in D131.

Forty-three centres were 'Accepted', but 26 centres were 'Not Accepted' and were required to re-submit evidence. All centres were 'Accepted' after resubmission.

Administrative errors in evidence accounted for a large number of 'Not Accepted' decisions.

Errors included:

- ◆ submission of evidence for wrong Unit
- ◆ arithmetical errors in candidate scores
- ◆ no evidence for one of the Outcomes
- ◆ incorrect cut-offs used
- ◆ NAB marking guidelines not followed

A large number of centres did not include the Candidate Progress Sheet or supply any detail of where marks had been awarded. This made provision of detailed feedback very difficult. In a small number of centres there was evidence of a lack of standardisation of marking across different teaching groups. All of these errors could have been avoided by a more robust internal verification process within centres.

The vast majority of centres that received visits were verified in Unit DF4V and 19 of the 24 centres were accepted on the first visit.

Eighteen centres were verified in DF4W. Eleven centres were 'Not Accepted'; and most of the problems were caused by the evidence submitted for modelling and graphics.

Advice on good practice and areas for further development

DF4V Design Analysis — Intermediate 2 and Higher

There has been a marked improvement in the assessment of this Unit. Centres have responded to advice, particularly that supplied during development visits and/or visiting verification.

Outcome 1 — Evaluate a commercial product

There has been an improvement in the marking of this Outcome. Most candidates are selecting appropriate products and there has been a movement away from evaluating products they are too familiar with, eg their mobile phone.

The main reasons for 'Not Accepted' results were:

- ◆ Marks can only be awarded for justification of selection of aspects. Centres often awarded marks for any correct statement.
- ◆ The evaluation strategy must be marked using the band statements contained in the NAB. A number of centres awarded one mark per correct statement.
- ◆ Marks can only be awarded for valid research. A number of centres incorrectly gave marks for inappropriate research or simple archived materials.
- ◆ Conclusions must be marked using the band statements contained in the NAB. A number of centres awarded one mark per correct statement.

Outcome 2 — Establish a design specification from a brief

This Outcome continues to present problems. Many candidates seemed to be unclear about the difference between this Outcome and Outcome 1 and approached it as if they were evaluating a product. There were also a significant number of candidates who treated this as if they were developing a design proposal. Candidates should be continually reminded to direct their efforts toward producing a specification.

The main reasons for 'Not Accepted' results were:

- ◆ Many candidates started with a very vague brief. This caused problems throughout the whole Outcome. Candidates should be given a brief which is structured enough to allow them to do meaningful research.
- ◆ A number of centres incorrectly gave marks for inappropriate research or simple archived materials. Marks can only be awarded for valid research.
- ◆ The specification must be marked using the band statements contained in the NAB. A number of centres awarded one mark per correct statement.

DF4W Developing Design Proposal — Intermediate 2 and Higher

A significant number of centres produced excellent evidence for this Unit. However, a large number of centres were 'Not Accepted', largely due to missing evidence for some of the Outcomes, particularly in modelling and graphics.

Outcome 1 — Produce a design proposal

This was generally well assessed by centres. The main reason for 'Not Accepted' results was:

- ◆ At Higher, a number of centres accepted evidence which was more appropriate to Intermediate 2 level. The evidence presented must be detailed enough to demonstrate the candidate's design knowledge.

Outcome 2 — Use graphic techniques during the production of a design proposal

A number of candidates produced very high quality graphics and the Outcome was generally well assessed by centres.

The main reasons for 'Not Accepted' results were:

- ◆ Occasionally, marks were awarded to drawings that were not recognisable types. Reference should be made to NAB statements.
- ◆ Occasionally, too many marks were awarded for computer-generated graphics. Reference should be made to NAB statements.
- ◆ Often, too many marks were awarded for rendering. Marks in the top range (7–10) can only be awarded if at least three media have been used.

It should be noted that if candidates have undertaken more than one design task to generate evidence for this Outcome they are required to submit the folio of work for each task to show that the graphic techniques were used during the production of a design proposal.

Outcome 3 — Use modelling techniques during the production of a design proposal

This Outcome was the main reason for 'Not Accepted' results. It would appear that a large number of candidates are not using modelling during the design process but are simply producing a model of their design proposal at the end of the process.

The main reasons for 'Not Accepted' results were:

- ◆ Inappropriate use of modelling. Models should be used for a purpose and they should be evident throughout the folio.
- ◆ Lack of range of models. Very often a single model was produced and appeared at the end of the folio. Often several examples of the same type of model appeared at the end of the folio. Centres should note that candidates can achieve the maximum 5 marks for very quickly produced models which have validity during the idea generation and development stages of the folio.

- ◆ Too many marks were awarded for computer models. Reference should be made to NAB statements.
- ◆ Too many marks were awarded for practical skills. Reference should be made to NAB statements.

It should be noted that if candidates have undertaken more than one design task to generate evidence for this Outcome they are required to submit the folio of work for each task to show that the modelling was used during the production of a design proposal.

DF4X Manufacturing Products — Intermediate 2 and Higher

This Unit continues to raise very few issues at verification.

D130: Product Design Analysis — Advanced Higher

D131: Product Development — Advanced Higher

A mixture of the new and old NABs was presented for verification. All centres were accepted. Exemplar material is being produced for the new NABs and this will aid centres.