

National Certificate of Educational Achievement

2014 Assessment Report

Design and Visual Communication (DVC)

Level 1

- 91063 Produce freehand sketches that communicate design ideas.**
- 91064 Produce instrumental, multi-view orthographic drawings that communicate technical features of design ideas.**
- 91065 Produce instrumental paraline drawings to communicate design ideas.**

COMMENTARY

STANDARD REPORTS

91063 Produce freehand sketches that communicate design ideas.

ACHIEVEMENT

Candidates who were awarded Achievement for this standard demonstrated the required skills and knowledge. They commonly:

- communicated their own design ideas
- limited their use of recognised sketching techniques to crating or rendering but not both
- limited their use of function and aesthetics
- demonstrated some evidence of design exploration
- used a design brief that was too restrictive for the candidate to move beyond the level of Achievement.

NOT ACHIEVED

Candidates who were assessed as Not Achieved for this standard lacked some or all of the skills and knowledge required for the award of Achievement. They commonly:

- used ruled lines in their drawings
- did not include evidence of both 2D or 3D sketching
- used traced drawings
- lacked candidate design ideas or did not explore basic design ideas any further
- did not make use of any sketching techniques
- included evidence of class exercises instead of developing their own design ideas.

ACHIEVEMENT WITH MERIT

In addition to the skills and knowledge required for the award of Achievement, candidates who were awarded Achievement with Merit commonly:

- produced sketches that clearly explained the construction and structure of their design through detailed, exploded or sectional views
- used accurate crating techniques
- used a wide range of sketching 3D methods
- showed information about structure and construction of garments in fashion sketches
- showed texture and surface features clearly
- undertook an effective exploration of design ideas
- gave dimensions or showed a person or a human body part in an image to give scale / proportion.

ACHIEVEMENT WITH EXCELLENCE

In addition to the skills and knowledge required for the award of Achievement with Merit, candidates who were awarded Achievement with Excellence commonly:

- employed a variety of appropriate and effective sketching techniques
- demonstrated a high level of sketching skill

- included drawings that made it clear what the purpose of the design was
- showed human forms interacting with the design ideas to communicate intent
- showed the wider context of design ideas
- communicated features such as stitching, patterns, details of construction components in fabric submissions
- used exploded, sectional or sequential views applied to their own designs to show in-depth information about their design
- demonstrated excellent presentation of their design ideas on all submitted sheets of work.

OTHER COMMENTS

Candidates that presented work in a logical manner were able to communicate the evolution and refinement of their own ideas with greater success. Candidates that only communicated design ideas at a concepts stage found it hard to gain an award beyond Achievement, while candidates that deliberately developed and refined ideas to a final solution were more successful at gaining Achievement with Merit or Excellence.

Candidates that submitted work that covered two or more projects/contexts were more successful in communicating both functional and aesthetic detail, and conveying intent. In general, product design contexts allowed candidates to communicate functional and aesthetic details in greater depth than spatial contexts, as well as communicating intent and purpose more effectively by including human forms interacting with the product.

Showing the wider context within which the design ideas were situated made for very effective communication for both product and spatial contexts.

Visual diaries sometimes restricted candidates from presenting their best work.

Design ideas need to be candidate-generated responses to design briefs, not just using existing briefs to copy existing products.

Textile candidates were more successful if they included sketches in their folders/project books that related to their design ideas

Common forms of visual communication techniques used were:

Two-dimensional: third-angle orthographic and sectional views.

Three-dimensional: oblique, perspective, planometric and isometric views.

Sequential views, enlarged details, exploded views and views showing human form and/or human hands interacting with design ideas to give the sense of scale or proportion.

Pencil sketches, black pen outline, use of tonal change, crating, coloured pencil renderings. White pencil on black card, pro-marker renderings.

Page layout was evident and use of different types of paper for thumbnails and explorative sketches. More candidates were using a wider range of techniques. Ideation was evident.

Also seen was an emerging number of sketch models (paper) being used at the early stages of the design process, and although the models did not directly contribute evidence to the standard, the practice of modelling often enabled candidates to explore the form and /or function of the object in greater detail, which is communicated in subsequent sketches. Some better 2D sketching in full orthographic with dimensions. There was less use of different techniques just for the sake of it, e.g. sketching the same object in isometric and

oblique. Traced images from photocopies and artistic drawings of whole scenes as observational and traced sketches did not constitute evidence for the standard.

Aesthetics included the exploration of shape and form, texture and surface finish. Quick rendering with pencil, coloured pencils and pro-markers was commonly used. Some candidates showed separate blocks of texture or surface finish which was completely unrelated to the candidate's design idea. In some cases, entire objects were rendered.

Function was demonstrated by the use of exploded views, sequential views, directional arrows and cut-away views showing construction details. Successful candidates showed each of the functional details/features through a series of sketches using a range of drawing types including exploded, sectional and sequential views.

The clarity and skillfulness of techniques was quite low overall, with only a handful of schools demonstrating strong sketching skills across their portfolios. Many candidates failed to apply an understanding of line weights to their freehand sketches. Some candidates did not use crating techniques effectively.

Some trends that were noted included function being shown with effect and skill, however, predominantly the communication of aesthetic details was lacking. The presentation of work went hand in hand with the quality of sketches for the most part – portfolios that were presented with care and attention to detail were more likely to contain freehand sketches that effectively communicated design ideas in depth and higher quality than those portfolios that were not presented with pride. Some candidates that presented exploded and sectional drawings of their work, without any detail, did not explain or demonstrate any new information about their design.

Successful ways of communicating design ideas included portfolios that showed intent effectively, included final design pages of sketches that showed how people interacted with the final product or spatial design, showed the wider context and presented work in a logical manner to clearly communicate the evolution of design ideas and the final outcome communicating all details. Candidates who showed a large number of drawings, including thumbnails, for one design were more successful in communicating their design ideas. It is good to see that ideation is emerging, even at this level.

Candidates must communicate aesthetic qualities if they are to be awarded Achievement with Merit or Excellence.

Successful areas of Technology included (hand) bag designs, as they were able to be shown in context more clearly, as well as communicating aesthetic detail more effectively.

Submissions from other areas of technology were not as successful, as the focus of sketches was predominantly on communicating physical form and some construction details but very little aesthetic detail or context were explored or communicated. Hard material projects such as tables and boxes were commonly seen. A low level of skill was common and a less generic detailing would have helped those candidates to achieve at a higher level.

Some candidates produced exploded views of joints straight from the secondary sources. For candidates to achieve at Merit or Excellence they needed to apply this to their own design.

Some schools submitted work that contained evidence from both product and spatial design contexts – these submissions were able to show more detail across the two contexts and therefore were able to gain higher grades.

Schools that were successful for this standard had provided their candidates with a context that the candidates clearly related to, and had enough scope to explore and refine design ideas to a level where a comprehensive set of sketches could communicate functional and aesthetic details in depth.

Some contexts/briefs seemed quite dated and uninspiring, leading to uninspired, simple design ideas being generated. Candidates could focus on deeper development of their ideas.

91064 Produce instrumental, multi-view orthographic drawings that communicate technical features of design ideas.

ACHIEVEMENT

Candidates who were awarded Achievement for this standard demonstrated the required skills and knowledge. They commonly:

- produced two views using projection
- indicated that the drawing was in orthographic projection by a combination of labelled reference lines, labels, orthographic symbol and a drawing title
- produced a simplistic design and little detail
- used fundamental CAD drawings
- used appropriate, but limited drawing techniques and conventions.

NOT ACHIEVED

Candidates who were assessed as Not Achieved for this standard lacked some or all of the skills and knowledge required for the award of Achievement. They commonly:

- did not show adequate evidence of projection between views
- did not communicate their own design opting to use a pre-determined design brief only
- used freehand sketches instead of producing instrumental orthographic drawings
- submitted class exercises as evidence
- provided insufficient evidence of multi-view instrumental drawing knowledge and conventions.

ACHIEVEMENT WITH MERIT

In addition to the skills and knowledge required for the award of Achievement, candidates who were awarded Achievement with Merit commonly:

- produced drawings that demonstrated greater understanding of orthographic projection
- produced drawings based on more complex forms that used appropriate construction techniques
- had produced drawings to an indicated scale
- showed internal details in their drawings
- used appropriate conventions, for example; title, labelling, correct differentiation between line types.

ACHIEVEMENT WITH EXCELLENCE

In addition to the skills and knowledge required for the award of Achievement with Merit, candidates who were awarded Achievement with Excellence commonly:

- were consistent with line types and weights
- produced drawings where design elements were clearly shown
- used appropriate conventions and scale accurately
- showed complex form and shape, constructed accurately
- generated their own effective design ideas from a design brief
- produced neat, precise and clear drawings with appropriate and accurate detail.

OTHER COMMENTS

Common forms of 2D drawings were hand-drawn orthographic views that included a plan, main and at least one more elevation. Some portfolios included section views that were not well considered and could have shown more detail, more effectively, if a better section plane had been chosen. Some drawings tried to show too much detail in the section views or with hidden detail lines, making the features unclear. Candidates that drew two versions, one with some hidden detail lines and another with a sectioned view, would have demonstrated effective communication and would have moved to the higher grades.

More computer-generated work was evident. Accuracy and quality of conventions on hand drawn drawings is diminishing, however, the standard still allows candidates to achieve at higher levels with neat, accurate, well drawn conventions – labelling of views, line weights, and dimensioning to list a few.

Typical drawings using architectural briefs included a floor plan view and three elevations, showing the layout of space, internal walls as well as external walls with window cavities, sectioned construction detail views in larger scale often found on a separate page.

Those that aimed to achieve at the Excellence level, produced drawings showing high level construction skills, multiple drawings that showed clear details and did not try to show too much in one drawing, demonstrated accuracy in the use of conventions, well considered dimensioning, or multiple CAD drawings showing both internal and external details.

Common faults were construction quality, poor dimensioning, simple design ideas that were only able to communicate superficial detail or simple construction techniques.

Typical drawings using engineering or product design briefs included a plan view as well as two or more elevations, sectioned views, hidden detail lines which were either hand drawn or utilised CAD.

Those that aimed to achieve at the Excellence level, produced high quality constructed views that clearly showed detail through well considered inclusion of hidden detail lines and/or sectional views, careful and accurate construction of complex forms, accurate and well considered labelling and the correct use of line types and conventions.

Common faults were simple design ideas, poor construction and line work, working to incorrect or inappropriate scale, no distinction between line types on both hand drawn and CAD drawings.

Successful candidates could produce drawings that correctly used conventions, such as reference lines, title blocks, labelling, printing, projection lines, outlines and dimensioning.

Many candidates were utilising correct, recognised scales in their drawings.

The most common types of CAD drawings were a plan view with two or more elevations, sectional views and hidden detail. Multiple drawings showing internal and external details of architectural briefs were shown, e.g. Archi-Cad.

Successful candidates produced CAD drawing with accuracy of the construction of complex forms, ability to select appropriate level of detail shown in views, clarity and effectiveness of conventions, effective use of line types, and multiple drawings showing external and internal details effectively, all these enhancing the chances of achieving at the higher levels.

Drawings that were within a unit often achieved higher grades than an isolated drawing around a design unit.

Common errors were the incorrect selection of line types and/or thickness, trying to show too much in one view, no distinction between line types, the placement of dimensions and simple design ideas.

Candidates who used well-controlled, detailed multi-view drawings, with accurate use of conventions were most successful when aiming to achieve at Excellence level.

Apart from construction and presentation quality, success was influenced by the design ideas in this standard.

Predominantly, simple design ideas did not get higher than Achievement even if a section view was included, as for the most part, these did not add any extra detail to the drawing. A number of candidates tried to show too much in their drawings which reduced their ability to effectively communicate detail. Candidates were more likely to work with complex shapes within a product context, as opposed to the spatial context.

91065 Produce instrumental paraline drawings to communicate design ideas.

ACHIEVEMENT

Candidates who were awarded Achievement for this standard demonstrated the required skills and knowledge. They commonly:

- produced drawings which related to their design, however, were simplistic in nature
- produced only one acceptable drawing
- communicated at the basic level of their design
- used appropriate paraline drawing techniques
- used crating to build up the form of the object.

NOT ACHIEVED

Candidates who were assessed as Not Achieved for this standard lacked some or all of the skills and knowledge required for the award of Achievement. They commonly:

- had no design ideas to support their drawing(s)
- had limited instrumental work, instead having freehand drawings present
- obliterated evidence of construction and line-work with the inclusion of rendering
- submitted class exercises.

ACHIEVEMENT WITH MERIT

In addition to the skills and knowledge required for the award of Achievement, candidates who were awarded Achievement with Merit commonly:

- used exploded views with limited success to show internal parts and/or cut-away aspects
- produced additional views to show further detail of their design ideas
- produced drawings of complex shape and form with the inclusion of skills, e.g. circles or ordinates
- used correct line weighting
- produced drawings that were complete and accurate.

ACHIEVEMENT WITH EXCELLENCE

In addition to the skills and knowledge required for the award of Achievement with Merit, candidates who were awarded Achievement with Excellence commonly:

- used clear and precise line-work, incorporating correct line weighting
- used two or more related drawings to communicate their design ideas
- used the most appropriate view point for their drawing
- used drawings that were well executed with recognised paraline methods
- submitted complex computer-generated drawings with evidence of construction lines.

OTHER COMMENTS

Many candidates understood the principles of paraline drawings which resulted in a greater success rate. Candidates that produced multi-view drawings of high quality with depth of detail were often awarded Achievement with Excellence. Common faults were drawings showing only one view, not showing enough detail, poor construction quality, freehand only, design ideas that were too simplistic, oval templates used for isometric circles and using perspective, which is not an example of a paraline drawing.

Where a series of views were drawn including complex form, exploded and or cut-away views, depth and intent of design ideas were able to be communicated with much more effect.

Design ideas from multiple angles including internal details and or design features through a series of drawings rather than a singular drawing also resulted in successful grades. Candidates that started with the design as a whole, before going into detail were also more successful.

It was noted that the most common paraline technique used in spatial briefs was planometric, while for product design briefs, it was isometric. Oblique was the least common technique of all.

Some candidates produced CAD drawings of their final design. Candidates using CAD were able to achieve at the Merit or Excellence level as they could repeat and modify their drawings to show in-depth detail, including exploded, sequence and sectional views.

Common faults were drawings that focused on superficial details or producing multiple drawings that did not show any extra detail.

Candidates that kept pencils sharp, and were able to control measurement, angles and line consistently well, whilst conveying in-depth information through multiple and/or complex drawings were most successful when aiming to achieve at the Excellence level. The use of pen over the top of pencil line work sometimes diminished the quality of the work rather than improving it. Heavily rendered work made assessment difficult.