

National Certificate of Educational Achievement

2014 Assessment Report

Design and Visual Communication (DVC)

Level 3

91627 Initiate design ideas through exploration.

91631 Produce working drawings to communicate production details for a complex design.

COMMENTARY

This is the second year of these standards and while there is improvement in candidate achievement, this report reminds teachers to continue to evaluate their own teaching and learning programmes and access professional development around the standards, where available.

To achieve at the higher levels of achievement teachers and candidates should access the NZQA Exemplars at: <http://www.nzqa.govt.nz/Home> > [Qualifications and standards](#) > [Qualifications](#) > [National Certificate of Educational Achievement \(NCEA\)](#) > [NCEA Subject Resources](#) > Sample External Assessments – Level 3

Exemplars with commentary for AS91631 from the 2014 marking will be produced and posted to complement those for AS91627 produced last year.

Supporting and attending local NZGTTA association meetings will also help.

STANDARD REPORTS

91627 Initiate design ideas through exploration.

ACHIEVEMENT

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

- used visual communication techniques (these varied from observational sketches to tracing of photographs and other existing images) to explore shapes, forms, compelling details and other aesthetic elements (textures, line, negative space, etc.) to visually analyse a starting experience. The starting experiences were varied but often included natural influences and experiences such as plant, shell, animal and bird forms. Other starting experiences included existing product and spatial designs, and occasionally themes from literature, film and music
- used visual communication strategies such as: abstraction, re-combination, tessellation, exaggeration, rotation, inversion, translation, translocation, deconstruction to interrogate and regenerate new shapes and forms. Some candidates unnecessarily used all of the visual communication strategies, when a limited range would have sufficed
- selected promising origin ideas from their explorations to regenerate into design ideas showing aesthetic and functional qualities. Demonstrating a link to a potential design idea is a requirement of the standard
- did not constrain their idea initiation to a brief. Candidates were more likely to succeed in achieving this standard if they experimented with and explored potential shapes and forms without predetermining a design idea. The introduction of the constraints of a brief ideally occurred once ideation had reached the regeneration stage.

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 use a starting experience, just began by generating initial ideas
- used a brief that asked them to begin generating concepts
- used only research as a precursor to initial experimentation and initial idea generation
- did not use alternatives and variations to explore and re-generate ideas

- did not link idea initiation to their own design ideas
- carried out initial exploration, but did not re-generate ideas from the shapes and forms explored
- used starting experiences too literally; e.g. a bird could be a lamp looking exactly like the original bird
- submitted only design development not preceded by idea generation
- submitted evidence for a different standard, i.e. AS 91630.

ACHIEVEMENT WITH MERIT

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

- showed evidence where they had selected an idea that had been explored and re-generated, and showed further analysis and re-interpretation
- demonstrated that the idea was subject to further interrogation with an obvious theme (a train of thought) emerging
- used sophisticated visual communication strategies to foster and grow ideas; e.g. observational drawing techniques that deconstructed elements (not the entire starting experience), tracing/overlays from quick experimental sketch models or SketchUp models to examine ideas and consider alternatives, then re-constructing and re-combining
- showed elements of risk-taking by allowing their ideas to be continually adapted through further interrogation and purposeful exploration
- re-generated their ideas by using analytical visual thinking. This included iteration, re-working design elements, depth of thinking through experimentation and level of creative play
- were prepared to introduce new, extra elements to their ideation.

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:

- communicated their thinking very clearly through the use of sophisticated and varied visual communication techniques and strategies
- showed extensive exploration to challenge thinking through divergent and perceptive alternatives in their initiation of design ideas and by continually exploring and investigating alternatives, questioning/stimulating new thought, by engagement with discovery and perceptiveness
- showed an ability to extend and transform both aesthetic and functional elements of the design idea. This extension and transformation was usually symbiotic and complementary i.e. aesthetic elements related to functional elements and vice versa
- were able to reinterpret and combine dissimilar ideas and discern connections between them that challenged predictable outcomes. This led to enhanced solutions and ideas.

OTHER COMMENTS

This is the second year of this standard, “Initiate design ideas through exploration” or ‘ideation’ as it is commonly known, and it is becoming established as part of DVC practice, and is a precursor to what candidates will be undertaking in tertiary education programmes if they are progressing to Design education.

However, there is still room for teachers of DVC teaching and learning programmes to continue to up-skill themselves. The comments on each of the achievement criteria above apply to the teachers as well as the candidates, as candidates may achieve more successfully with the appropriate guidance.

There were noticeably fewer candidate submissions that were generated from teaching and learning programmes based on the Negotiated Brief, although there are still candidate submissions that are including their work for the Presentation standard (this is only appropriate if candidates are also submitting work for the assessment of Scholarship).

There was also less evidence of candidates submitting work from outdated briefs, briefs that do not expect candidates to spend time initiating design ideas. There are exemplars provided by NZQA which should be accessed and integrated into teaching and learning programmes. However, it should still be noted that this standard is separately assessed; apart from the internals “Resolve a spatial design through graphics practice” and “Resolve a product design through graphics practice”, it is intended to be part of the same design practice and evidence will be found in the divergent thinking (initial experimentation and initial idea generation) and convergent (development) work of the internal standards. Some teaching and learning programmes continue to treat the work required for this standard as a quick mini-project in which candidates could generate a range of origin or starting ideas but did not allow candidates the opportunity to re-interpret, analyse or extend their thinking any further and therefore prevented candidates from gaining higher grades.

While an appropriate design brief is an important part to candidate’s success, the timing of its introduction is also important. Introducing the brief early can pre-dispose candidate thinking towards an outcome without the benefit of unhindered creative thinking. The brief can be introduced after design initiation has commenced to allow this thinking. It is also important for teachers to integrate teaching and learning of the skills for ideation at earlier levels to embed the ideation process into their junior programmes, to help grow and promote this train of thinking. The standard is assessed at level 3, but presumes prior learning and practice.

Although the rate of success was slightly improved upon 2013, a higher proportion of candidates may have succeeded if teachers accessed the Professional Development available to improve their understanding and ensure that candidates were appropriately prepared for this external standard.

The following guidance is re-published this year: it is an unpacking of the stages of candidate work required for this standard:

- identify an experience (or a source of inspiration); from natural and/or built landscapes, film clips, music extracts, observational drawing, conceptual modelling, photography, language devices, etc.
- select visual communication techniques: from modelling (real and/or virtual), photography, sketching, collage, tracing, etc.
- select visual communication strategies: from interpretation, abstraction, recombination, tessellation, exaggeration, rotation, inversion, translation, translocation, deconstruction, etc.
- produce ideations from the starting experience using selected techniques and strategies. The emphasis should be on a range of interpretations and observations to meet the requirement of “interrogate”
- from the ideations produced in the previous step, generate new ideations. This means that the starting ideas are abstracted from the starting experience by two steps of interrogation. They of course may still reference the starting experience but are now new (the candidate’s) ideas

- show the initial ideas that emerge from the ideation, this provides evidence and validates the ideation process as it provides the beginnings of design ideas
- continue to ideate throughout the initial experimentation and initial idea generation, and development phases; it doesn't have to stop.

While these stages describe the activities required for ideation candidates still need to organise their work so that the ideation story makes sense and can be followed. It can be difficult to follow the thinking of the candidate (for assessment) when there is a range of exploration(s). Making this obvious and clear would be helpful to both the candidate and the marker. Use of techniques such as cut and pasting thumbnails or photocopies on the candidates' later work linking origin ideas to further regeneration would also be helpful.

91631 Produce working drawings to communicate production details for a complex design.

ACHIEVEMENT

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

- had selected a design of adequate complexity to produce working drawings for
- included views and modes that a set of working drawings would conventionally use including; site plans, floor plans, elevations, cross-sectional views, assembly views, detail views, material information such as wiring details or something that could be read and completed by another person
- included exterior and interior detail including their construction and assembly
- had proficiency in technical drawing and presentation conventions, such as labelling section planes, details and views, dimensioning, use of appropriate scale, line quality and line types
- indicated the relationship of one drawing to another through the use of recognised conventions for the cross-referencing of drawing, e.g. north symbol, elevations, section and detail reference symbols
- adapted and contextualised generic detail to their design
- identified materials using appropriate hatching, colouring or symbolic reference of material types or use of labels
- produced elevations which were drawn neatly using conventions, and a sectional view was available to show some detail of either materials that would be used or how it would be assembled.

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:

- selected a design of inadequate complexity such as; simple furniture, letterboxes, decks
- produced working drawings only of exterior or interior views
- did not communicate construction or assembly of their designs using appropriate detailed drawings
- did not communicate materials or components/parts adequately
- produced only generic design working drawings, generally from a pre-published source
- produced class exercises
- lacked understanding in the use of drawing conventions such as titling, dimensioning, use of appropriate scale, detailed drawings, line quality and accuracy

- produced drawings that were not linked to each other or showed no relationship to each other
- included drawings with contradictory information, e.g. different measurements for the same item
- did not complete the set of working drawings.

ACHIEVEMENT WITH MERIT

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

- showed precise measurement and dimensioning, accurate line-work and good application of drawing conventions. Using a computer programme helped with being more precise but still required knowledge and application of conventions used in New Zealand
- produced a complete set of linked drawings with the exterior and interior detail explained showing construction and assembly of the design with greater accuracy
- produced drawings that was normally the outcome of considered design thinking and represented a solution to a design problem.

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:

- showed excellent and consistent use of drawing conventions and standards
- included all relevant drawings to clearly communicate detailed construction and assembly information through the use of carefully selected series of plans, elevations, section views, assembly views and enlarged detail views
- included three dimensional drawings, CAD models or animations to clearly communicate assembly and construction. The animations offered sequential information that clearly communicated assembly and rotational views that explained 3D design details.

OTHER COMMENTS

The results for this standard, in its second year, have only marginally improved although the numbers of candidates attempting it has reduced.

If candidates are wanting to progress to tertiary study, and a future career, using this standard then candidates are reminded that to gain Achievement in this standard which is worth six credits requires approximately 60 hours of teaching and learning time, including homework and self-reflection. However, the quality, quantity and standard of work submitted by some candidates did not reflect this expectation.

A significant issue that contributed to the lack of achievement in this standard was the generic nature of the design work. It is recommended that the construction and structural details of spatial design projects should be contextualised to the candidate's ideas; this will require teaching advice and candidate knowledge. Generic details such as footings, foundations, roof cross-sections and lintel beams are not the candidates own design ideas and while the use of these detail is acceptable they have to be correctly applied in the candidates own design work.

While there was an reduction in the submission of simple designs (not "complex") that were unable to access this standard, this report continues to encourage teaching and learning programmes that enable candidates to produce suitably "complex" designs. The standard defines "a complex design" as a "design with multiple components". It goes on "The production details to be communicated about the complex design must be decided by the candidate".

Teachers have to encourage their candidates to make design and drawing decisions. The use of simple furniture, letterboxes and decks often did not allow candidates to engage in drawings of adequate complexity. Including evidence of the candidates design work is important to support marker assessment here.

The standard was also created to recognise the increasing use of CAD programmes that incorporate 2D (plans, elevations, sectional views), 3D (parallel and perspective constructions) and 4D (animations and other moving views). This allows candidates to design in 3D and generate 2D views and 4D views, and vice versa. Producing working drawings using CAD programmes has the added advantage of controlling line quality and minimising measurement errors. However, using CAD still requires the candidates to ensure that the default settings controlling line weight, dimension conventions and orthographic systems are correct and reflect New Zealand Standards.

The use of more traditional pencil drawings to access the highest level of achievement, however continues to be common.