2024 NCEA Assessment Report

Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Subject: Design and Visual Communication

Level: 2

Achievement standard(s): 91337, 91338, 91339

Report on individual achievement standard(s)

Achievement standard 91337: Use visual communication techniques to generate design ideas

Commentary

Artificial Intelligence (AI) is beginning to appear in submissions under the guise of research and this is blurring the edges around what is candidate thinking – are candidates using AI as an influence or is AI doing the design for the candidate? This creates difficulty for determining the authenticity of candidate design ideas: where the influence of AI ended, and where the candidate's own ideas began.

It is important that briefs allow candidates to show their understanding and ability in relation to the needs of the achievement standard. When candidates select briefs, they should take into consideration the scale of the project, both in terms of breadth and complexity. There was an increase in projects that had too many components for candidates to be able to comprehensively explore ideas. Conversely, it is also important that briefs provide sufficient opportunity for candidates to access the higher levels of achievement.

Another area for this standard is the consideration of the context for the design. Candidates who produced ideas within a context took their ideas from being shapes and forms and transformed them into definite design ideas. The most successful candidates tended to establish the context of their design early and better communicated their ideas.

Candidates who achieved at higher levels demonstrated a clear curation of work, and submitted a portfolio that best represented their ideas in relation to the standard. This meant they did not submit every page of work from their project. Nor did they present research that had no bearing on the standard, or was irrelevant to their design, for example, design era study or general research into construction or materials that would not be used in the design. This standard focuses on the use of visual communication techniques to generate design ideas. Therefore, candidates are expected to consider the order of their work within their portfolio, and how it will be viewed.

Digital modes of producing evidence are continuing to increase. Animated walk throughs are becoming more prevalent, but candidates need to consider the speed and navigation of a space being used to avoid the appearance of the viewer walking through walls.

Physical modelling for idea generation as well as traditional drawing skills also continue to be used successfully.

A further note regarding submissions that contained imperial measurements: as we are in New Zealand, it is important that candidates are taught and understand metric measurement systems.

Grade awarding

Candidates who were awarded **Achievement** commonly:

- produced a limited range of ideas or outcomes that were generic or expected
- relied heavily on the close influence of research images included
- produced ideas in context, through the addition of people or other contextual items, so that they became an idea rather than just a form
- communicated basic function and aesthetic considerations for the design ideas
- communicated aesthetics through colour and simple materiality
- included simple details, such as materials and construction or human interface as the main aspects, and then elements specific to the context, such as floor plans in spatial contexts, pattern pieces for textiles.

Candidates who were awarded **Achievement with Merit** commonly:

- generated designs that showed a range of interesting ideas, which may have included unexpected or unique outcomes
- included unique ideas that were influenced by a design era, designer, or observational drawings, rather than reproducing existing outcomes
- clearly showed the context of their design, linked to functionality, which was integrated in their process
- explored ideas in great detail using a range of visual communication modes and methods
- showed balance between the consideration of aesthetic and functional qualities
- demonstrated clear visual communication strategies to show thinking and understanding of design forms and functions
- produced design work that communicated how people might use and interact with the design, often with consideration for the intended environment.

Candidates who were awarded **Achievement with Excellence** commonly:

- generated a range of interesting design ideas where context and function were actively considered from the beginning
- thoroughly explored functional and aesthetic qualities with attention to fine details of the design
- used multiple viewpoints throughout their process and used a variety of visual communication techniques
- visually communicated their thinking clearly, selecting and using the most appropriate methods of communication
- extended designs through regeneration, manipulation, or original ideation
- communicated multiple elements of the design such as texture, lighting, the human interface, or specific construction for that design.

Candidates who were awarded **Not Achieved** commonly:

- provided evidence that was unclear or lacking context to determine what the design was
- produced work that lacked communication of function and/or aesthetics.

Achievement standard 91338: Produce working drawings to communicate technical details of a design

Commentary

Many submissions continue to be made with CAD software. It is important that candidates have a good understanding of the fundamentals of working drawings and their purpose. Candidates also need to know the requirements of this standard and what is required for producing a set of related drawings of their design. It is clear when candidates allow the software to do the thinking for them, rather than them making decisions about how and when to apply conventions.

Grade awarding

Candidates who were awarded **Achievement** commonly:

- demonstrated an ability to produce a set of interconnected 2D instrumental working drawings to show technical details expressing complex visual communication; most commonly this involved a plan, elevations, and a clearly related and linked cross section
- used page titles and/or page numbering in a related sequence
- showed the use of recognised drawing conventions appropriate to the drawings being produced, e.g., labelling, scale, basic line types – construction lines, outlines, section lines
- produced drawings that communicated both functional and aesthetic qualities of their design, e.g., room purpose in their plans and/or materiality in their elevations for spatial; shape and componentry of a product design
- produced several pages of drawings of all the components of their design but with limited 2D drawing of the assembled design, with no section of the assembled project to give the marker any indication how the components fitted together.

Candidates who were awarded **Achievement with Merit** commonly:

- produced a set of interconnecting 2D instrumental working drawings that clearly communicated technical details of the design. Drawings clearly showed construction information or complex detailing that related to the design
- communicated drawings clearly through appropriate use and application of tools to link the pages. This helped to make the pages related, for example, the use of labelled cutting planes to link to sectional views, NSEW symbols to link plans to elevations, and effective project descriptions and page sequence numbering in the title blocks
- produced drawings that were skilfully and accurately drawn, either by hand with instruments or with CAD applications
- demonstrated good skills in applying drawing conventions appropriately to the context of drawings being presented, e.g., in the spatial or product design fields.

Candidates who were awarded **Achievement with Excellence** commonly:

- produced a set of drawings that communicated the technical details of their design effectively and were presented to a high standard using appropriate conventions for the type of working drawing being presented
- produced drawings that were consistently accurately drawn, and included information and details to effectively understand the design. These drawings included sectional views, with enlarged details, which allowed the design to be effectively communicated
- included particular details that accurately related to the design and were consistent with information communicated in other linked drawings. These were added to the set of working drawings to effectively inform the design and support the coherency of the communication

- produced a set of drawings that flowed and the technical information was easy to understand, including an understanding of the relationship of parts and interconnected nature
- used design projects that were appropriate for the level and provided appropriate opportunity to show a mastery of the drawing.

Candidates who were awarded **Not Achieved** commonly:

- produced a set of interconnected drawings that did not show sufficient technical details about the design; the most common example was a working drawing of a product that contained a plan or top view, end elevation, and a sectional view, that lacked any technical details of distinct parts and their assembly, or spatial designs that showed no functionality in the plans as well as no materiality in the elevations
- did not include, label, or describe the placement of furniture block room spaces in floor plans
- produced product design drawings with considerable detail, but no or limited assembly views of the overall object
- did not provide appropriate dimensions to show how big the object was and/or relate it to the given scale
- produced drawings that were not interconnected, lacking information to connect one drawing to the next, e.g., poor use of the title block, page sequence, or linking the north symbol to elevations
- used limited or poor drawing conventions throughout the set, including a lack of dimensions to verify the size or of the object or scale of the drawings
- produced drawings that lacked sufficient visual information, i.e. the design or object being conveyed was too simple and/or didn't have scope to show complexity in how the parts would be connected together.

Achievement standard 91339: Produce instrumental perspective projection drawings to communicate design ideas

Commentary

Instrumental perspective projections are complex drawings and involve a good understanding of projection principles. Candidates need to convey their own design details and features within this standard.

Candidates need to show construction clearly, especially circles and curved features. Often these were drawn in freehand or guessed. Candidates who achieved at higher levels accurately plotted these points. Candidates need to show sufficient detailing/complexity in terms of the form and features of the object in projections. These should be evident in the plan and elevation to be projected. Guessing widths and bringing these into the perspective limits a candidate's ability to achieve higher grades.

Accuracy and quality drawing skills at the correct level should be encouraged. This includes keeping drawing sheets clean and tidy, and considering the choice of pencil grade for clear line work. Some CAD applications are being used to generate perspective projections. This is fine as long as candidates are projecting the view as they would on a drawing sheet. SketchUp 3D models are not acceptable for this standard.

Grade awarding

Candidates who were awarded **Achievement** commonly:

- produced an instrumental perspective drawing that applied the principles of perspective projection correctly, showing the correct setting out and use of the picture plane, eye level line, ground line, vanishing points, and station point
- used perspective projection techniques to reveal design features.

Candidates who were awarded **Achievement with Merit** commonly:

- produced an instrumental perspective drawing that applied the principles of perspective projection accurately to show detail of the design feature
- showed the correct setting out and use of the picture plane, eye line, ground line, and vanishing points, and correctly used (and labelled) a height line or elevation to project the heights on the drawing
- showed some skill in being able to clearly project the detail of the design features such as window frames, doorframes, and railings, showing thickness and depth, and allowing the communication of construction or the materials
- demonstrated skill through clear and effective line work
- produced a drawing of sufficient scale/size so detail could be viewed
- plotted points that allowed for more complex shapes and or curves to be drawn.

Candidates who were awarded **Achievement with Excellence** commonly:

- selected a viewpoint that enabled the perspective projection to effectively communicate visual information and detail about the design
- produced highly informative and visually realistic perspective drawings, including the overall form and structure of the building or object
- used the picture plane and viewpoint effectively to produce an enlarged image of the object/building of sufficient scale/size so detail could be clearly seen and the key details enhanced
- used projection techniques, not digital manipulation
- included accurately plotted design features with skill, such as weatherboards, gaps in fittings, handles, guttering, flooring, and decking
- consistently exhibited a high level of drawing skill to communicate the design information: techniques such as exploded views or showing additional interior information through the windows, or some exterior cladding removed to show wall framing was effective.

Candidates who were awarded **Not Achieved** commonly:

- attempted to produce an instrumental perspective drawing
- did not correctly apply the principles of projection. The most common error was not projecting the vanishing points from the station point and picture plane set up, i.e., not projecting parallel to the plane view from the station point when setting up an angular perspective projection
- did not demonstrate understanding of the relationship between the station point, picture plane, and vanishing points
- did not have an elevation or labelled features on a height line to project the object's height from
- produced an instrumental perspective drawing that was too simple in shape and form, lacking the opportunity to demonstrate communication of complex information or detail of the design features
- presented drawings from a 'drawing task', not the candidate's own design ideas
- submitted a freehand perspective sketch or a computer-generated perspective image with no projection, e.g., a SketchUp CAD model.