Level 1 92012 (MPT 1.1) - August 2024

TENZ has received guidance from the MoE around 92012 - Develop a Materials and Processing Technology outcome in an authentic context (Materials and Processing Technology 1.1)

The Unpacking states "*A Materials and Processing Technology outcome is a completed physical item that could be constructed in the context or contexts the ākonga is studying, for example, hard materials, textiles, food technology, and electronics*.

- In common usage a physical item is something tangible, that has real material presence.
- A recipe should be supported with evidence of it having been tested or used to make a food product, otherwise it is just a plan. Likewise, a completed design for a ring must be tested and worn, or it is just ideation. This is because, all outcomes must be shown to be fit for purpose/purposeful in the environment they are intended for to Achieve. For example, the suitability of a recipe or design of a ring cannot be validated until someone creates the dish or wears the ring – this is how they gauge authentic fitness for purpose/purposefulness.
- A teacher setting a brief that results in a fully digital outcome should ask themselves does this task fit an MPT context or is it perhaps more reflective of the requirements of DVC Product Design or Digital Technologies standards. This is because of the technical skill and knowledge required to develop and assess such outcomes.

Remember that the kaupapa of Level 1 Materials & Processing Technology is to provide ākonga with hands-on, creative experiences that encourage them to explore the three strands of the Technology curriculum.

- Therefore, the design of a product cannot be considered a finished "outcome" in and of itself. Scale models, mock-ups or simulations are also not considered 'outcomes' in relation to assessment.
- At Level 1 ākonga used to be able to develop a conceptual design for a technological outcome. The end point of that standard was a conceptual design that clearly communicated a proposed technological outcome that had the potential to address a brief e.g. freehand sketches, diagrams, technical drawings, computer simulations. The new standards require that proposed technological outcome to be fabricated.
- Designing using a CAD programme, understandably, remains part of technological practice, it is a form of functional modelling, just like freehand sketching or isometric drawing.

Regarding outsourcing manufacture, ideally at Level 1 students will make the actual outcome themselves as through the process of manufacture, they are gaining the required context-specific knowledge of materials and skills, including skills in the use of specialist equipment. However, there is no reason why students cannot outsource part of the fabrication to a specialist, it's what happens in industry, and not all workshops have specialist resources. Of course, there must be sufficient evidence of the outcomes development (tech practice). Having a silversmith cast a design for a ring is no different to sending a design to a 3D printer or having a unique fabric digitally printed. The evidence should be clear about the outsourcing to avoid issues with authenticity.