



**2008**  
**School-assessed**  
**Task Report**

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**Design and Technology GA 2**

**BACKGROUND INFORMATION**

The School-assessed Task is commenced in Unit 3 and completed in Unit 4. Components of the task relate to Unit 3 Outcome 3, and Unit 4 Outcomes 2 and 3.

**UNIT 3**

**Design, technological innovation and manufacture**

**Outcome 3**

Present a folio that documents the procedure and decision making processes used while working as a designer to meet the needs of a client or end-user, and commence production of the designed product.

**Nature of task**

A design folio comprising:

A client and/or end-user profile, a design brief, evaluation criteria, research, design ideas and options, presentation drawing of final option, production plan, timeline, materials list and record of progress and modifications. The design folio must include documentation of decisions.

**UNIT 4**

**Product development, evaluation and promotion**

**Outcome 2**

Competently and safely apply a range of production skills and processes to implement the production plan, make the product designed in Unit 3 Outcome 3, and manage time and resources efficiently.

**Nature of task**

A design folio comprising:

Production work accompanied by a record of production progress, documentation of decisions and modifications with justification of these changes (text and images should be included).

and

A functional product that conforms to standards of quality, performance, ease of use, and safety.

**Outcome 3**

Evaluate the outcomes of the design and production activities, and promote the product's design features to the client and/or end-user.

**Nature of task**

An evaluation report that includes evaluation of the product and production processes.

and

A visual display (e.g. a poster) to promote features and care requirements of the product.

or

A storyboard with captions to promote features and care requirements of the product.

or

A multimedia presentation to promote features and care requirements of the product.

## Scope of task

The design folio should incorporate a range of conventional and computer assisted communication methods. Where digital information or drawings are produced, a printout must be provided in the folio. The design folio should be largely completed in Unit 3, but may have some additional material added in Unit 4. It should include the following components:

- A client or end-user profile.
- A design brief including specifications (considerations and constraints) of primary and secondary importance that outlines the problem/need/s of a client or identified end-user. Teachers should ensure that the design brief allows for both functional and aesthetic aspects of the product to be considered in design options developed by students. The design brief should include an indication of the expected standard and quality of finish/presentation that should be evident in the completed product.
- Criteria for evaluation of the design options and finished product/s. The relevance of each criterion should be explained. Students should also explain how the completed product would be tested or checked against the criteria. The criteria should be weighted according to their degree of importance to the design problem or situation.
- Research (background information, inspiration and trialling to produce ideas for the design options such as historical developments, fashion, trends, styles, ergonomics, safety, cultural influences, properties of materials, available fittings and fastenings, processes, construction methods, suitability of tools, equipment and machines). Sources of information must be acknowledged.
- Development of design ideas (concept mapping and other graphic organisers, brainstorming, drawings, sketches, image/mood boards, annotations, diagrams and models).
- Annotation of design ideas and options in relation to the specifications (considerations and constraints) outlined in the design brief. Reference to research and client or end-user feedback should also be made. It is recommended that students develop between three and six design options. The preferred option should be justified with reference to the weighted design option criteria.
- Working drawing/s and templates/paper patterns that incorporate appropriate conventions developed with reference to the preferred design option.
- A production plan that clearly outlines the steps and sequence, materials list (including fittings and fastenings), tools, equipment and machines needed to safely implement the preferred option within the specified timeline. The production plan should be completed **before** the production work commences.
- Record of progress (text and images) of production work (commenced in Unit 3 and continued in Unit 4) that also includes:
  - notes of modifications with justifications (commenced in Unit 3 and continued in Unit 4)
  - a client or end-user feedback log to record dates of contact and decisions that inform the development of the product and other relevant feedback.
- Production work (which should be undertaken by individual students, i.e. not a group project) that includes some processes with a degree of difficulty should result in a three-dimensional product or product range from one of the design specialisation areas listed on page 22 of the study design and that incorporates the use of one or more of the following categories of materials: wood/timber, metal, polymers (plastics), textiles/yarns/fibres/fabrics, ceramics or glass. A single product or product range (two or more products) planned for completion over Units 3 and 4 may be developed from the design brief devised in Unit 3. Teachers and students must ensure that all safety requirements are implemented through hazard identification, risk assessment and risk control processes. The risk management process is outlined on page 45 of the study design. Risk assessment is defined on page 41 of the study design.
- Trialling and testing materials and processes may occur prior to or during production and be documented in the design folio.

- A presentation (a visual display, storyboard with captions or a multimedia presentation) produced for the client or end-user that promotes the features of the product, explains its care requirements and shows an understanding of the marketing mix (the five Ps).
- The evaluation report should be based on the criteria developed in Unit 3. The evaluation of the product should include reference to client and/or end-user feedback. Students should include results of tests or other methods of analysis in responding to the evaluation criteria. Students should also report on the effectiveness of planning and efficiency of the design and production activities. The report should discuss possible improvements that were and could be made and that could inform future design and production activities.

Teachers must sight and monitor the development and documentation of the student's work on a regular basis.

The Authentication Record for School-assessed Tasks should be used for monitoring students' work in progress for authentication purposes. This sheet must be available if requested by the VCAA. The Additional Teacher Comment sheet should be used to document skills and competencies; particularly those relating to the safe use of tools, equipment and machines and application of processes (Criteria 5–8) that may not be clearly demonstrated in the student's final presentation.

## **SPECIFIC INFORMATION**

### **Assessment criteria**

The extent to which the **design folio** demonstrates:

#### **Criterion 1: Skill in developing a client or end-user profile, developing a design brief and evaluation criteria**

- Ability to develop a profile of the client or end-user in relation to the problem to be solved.
- Ability to develop a design brief that defines the needs of a client or identified end-user/s.
- Ability to develop and justify relevant criteria to evaluate design options and the completed product.
- Ability to explain how criteria will be tested or checked in the completed product.

Profiles should only include information that is relevant to the design problem. Students need to seek out this information and avoid including information about a client/end-user if it is unrelated, i.e. enjoys watching television. Students could include a photograph of the client/end-user although this is not absolutely necessary. Students have also presented market research at this stage to support the profile of the end-user and this has proved invaluable in avoiding generalisations.

Design briefs are generally well written. Clear and relevant evaluation criteria in question form are being provided with sound explanations of relevance to the design problem and methods of testing.

In some instances, however, students are still presenting a solution, i.e. stating exactly what they intend to make, instead of clearly stating the design problem. This is inappropriate as it most often leads to narrow research, developmental work and design options.

Students should ensure that they detail the expected standard and quality of finish/presentation that will be shown in the completed product as part of the design brief. Often students neglected to include this or did not include an appropriate description. Reference to these expectations needs to be made throughout the design process.

In consultation with the client or end-user, students should determine which specifications are of primary importance and those of secondary importance. Once this has been done, the evaluation criteria developed from the specifications can more easily be assigned a weighting.

It is advised that students develop a set of evaluation criteria for evaluating the product (Criterion 9) and a set for evaluating the design and production activities (Criterion 10). This method in most instances provides students with a clear direction for evaluating.

At this stage, students can begin logging their contact and discussion with their client.

### **Criterion 2: Skill in carrying out research and developmental work**

- Relevance of research to the need/s, problem/s and/or situation identified in the design brief.
- Ability to research aspects that are relevant to the design problem.
- Ability to carry out a range of development work that forms a basis for the creation of design options.

The research undertaken must be relevant to the design problem. Documented research must provide explicit links to the design problem. Images, i.e. bottles of glue do not show this even if it is annotated. Areas for research are detailed in the 'Scope of the task' in Supplement 1 to the February VCAA Bulletin VCE, VCAL and VET No. 67.

Developmental work must be linked to the research undertaken. There should be a clear relationship evident between the research and developmental work. Encouraging students to develop quality sketches with annotations on the same page as documented research is highly advised. 'Collage' type pages minus annotations are inappropriate as they do not demonstrate student's thinking about how ideas could be used in design options. Students need to ensure that their sources of information are documented. Students should document their progress accordingly and record their contact with client/end-user and subsequent decisions. It is advised that students begin to undertake materials tests at this stage and document their findings.

### **Criterion 3: Skill in developing creative and viable design options and justifying the preferred option**

- Use of a range of communication methods to convey design options.
- Ability to demonstrate suitability of the preferred option with reference to the design brief, specifications, weighted design option evaluation criteria and feedback from the client or an end-user.

A minimum of three design options that use a range of communication methods must be presented. Unfortunately students continue to present options that are not annotated. They must be encouraged to include appropriate detail. Using a resource like the Top Designs 2008 catalogue CD-ROM that includes the folio pages may provide students with prompts.

Weighted evaluation criteria should be used to determine the preferred option. Students may also choose to undertake further end-user market research to support their preferences. Specific client/end-user feedback must be included to assist in the justification of the selection.

Often students have clients/end-users with budget constraints but this is often overlooked in the selection of design options. Students need to ensure that they effectively undertake their role as a designer and provide their clients/end-users with the appropriate information.

#### **Criterion 4: Skill in preparing working drawings and a production work plan**

- Preparation of working drawings/patterns using appropriate conventions.
- Preparation of timelines and a sequence of steps necessary to complete the product.
- List of materials (including costs), tools, equipment, machines and processes required.
- Knowledge of relevant health and safety (including hazard identification, risk assessment and risk control).
- Reference to quality standards.

An accurate working drawing/pattern with all relevant detail is essential to assist in the development of an effective production plan. A production plan should not be completed retrospectively. Students must think through the production of their preferred option and work out a course of action for this to occur safely and within the timeline. Incomplete products often were accompanied by a lack of proper planning.

Students should identify potential hazards prior to developing the production plan. They should assess the risks and provide details about these risks and how they can be controlled. Reference to quality standards also needs to be made by explaining quality control measures in the production plan.

Students should also use their production planning as a means of demonstrating their understanding of appropriate tools, equipment and machines for selected materials. This documentation will also form the basis for evaluation of design and production activities by comparing it to the record of progress.

*Note:* With respect to Criteria 5–8, teachers are reminded to complete the **Additional Teacher Comment sheet** available in Supplement 1 to the February VCAA Bulletin VCE, VCAL and VET No. 67. Advice on the use of the Additional Teacher Comment sheet to document skills and competencies that may not be demonstrated in the student's final presentation is provided in the supplement.

The extent to which the **design folio** and **production work** demonstrate:

#### **Criterion 5: Understanding of the characteristics and properties of the materials used**

- Evidence of research, trialling and testing of materials and processes.
- Selection of materials appropriate for the product.
- Selection of tools, equipment, machines and processes and safety issues appropriate to the materials.
- Understanding of health and safety issues related to the materials used.

Further documentation of materials tests related to the preferred option need to be presented to support the material selection and show an understanding of their characteristics and properties. Students can show their awareness of health and safety issues by including relevant documentation, i.e. Material Safety Data Sheets.

Often appropriate material selection has been made by students but their design folio contains little evidence to support this selection.

In some cases the appropriate use of materials was not considered by students, for example, Radiata Pine (untreated) was used for outdoor furniture without adequate investigation of the material and its suitability for outdoor use documented in the student's folio.

The extent to which the **production work** and **accompanying documentation** demonstrate:

**Criterion 6: Skill in the application of processes**

- Range of processes used.
- Degree of difficulty in the processes used.
- Ability to record progress and modifications.
- Efficient use of time during production.

Students are generally demonstrating high levels of technical competence in the application of a wide range of processes. However, in instances where students are selecting simpler processes, they must be informed that a Very High may not be obtainable. In some instances, simpler processes are not carried out to a level worthy of a High.

Progress must be recorded with any deviations from the production plan explained. It is recommended that students include documented trialled use of processes within their folio to support their selections. It is advised that students also identify and document areas for improvement throughout their record of progress.

**Criterion 7: Skill in the use of tools, equipment and machines**

- Awareness of hazards, risk assessment and control.
- Range of tools, equipment and machines used.
- Safety in the use of tools, equipment and machines used, some of which are complex.

Students are generally using a range of tools, equipment and machines competently during production. Where students have not selected to use a range, they must be informed that a Very High may not be obtainable. It is recommended that students include documented trialled use of the range of tools, equipment and machines within their folio to support their selections.

**Criterion 8: Skill in completing the product to specified and accepted standards of quality**

- Comparison of product to the preferred option, production plan and recorded modifications.
- Quality of finish and presentation of the completed product.
- Product complies with accepted standards.

Students need to ensure that in the design brief they detail the expected standard and quality of finish/presentation that should be seen in the completed product so that the expected standard can be judged against the actual standard. In some instances, this acts as a means for students to ensure that they are not penalised for ‘incomplete work’, i.e. if a student is planning to have a component outsourced or the product fits with an existing product and it is not possible/recommended for the other part to be at school then the student needs to ensure that they state this in the design brief.

Students, who have been encouraged to investigate and document current accepted standards in their folio including applicable Australian Standards, can use this as a point of comparison.

It is recommended that students record modifications to the preferred option and production plan in detail so that this information is available for use in the evaluation.

The extent to which **the evaluation report and the visual display, or the storyboard or multimedia presentation** demonstrate:

**Criterion 9: Skill in evaluating and promoting the product**

- Use of client or end-user feedback and evidence from testing/checking to evaluate the suitability of the product.
- Use of established criteria to draw conclusions about how well the product meets the client/end user needs.
- Identification of areas for improvement.
- Production of a visual display, storyboard or multimedia presentation that promotes product features with consideration of the marketing mix.

Product evaluations are generally completed well by most students. The results of tests and client/end-user feedback must be documented and used to determine the success of the product. There are times where the evaluation is completed hurriedly as the production timeline is not adhered to by students. Students are advised to complete the product at least a fortnight prior to the end of Term 3 so that adequate time is available for evaluation.

Promotion of the product has been successfully completed by students that have worked with varied clients/end-users. Appropriately pitching the promotion will demonstrate an understanding of the marketing mix. The features of the product must be showcased as applicable to the client/end-user. Good quality photographs of completed products are important for the promotion to be completed most effectively. It is recommended that photographs of incomplete products are not used and that other methods are sought, i.e. using a cropped image of the completed part. Hypothetical company names and logos are being developed by students for the purpose of promotion; however, this is not necessary to promote the features and show an understanding of the marketing mix if this is unrelated to a student's client/end-user.

The extent to which the **evaluation report** demonstrates:

**Criterion 10: Skill in evaluating the effectiveness and efficiency of the design and production activities**

- Effectiveness and efficiency of the production work plan (including references to safety practices).
- Use of the record of progress of production work and notes of modifications.
- Recommendations for improvement in the design and production activities.

Evaluation of the design and production activities need to draw on the production plan, record of progress and documented modifications. Students who developed relevant evaluation criteria questions using the design brief were better able to make judgments and recommendations. Students who used teacher generated generic evaluation criteria questions were not often able to do this as effectively. Students should use the areas they have identified for improvement in their record of progress to make sound recommendations.