

Higher Product Design

Unit 1

Product Design: Design Analysis

DF4V 12/NAB001 - Exemplar 2

Marking Commentary

Outcome 1: Evaluate a Commercial Product

Outcome 1	Marks
Evaluate a commercial product.	
Performance Criteria	
PC (a) Aspects to be included in the evaluation are identified and justified.	18
PC (b) An appropriate strategy for evaluation is developed.	8
PC (c) A comprehensive evaluation of the product is carried out.	18
PC (d) Valid conclusions about the product are given.	8

PC (a) Aspects to be included in the evaluation are identified and justified – 18 marks

Six “big” aspects were identified: Function, ergonomics, aesthetics, materials & manufacture, value for money and safety.

Marks cannot be awarded for the identification.

Justification of function: There is good justification for the inclusion of function in the evaluation. There are at least 4 separate reasons given and also mention of overlap with ergonomics. This aspect is awarded the maximum of four marks. **4 marks**

Justification of ergonomics: Again, there is good justification of the inclusion of this aspect. There is clear understanding of the importance of ergonomics in the **design of this product**. There are enough valid points made to award the maximum four marks. **4 marks**

Justification of aesthetics: There is some repetition in this section but there are enough points made to award three marks. **3 marks**

Justification of materials & manufacture: Although some of this section describes parts of the product which may be evaluated there are three clear reasons given for the inclusion of materials and manufacture: durability, life expectancy of parts and replacement of parts. **3 marks**

Justification of value for money: There three valid points made: balance between cost and performance, comparisons to similar products, lifespan. **3 marks**

Justification of safety: Three valid points: electricity, sound and quality of production. **3 marks**

Therefore this report has been awarded 20 marks because it scores well in all six aspects. **However, the maximum marks which may be awarded for this PC is 18.**

Total for PC (a) 18 marks

PC (b) An appropriate strategy for evaluation is developed – 8 marks

Three evaluation strategies have been chosen. A valid method of evaluating all of the issues identified in PC (a) has been considered. There is, however, no mention of how the information is going to be displayed. Seven marks awarded.

Total for PC (b) 7 marks

PC (c) A comprehensive evaluation of the product is carried out - 18 marks

Internet reviews

Pages 7-12 are taken from other people's review of the product. This is a useful source of information and the summary on page 13 demonstrates an understanding of the reviews. Four marks are awarded for this section, one for the gathering of the internet reviews and three for conclusions drawn: restrictions on (and ways round) copying music, price and sound quality & style. **4 marks**

Product comparison

Page 13 gives a well laid out product comparison. All of the aspects used for comparison are relevant and all sections are completed. The products used for comparison are valid. Seven marks are awarded to this section: one for the aspects used for comparison, four for the information on the products and two for the summary of the table. **7 marks**

User trial/survey

Pages 14- 16 give questionnaire and results. Questions are valid and clear and results are displayed clearly. Seven marks are awarded: one mark for questionnaire, one for each aspect evaluated (4) and one for breakdown of aspects **7 marks**

Product analysis

Pages 17 and 18 give information on materials & manufacture, value for money and safety. 4 marks are awarded; two for information on materials & manufacture and two for safety (electricity and sound). No marks are given to value for money as there is no new valid information given. **4 marks**

Therefore this report has been awarded 22 marks because it presents good, valid information on all aspects. **However, the maximum marks which may be awarded for this PC is 18.**

Total for PC (c) 18 marks

PC (d) Valid conclusions about the product are given – 8 marks

The conclusions reached were valid and relate to the evaluation. However the summary is very brief and does not do justice to the amount of information gathered. Five marks awarded

Total for PC (d) 5 marks

General Comments

This was a good choice of product for evaluation. It offered scope for evaluation of a range of aspects and for use of assorted evaluation techniques.

This was a well structured and detailed report. In two of the PCs the candidate supplied evidence beyond the mark allocation.

CUT-OFF FOR OUTCOME 1 = 31

TOTAL FOR OUTCOME 1 – 48/52 MARKS = PASS

Outcome 2: Establish a design specification from a brief

Outcome 2	Marks
Establish a design specification from a brief.	
Performance Criteria	
PC (a) The brief is analysed and relevant design issues are identified and justified.	18
PC (b) The design issues are fully researched.	24
PC (c) A detailed specification is derived from the design issues researched.	8

General Comments

PC (a) The brief is analysed and relevant design issues are identified and justified – 18 marks

Six design issues are identified (pages 2, 3 & 4): Ergonomics, materials, safety, aesthetics, function and economics.

Marks cannot be awarded for the identification.

Justification of ergonomics: Between the mindmap and information on page 3 there are more than four valid reasons given to justify the selection of this issue. Maximum marks of **4 marks** awarded.

Justification of materials: Again more than 4 valid reasons for choice, e.g. electricity, heat, cost, match other materials. This area is strengthened by mention of link to safety and also the research areas listed but the maximum of **4 marks** is already awarded.

Justification of safety: 4 reasons on mind map plus further development on page 3 – **4 marks**.

Justification of aesthetics: Again, 4 reasons on mind map plus further development on page 4 – **4 marks**.

Justification of function: Mind map points are weak for this issue, really only “give light...” is valid and this developed on page 4 – **1 mark**. Types of switching and adjustment of light are mentioned on page 3 and are considered valid – **2 marks**.

Justification of economics: More than 4 valid points to justify choice – **4 marks**.

Therefore this report has enough evidence for 23 marks because all six issues have been well justified. **However, the maximum marks which may be awarded for this PC is 18.**

Total for PC(a) 18 marks

PC (b) The design issues are fully researched – 24 marks

Six issues researched:

Ergonomics: Information is displayed on anthropometric data and three clear valid pieces of information are extracted, range for hand size, reach and index finger. There is also good evidence on research into physiology. Maximum marks of **4 marks** awarded.

Function/operation: A basic questionnaire is carried out and results recorded. **1 mark.**

Aesthetics: Questionnaire on style – **1 mark.** Research on colour – **1 mark.**

Cost: Research on typical prices for two categories of lamps and conclusions drawn – **2 marks.**

Safety: Valid information on BS EN 50285, testing for CE – **2 marks.** Low energy bulb – **1 mark**

Materials/manufacturing: General information on materials – **1 mark.** General information on manufacture – **1 mark.**

Total for PC (b) 14 marks

PC (c) A detailed specification is derived from the design issues researched – 8 marks

The specification is detailed, draws on the research and covers all of the design issues and justifies maximum marks.

Total for PC(c) 8 marks

CUT-OFF FOR OUTCOME 2 = 30

TOTAL FOR OUTCOME 2 = 40/50 MARKS = PASS