



Year 12, Design and Technology

Task 2: Case Study

Due Date: Week 6 08/03/2024

Task Distributed: 01/02/2024

Unit: Innovation & Emerging Technologies

Task Type: Case Study

Task Weighting: 20%

Outcomes: H2.1, H2.2, H3.1, H6.2

Task Description

When answering examination questions, it is best practice to support your answer with evidence from a case study. A case study is an in-depth analysis of an innovation. Students are to identify and investigate an innovative product, system or environment of their choice and produce a case study on it. You will submit a written report addressing the following questions:

1. Describe the innovation. What is it? What is it used for? (Not included in word count)
2. Explain the influence of trends in society on the development of the innovation. Consider THREE relevant factors in play at the time the innovation was developed such as: (H2.1). (approx. 400w)
 - Local socio-economic conditions
 - Global issues
 - Political influences
 - Economic environment
 - Environmental considerations
 - Technological change
 - Legislative changes
 - Marketing and media
 - Changing nature of work
 - Cultural diversity
3. Discuss the environmental and ethical issues related to the innovation (H2.2). (approx. 600w)
 - a. Explain how sustainable technologies are used in the innovation, and how these impact on the environment.
 - b. Explain how the company/designer protects their intellectual property.
 - c. Outline the rights and responsibilities of designers towards individuals, society and the environment.
 - d. Identify and critically evaluate the impact/s of the innovation on society.
4. Analyse the factors that influence innovation and the success of the innovation (H3.1). (approx. 600w)
 - a. Explain how TWO factors have contributed to the success of the innovation such as:
 - Timing
 - Available and emerging technologies
 - Historical and cultural
 - Political
 - Economic and legal factors
 - Marketing strategies
 - b. Identify TWO agencies that influenced the development, implementation and acceptance of the innovation. Describe the role of each agency and explain the impact.
 - c. Describe the role of entrepreneurs in the design/development of the innovation. Discuss the nature of the entrepreneurial activity and the influence on successful design.
5. Critically evaluate the impact of emerging technologies on the innovation (H6.2). (approx. 400w)

- a. Identify an emerging technology used in the development of your innovation, OR determine if your innovation is an emerging technology.
 - b. Discuss the impact of the emerging technology on the innovation itself, society and the environment.
6. Bibliography

Further Details:

- 2000 words ($\pm 10\%$)
- Bibliography (not included in word count)
- Include at least one image of the innovation

Marks Available:

60 - See Rubric below

Case study (55 Marks Available)

Bibliography (5 Marks Available)

NESA Glossary of Key Words

Understand the verb associated with the task. The verb will provide an understanding of the detail needed to successfully answer the question.

- **Critically (analyse/evaluate):** Add a degree or level of accuracy depth, knowledge and understanding, logic, questioning, reflection and quality to (analyse/evaluate)
- **Analyse:** Identify components and the relationship between them; draw out and relate implications
- **Describe:** Provide characteristics and features
- **Discuss:** Identify issues and provide points for and/or against
- **Explain:** Relate cause and effect; make the relationships between things evident; provide why and/or how
- **Investigate:** Plan, inquire into and draw conclusions about
- **Outline:** Sketch in general terms; indicate the main features of

Check the NESA Glossary of Key Words for further guidance

<https://educationstandards.nsw.edu.au/wps/portal/nesa/11-12/hsc/hsc-student-guide/glossary-keywords>

Details of Submission

You are to submit your case study on Google Classroom. Your report must address the questions that are provided and submitted as a word-processed document.

Format of the report must include formatted headings, images where possible, contents page and bibliography of sourced references.

Teacher Feedback and Student Self-Reflection

- The task will typically be returned to students within 14 days of the due date.
- At this time feedback including information on how to improve will be provided through Google Classroom.
- Students can clarify or seek further feedback by speaker with their teacher or the assessment marker.

Upon return of the task, students will also be expected to complete a self-reflection. Self-reflection will be completed via a Google online form.

How does this link to my learning?

What Areas of Learning will this Assessment Task Report on

- Knowledge and understanding of course content – 20%

Report Outcomes

- H2.1 Explains the influence of trends in society on design and production.
- H2.2 Evaluates the impact of design and innovation on society and the environment.
- H3.1 Analyses the factors that influence innovation and the success of innovation.
- H6.2 Critically assesses the emergence and impact of new technologies, and the factors affecting their development.

Assessment Procedures

All students should be fully aware of the School Assessment Procedures for their year group. These were provided at the beginning of the school year and are available off the school website under the Learning Tab for each year group.

Marking Criteria

H2.1 Explains the influence of trends in society on design and production.				
0-1	2-4	5-6	7-8	9-10
Little or no explanation of the influence of trends in society on the development of the innovation.	Limties explanation of the influence of trends in society on the development of the innovation, with reference to a relevant factor.	Adequate explanation of the influence of trends in society on the development of the innovation, with reference to two relevant factors. Discussion on how these factors positively and/or negatively impacted on the development of the innovation.	Detailed explanation of the influence of trends in society on the development of the innovation, with reference to three relevant factors. Detailed discussion on how these factors positively and/or negatively impacted on the development of the innovation.	Explicit explanation of the influence of trends in society on the development of the innovation, with reference to three highly relevant factors. Explicit discussion on how these factors positively and/or negatively impacted on the development of the innovation.

H2.2 Evaluates the impact of design and innovation on society and the environment.				
0-1	2	3	4	5
Little or no explanation of how sustainable technologies are used in the innovation and how these impact on the environment.	Limited explanation of how sustainable technologies are used in the innovation and how these impact on the environment.	Adequate explanation of how sustainable technologies are used in the innovation and how these impact on the environment.	High-quality explanation of how sustainable technologies are used in the innovation and how these impact on the environment.	Detailed explanation of how sustainable technologies are used in the innovation and how these impact on the environment.
0-1	2	3	4	5
Limited explanation of how the company/design protects their intellectual property.	Basic explanation of how the company/design protects their intellectual property.	Sound explanation of how the company/design protects their intellectual property.	Thorough explanation of how the company/design protects their intellectual property.	Excellent explanation of how the company/design protects their intellectual property.
0-1	2	3	4	5
Limited outline of the rights and responsibilities of designers towards individuals, society and/or the environment.	Basic outline of the rights and responsibilities of designers towards individuals, society and/or the environment.	Outlines of the rights and responsibilities of designers towards individuals, society and the environment.	Detailed outline of the rights and responsibilities of designers towards individuals, society and the environment.	Extremely detailed outline of the rights and responsibilities of designers towards individuals, society and the environment.
0-1	2	3	4	5

Little or no identification of the impact/s of the innovation on society.	Basic identification of the impact/s of the innovation on society.	Clear identification of and good evaluation of the impact/s of the innovation on society.	Clear identification of and critical evaluation of the impact/s of the innovation on society.	Clear identification of and high-quality critical evaluation of the impact/s of the innovation on society.
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H3.1 Analyses the factors that influence innovation and the success of innovation.				
0-1	2	3	4	5
Elementary explanation of how a factor has contributed to the success of the innovation.	Basic explanation of how a factor has contributed to the success of the innovation.	Sound explanation of how factors have contributed to the success of the innovation.	High-quality explanation of how two factors have contributed to the success of the innovation.	Excellent explanation of how two factors have contributed to the success of the innovation.
0-1	2	3	4	5
Identification of an agency that influences the development, implementation and acceptance of the innovation. Limited description of the role of each agency.	Identification of up to two agencies that influences the development, implementation and acceptance of the innovation. Basic description of the role of each agency and some explanation of the impact.	Sound identification of up to two agencies that influences the development, implementation and acceptance of the innovation. Sound description of the role of each agency and explanation of the impact.	Clear identification of two agencies that influences the development, implementation and acceptance of the innovation. Thorough description of the role of each agency and high-quality explanation of the impact.	Clear identification of two agencies that influences the development, implementation and acceptance of the innovation. Explicit description of the role of each agency and high-quality explanation of the impact.
0-1	2	3	4	5
Limited description of the role of entrepreneurs in the design/development of the innovation. Little or no discussion on the nature of the entrepreneurial activity and the influence on successful design.	Basic description of the role of entrepreneurs in the design/development of the innovation. Some discussion on the nature of the entrepreneurial activity and the influence on successful design.	Sound description of the role of entrepreneurs in the design/development of the innovation. Discussion on the nature of the entrepreneurial activity and the influence on successful design.	Thorough description of the role of entrepreneurs in the design/development of the innovation. Good discussion on the nature of the entrepreneurial activity and the influence on successful design.	Extensive description of the role of entrepreneurs in the design/development of the innovation. High-level discussion on the nature of the entrepreneurial activity and the influence on successful design.

H6.2 Critically assesses the emergence and impact of new technologies, and the factors affecting their development.				
0		1		2
Identifies an emerging technology.		Identifies an emerging technology that may or may not have been used in the development of your innovation.		Correctly identifies an emerging technology used in the development of your innovation, OR correctly determines if your innovation is an emerging technology.
0	1-2	3-4	5-6	7-8
Limited discussion of the impact of the emerging technology on the innovation itself, society and the environment.	Basic discussion of the impact of the emerging technology on the innovation itself, society and the environment.	Sound discussion of the impact of the emerging technology on the innovation itself, society and the environment.	Detailed discussion of the impact of the emerging technology on the innovation itself, society and the environment.	Extremely detailed discussion of the impact of the emerging technology on the innovation itself, society and the environment.

Bibliography				
0-1	2	3	4	5
Little or no sources included.	Website URLs have been included.	A minimum of five websites used are included in the bibliography.	A minimum of eight websites used are included in the bibliography. In-text referencing has been included.	A minimum of ten websites used are included in the bibliography. In-text referencing has been included.