

ENG6207 INNOVATION MANAGEMENT AND NPD

Assignment 1: Understanding Innovation and NPD Concepts

Description	Marks out of	Wtg (%)	Due date
Understanding Innovation and NPD Concepts	200	20.00	As per course specification

OBJECTIVES:

This assignment addresses the following Objectives for the course as outlined in the Course Specification:

- Understand the concept of innovation and innovation management;
- Understand and evaluate the research and development process;
- Understand and manage new product development;

Attempt ALL six (6) questions.

Artificial Intelligence (AI) Utilisation (Opt-in) for this Assessment Item is Level 3:

AI Integrated Content Creation Description: Students are permitted to actively use AI to produce parts of the assessment content. This can include generating data analysis, creating visualisations or code, or using generated content as a prompt. Further details are provided in the assessment item instructions/task sheets.

Additional Information Required: Clearly delineate the sections or elements created with AI assistance. Include a detailed explanation (approximately 250 words) of the AI's role and the rationale for its use.

The Artificial Intelligence Use in Assessment form must be completed to declare your use of AI for this assessment item. A completed form must be submitted for your assessment to be marked. The use of AI in assignment will be assessed.

Assessment Criteria for AI Utilization in Assignments

Criteria	High Intellectual Input (100%)	Moderate Intellectual Input (50%)	Minimal Intellectual Input (0%)
Use of AI in Content Creation	AI-generated content is extensively edited, expanded upon, or integrated with original material. Demonstrates ethical use, critical thinking, and creativity, with clear rationale.	AI-generated content has been partially edited or refined. Evidence of some intellectual engagement is present but limited to surface-level adjustments.	Content is heavily reliant on AI-generated outputs with little to no editing or refinement. Lacks significant intellectual contribution.
Delineation of AI and Student Contributions	Clearly specifies AI-generated sections and the student's contributions to editing and intellectual input. Provides a detailed rationale for ethical AI use.	Identifies AI-generated sections but provides limited or vague explanations of their role in editing or enhancing the content.	Does not distinguish AI-generated content from the student's own contributions. Lacks transparency in AI use.
AI Use Declaration and Reflection	Thoroughly completed AI Use Declaration form with a detailed explanation of how and why AI was used. Reflection shows thoughtful consideration of AI's role and its impact on learning.	Completed AI Use Declaration form with basic explanation and limited reflection on AI's role.	AI Use Declaration form is incomplete or missing. No reflection or rationale for AI use is provided.

The assessment criteria evaluate use of AI in creating content, with a focus on the ability to effectively and ethically integrate, refine, and contribute intellectual input to AI-generated material. The evaluation is based on a three-level scale, and will be applied to the marks of the relevant section/question, or the final marks whichever is applicable:

Criteria 1: Use of AI in Content Creation

Measures the extent to which students rely on AI to produce their assessment content.

- **0% Level: Majority Written by AI (Minimal Intellectual Input)**
 - Content is heavily reliant on AI-generated outputs with little to no editing or refinement.
 - There is no evidence of significant intellectual contribution from the student beyond the AI's initial outputs.
 - The submission merely compiles AI-generated text, visualisations, or code without meaningful evaluation or contextualisation.
- **50% Level: Attempts at Editing AI-Generated Content (Moderate Intellectual Input)**
 - AI-generated content has been partially edited or refined by the student.
 - Evidence of some intellectual engagement is present, but the student's input is limited to surface-level adjustments, such as correcting grammar or slightly modifying structure.
 - Student demonstrates a basic understanding of the AI's role but provides minimal additional insight and/or creativity.
- **100% Level: Substantial Contribution and Refinement (High Intellectual Input)**
 - AI-generated content is extensively edited, expanded upon, or integrated with original material.
 - The student demonstrates ethical use, critical thinking, creativity, and a clear rationale for how the AI outputs have been utilised and enhanced.
 - The submission reflects a strong understanding of the topic, with the AI serving as an effective tool to complement the student's intellectual effort.

Criteria 2: Delineation of AI and Student Contributions

Assesses the clarity in identifying which sections or elements were AI-generated and the student's role in the process.

- **0% Level: No Delineation of AI vs. Student Work**
 - The student does not distinguish AI-generated content from their own contributions.
 - Lack of transparency in the use of AI results in unclear authorship.
- **50% Level: Basic Delineation of AI Contributions**
 - The student identifies which sections were AI-generated but provides limited or vague explanations of their role in editing or enhancing the content.
 - The distinction between AI and student work is present but lacks depth.
- **100% Level: Detailed and Transparent Delineation**
 - The submission clearly specifies AI-generated sections and the student's contributions to editing, refinement, and intellectual input.

- The explanation includes a detailed rationale and ethical use for using AI, addressing why specific tasks were delegated to AI and how the student's actions added value to the content.

Criteria 3: AI Use Declaration and Reflection

Evaluates the completion and quality of the required AI Use Declaration form and reflection on the role of AI in the assessment.

- **0% Level: Incomplete or Missing Declaration**
 - The AI Use Declaration form is missing or incomplete.
 - No reflection or rationale is provided for the use of AI in the assessment.
- **50% Level: Basic Declaration with Limited Reflection**
 - The AI Use Declaration form is completed but lacks depth in explaining the rationale for AI usage.
 - The reflection demonstrates a limited understanding of AI's impact on the work.
- **100% Level: Comprehensive Declaration and Insightful Reflection**
 - The AI Use Declaration form is thoroughly completed, with a clear, detailed explanation of how and why AI was used.
 - The reflection shows thoughtful consideration of AI's role in the learning process and its contribution to the final submission.

Notes for Assessment:

1. Students must submit a detailed explanation (~250 words) describing the AI's role in their work, including a rationale for its use and specific contributions to their assessment.
2. A completed **Artificial Intelligence Use in Assessment** form is mandatory for the assessment to be marked. Please follow the instructions on Studydesk.
3. Submissions that fail to comply with transparency requirements and/or provide insufficient intellectual input may be penalised, or may not be marked.

Special Instructions

1. Answer all questions, and ensure that your answers have the coverage, and are in the format requested.
2. Present your own ideas.
3. Your answers should be properly referenced and reflect that you have undertaken research outside the study material.
4. It is expected that your answers will be produced using electronic word processing. The .pdf format is preferred for written answers. Answers to numerical questions should be produced with an electronic spreadsheet, in which all steps in any calculation should be clearly explained.
5. Students should ensure they clearly understand the meaning of plagiarism and cheating. In particular, students should understand that while they may collaborate with other students on the conceptual ideas in their assignments, the final written report submitted by each student must be unique, and must not contain the written material of (a) any other student in the course, or (b) by any other person without due acknowledgement. Assignments will be submitted to plagiarism detection software at the time of submission.
6. Assignments will be submitted electronically via the StudyDesk. They must be able to be read by Turnitin plagiarism detection software.
7. Requests for extension of time for assignment submission should be made via the online form available from the "Current Students" section of the UniSQ Home Page.

8. A requirement of this assessment is for students to be available for a viva-voce (interview) to speak on the substance of the relevant assignment work submitted. This will be an in-person or Zoom interview that will take approximately 10mins or less. If such an interview is required, it will be scheduled and advised to those students undertaking it at least 1 week before the interview. It will normally occur after the submission of the relevant assessment(s).

Question 1**(30 marks)**

- a) Explain how technology differs from science, yet still does not equal innovation. Provide examples of each in support. (15 marks)
- b) Explain science or technology push and market or demand pull with respect to innovations. How does it affect product/service development in today's context in terms of competitive advantage and comparative advantage. (15 marks)

Question 2**(50 marks)**

- a) How would you define a new product? Provide examples in support. (15 marks)
- b) What factors would influence new product development? In what ways do the factors influence? (15 marks)
- c) What measures would you apply in assessing the success of a new product? Illustrate with a case study example. (20 marks)

Question 3**(30 marks)**

- a) Why is innovation so complex and difficult? How can we overcome the hurdles and barriers? (15 marks)
- b) How can innovation give a firm a competitive advantage? Give an example. (15 marks)

Question 4**(30 marks)**

- a) What is the traditional view of research and development? How does it compare with today's context? (15 marks)
- b) What is meant by scientific freedom and why is it important? Provide examples of potential societal problems if this freedom is restricted and/or misused. (15 marks)

Question 5**(30 marks)**

- a) Describe and illustrate several types of technology transfer. How does it contribute to product development cycles. (15 marks)
- b) Describe and illustrate technology diffusion and adoption. How does it sustain the health of industries and its global competitive advantage. (15 marks)

Question 6**(30 marks)**

- a) How are technological innovation and economics related? And how does one influence another? (15 marks)

- b) Who are the key players in a national innovation system? And how do they relate to each other? (15 marks)

Notes:

- (i) The assignment should be reported using the format set out below.

The Required Format is:

(a) Title page with word count and student name and number

(b) Answers to questions (including intext citations)

(c) List of references

- (ii) The answers should be no more than 2500 words total as a guideline and should be word processed. No penalties will be applied if the word count exceed the word limit.
- (iii) The exact number of words in the report should be reported on the Title Page.
- (iv) Written communication will be implicitly assessed in this assignment.
- (v) The answers to the questions should be well researched and justified, supported by relevant examples and illustrations, and importantly relates to the topics explored in the study materials.
- (vi) Please note that if plagiarism or cheating is detected in this assignment it could result in no marks for the assignment. Students should ensure they clearly understand the meaning of plagiarism and cheating. In particular, students should understand that while they may collaborate with other students on the conceptual ideas in their assignments, the final written report submitted by each student must be unique, and must not contain the written material of (a) any other student in the course, or (b) any other person without due acknowledgement. You can find out more here: <https://www.unisq.edu.au/current-students/academic/academic-integrity>
- (vii) All sources of information used in the preparation of the report should be adequately cited and referenced in Harvard AGPS style, and you may need to consult works outside the formal study materials. Use to most up-to-date reference material available to you.