## ****Scenario-Based Report: Exploring Prompting Techniques in Generative AI****

### ****Scenario Context****

You are part of an AI research and training team working for an educational technology company, **EduThink AI**, which develops AI-driven learning tools for students and educators. Your task is to explore how different **prompting strategies** can improve the performance of a generative AI system when creating student-friendly study materials and analytical reports.

## ****1. Comparative Analysis Prompt****

### ****Scenario****

EduThink AI aims to evaluate how different AI models summarize academic content. The team uses a **Comparative Analysis Prompt** to analyze summaries generated by ChatGPT, Gemini, and Claude.

### ****Example Prompt****

“Compare the summarization styles of ChatGPT, Gemini, and Claude for a 500-word article on ‘The Basics of Blockchain Technology’. Analyze clarity, technical accuracy, and accessibility for undergraduate learners.”

### ****Outcome****

**ChatGPT:** Produced structured and pedagogical summaries.

**Gemini:** Focused on high-level abstraction, missing minor details.

**Claude:** Balanced technical and conceptual explanations.

### ****Insight****

Comparative prompts enhance **evaluation skills** of AI, promoting multi-model reasoning and cross-platform benchmarking — valuable for **AI audit reports** and **education analytics**.

## ****2. Experiential Perspective Prompt****

### ****Scenario****

The marketing department needs an AI-generated report reflecting human-like insight into student experience while using AI tutors.

### ****Example Prompt****

“From the perspective of a college student preparing for final exams, describe how an AI tutor powered by generative AI improves learning engagement and stress management.”

### ****Outcome****

The AI adopted a **first-person narrative**, integrating emotional and cognitive experiences, making the report **empathetic** and **relatable**.

### ****Insight****

Experiential prompts bridge **AI outputs and human context**, improving personalization in educational content creation.

## ****3. Everyday Functioning Prompts****

### ****Scenario****

The operations team wants AI assistance for **daily task automation** like scheduling, feedback analysis, and progress tracking.

### ****Example Prompt****

“Summarize today’s student feedback and list three key improvements for tomorrow’s class schedule.”

### ****Outcome****

AI generated quick actionable summaries, displaying **context awareness** and **task adaptability**.

### ****Insight****

Everyday functioning prompts enhance **practical utility**, embedding AI seamlessly into administrative and teaching routines.

## ****4. Universal Prompt Structures****

### ****Scenario****

EduThink wants consistent prompt formats usable across multiple departments (education, marketing, R&D).

### ****Universal Prompt Framework****

**[Role] + [Task] + [Context] + [Output Format] + [Constraints]**

### ****Example****

“As an educational analyst, summarize the key advantages of gamified learning in 100 words, focusing on student engagement.”

### ****Outcome****

Uniform, predictable responses with professional tone and format, regardless of task type.

### ****Insight****

Universal structures improve **prompt reusability**, **scalability**, and **training efficiency** in multi-department AI integration.

## ****5. Prompt Refinements****

### ****Scenario****

Initial AI outputs were too generic. The team refined prompts iteratively to increase **depth** and **specificity**.

### ****Example****

**Initial Prompt:**

“Explain blockchain simply.”

**Refined Prompt:**

“Explain blockchain technology to a 12th-grade commerce student using examples from digital payments.”

### ****Outcome****

Refined prompts led to **context-sensitive**, **audience-appropriate** outputs.

### ****Insight****

Prompt refinement enhances **clarity**, **target accuracy**, and **domain alignment**, especially for education and training applications.

## ****6. Prompt Size Limitations****

### ****Scenario****

When generating detailed research comparisons, AI models struggled with overly long prompts (exceeding token limits).

### ****Example Issue****

A 3,000-word input on “AI in healthcare” caused truncation and loss of focus.

### ****Solution****

The team used **chunked prompts** — dividing the input into sections (definition, application, ethics).

### ****Insight****

Managing prompt size ensures **efficiency**, **memory optimization**, and **context retention** during report generation.

## ****7. Conclusion****

| **Technique** | **Core Benefit** | **Use Case** | **Challenge** |
| --- | --- | --- | --- |
| Comparative Analysis Prompt | Model benchmarking | Research evaluation | Requires structured metrics |
| Experiential Perspective Prompt | Human-like empathy | Storytelling, engagement | Subjectivity may vary |
| Everyday Functioning Prompt | Task automation | Daily reports, summaries | Needs frequent updates |
| Universal Prompt Structures | Standardization | Multi-team workflows | May reduce creativity |
| Prompt Refinement | Output accuracy | Educational content | Time-intensive iteration |
| Prompt Size Limitation | Performance stability | Long-form generation | Requires chunking strategy |

### ****Final Insight****

Using a **scenario-based prompting approach** allows organizations like EduThink AI to create adaptive, efficient, and human-centered AI systems.  
Combining structured, experiential, and functional prompts ensures that AI outputs are **accurate, relatable, and operationally valuable**, supporting both **academic excellence** and **organizational productivity**.