From Prompt Engineering to Task Engineering

Designing AI-Ready English Learning

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Scenario: a student produces this in 20 seconds

Write a 50-word paragraph about the effects of climate change.

Climate change has serious environmental and economic effects. Rising temperatures intensify heatwaves, droughts, floods, and wildfires, while melting ice causes sea levels to rise. These changes also threaten ecosystems, reduce food and water security, damage infrastructure, displace vulnerable communities, and place pressure on national economies and public health systems worldwide.

What can we tell about what the student learned?

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What can we infer about what the student learned?

A. **Something**: the paragraph shows some knowledge of the topic.

B. Nothing: the text can't show who did the thinking.

Justify your choice with a partner.

What are students supposed to learn?

WORKSHOP FLOW

1. Prompt Engineering vs. Task Engineering
2. A Worked Example
3. Your Task Redesign: The Five-part Canvas
4. Peer Review
5. Your Next Step

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1
Prompt Engineering vs. Task Engineering

A better prompt may improve the AI response, but what is the student actually doing?

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Better prompts do not guarantee learning

PROMPT ENGINEERING

How should AI respond?

Focus: instructions to the model.

TASK ENGINEERING

What should learners think, do and show?

Focus: the learning sequence around AI.

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Why the original task is vulnerable

CURRENT TASK

Write a 50-word paragraph about the effects of climate change.

- Unclear outcome
- Outsourceable core thinking
- Invisible process
- Evidence = final text

Before any task:

- ✓ *Break the task into smaller learning steps*
- ✓ *Identify what learners must do themselves*
- ✓ *Set boundaries for AI support*
- ✓ *Decide what evidence will show learning*

TASK ENGINEERING CANVAS

Learning outcome	Human thinking	AI support	Evidence	Reflection
What should learners learn?	What must they do on their own?	Where may AI help?	How will learning become visible?	What should improve next time?

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2
A Worked Example

Original task: Write a 50-word paragraph about the effects of climate change.

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Protect students' thinking

Match each step (A-E) with one question on the Task Engineering Canvas. Work individually for one minute, then compare your answers with a partner.

A. Choose the effects, organize the ideas, and explain the connections.
B. Identify one thing to improve in the next writing task.
C. Show a brief plan, the first draft, and the final paragraph.
D. Use AI after drafting to check and suggest clearer wording/logic.
E. Explain two effects of climate change clearly in a short paragraph.

TASK ENGINEERING CANVAS

Learning outcome	What should learners learn?
Human thinking	What must they do themselves?
AI support	Where may AI help?
Evidence	How will learning become visible?
Reflection	• What should improve next time?

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Answer key

Learning outcome	Human thinking	AI support	Evidence	Reflection
What should learners learn?	What must they do themselves?	Where may AI help?	How will learning become visible?	What should improve next time?
E. Explain two effects clearly in 50 words.	A. Choose the effects, organize the ideas, and explain the connections.	D. Use AI after drafting, check and suggest clearer wording/logic.	C. Show a brief plan, the first draft, and the final paragraph.	B. Identify one area to improve in the next writing task.

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Original task vs. redesigned sequence

Visible evidence: idea notes, first draft, feedback, and final paragraph

****Visible = checked live, not just submitted.***

ORIGINAL TASK

Write a 50-word paragraph about the effects of climate change.

Evidence: final paragraph only.

REDESIGNED SEQUENCE

Before AI

1. List at least three effects
2. Choose two and note their impacts
3. Write the first draft

AI support

4. Check and flag unclear wording/logic.

Final decision

5. Revise in your own words + note what changed & why
6. Revise & reflect

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How to include AI support Human thinking

Example:

Act as a feedback coach. Identify one unclear claim and ask two questions that help me clarify it.

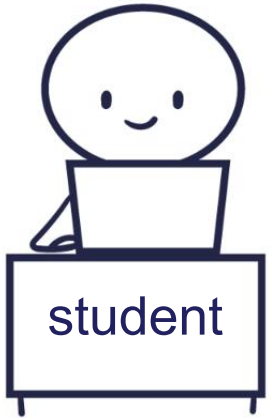
Do not rewrite my paragraph or add ideas.

This is my writing task: "Write a 50-word paragraph about the effects of climate change." and this is my writing: "Climate change causes many problems for people and animals. First, the weather becomes hotter, so ice melts and the sea gets higher. Besides, some places have more storms and floods, while other places are very dry. Moreover, animals may lose their homes. Climate change also makes people use more air conditioners." Act as a feedback coach. Identify one unclear claim and ask two questions that help me clarify it.
Do not rewrite my paragraph or add ideas.

One unclear claim is: **"Climate change also makes people use more air conditioners."**

Two questions to help you clarify it:

1. Why does climate change cause people to use more air conditioners?
2. How is using more air conditioners an effect of climate change?



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Limits on AI support

AI MAY SUPPORT

- ✓ Feedback
- ✓ Hints
- ✓ Rehearsal
- ✓ Language checking

AI MUST NOT

- × Complete the protected thinking
- × Rewrite the final response
- × Invent the ideas

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Make learning visible

VISIBLE EVIDENCE

- ❑ Idea notes
- ❑ Outline
- ❑ First draft
- ❑ Revision
- ❑ Final submission
- ❑ AI prompts and responses (if any)

STUDENTS' REFLECTION

- ❑ What changed?
- ❑ Why did I change it?
- ❑ What will I reuse?
- ❑ How can I do better?

3
Your Task Redesign with the five-part Canvas

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Apply the TASK ENGINEERING CANVAS

Choose one AI-vulnerable task from your own context, or select a task card in the handout, and complete the table to break it down.

Learning outcome	Human thinking	AI support	Evidence	Reflection
What should learners learn?	*What must they do themselves?*	*Where may AI help?*	*How will learning become visible?*	*What should improve next time?*

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4
Peer Review

Swap Canvases with a neighboring group.

Try to break the design

5-minute peer feedback

1. Can a learner outsource the core thinking?
2. Is the thinking visible?
3. Does the evidence match the outcome?

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Peer feedback

KEEP

Name one design choice that protects learning.

Keep it specific.

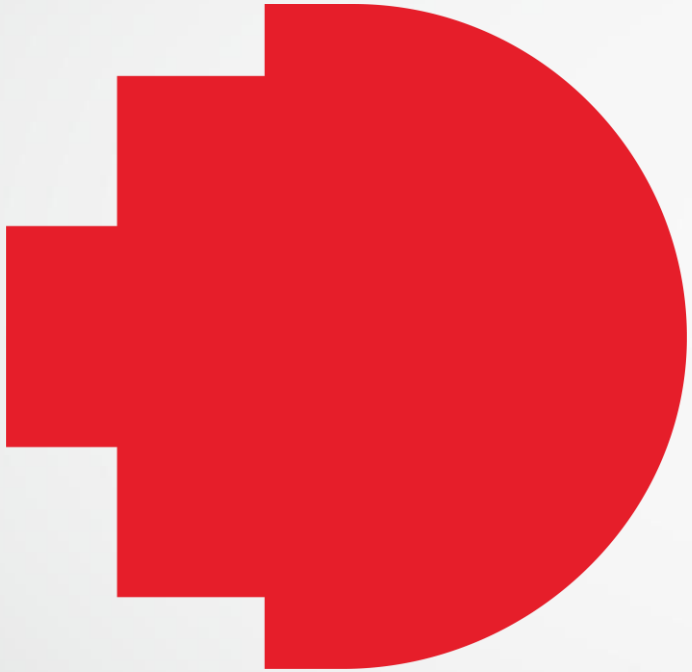
TIGHTEN

Name one loophole that lets AI do too much.

Suggest one change.

Revise the weak point

Which constraint matters most in your context?



- Mixed proficiency
- Limited devices
- Assessment
- Academic integrity
- Different school contexts

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5. Your Next Step:

“Tomorrow, I will redesign ___ by making ___ visible and allowing AI only to ___."

Thank you

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