

Clear Context and Structured Questioning Techniques (Prompting)

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Learning objective

The quality of an AI answer depends, to a surprising extent, on the quality of the request. The aim of this material is to help teachers give AI tools clear context and well-structured questions. By the end of the material, teachers will be able to name the building blocks of an effective educational prompt (role, task, learner level, learning objective, context, output format and evaluation criteria), turn a vague request into a structured one, apply basic questioning techniques such as examples, constraints and step-by-step reasoning, and improve results through deliberate iteration.

Introduction

A prompt is the message we send to an artificial intelligence system – in practice, it is the only channel through which we can tell the model what we need. Today a prompt is not only text: we can attach images, audio files, PDFs, spreadsheets or other documents, and all of these become part of the input that the model “reads” before answering.

Prompting is not about memorising magic phrases. It is about thinking clearly and passing that clear thinking on to the model. A good prompt is not necessarily long, but it is unambiguous: it states the goal, provides the necessary background, describes the expected output and, when useful, shows an example. The teacher remains the “manager” of the process: the model can speed up the work enormously, but it cannot decide the aims, the priorities or the quality standards on our behalf.

Key idea

“You can outsource your thinking, but you can’t outsource your understanding.”
Use AI for tasks you could, in principle, do yourself – so that you can recognise a good answer and spot a wrong one.

Three types of prompts

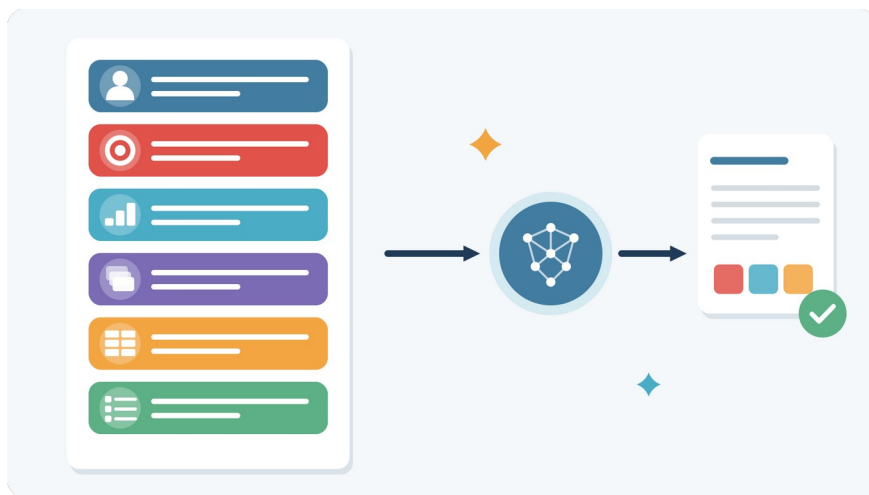
It helps to be aware of what kind of request we are sending, because the model approaches each type differently:

- **Question** – we expect an answer or an explanation (“How does a residual-current device work?”).
- **Instruction** – we ask the model to do something (“Write five multiple-choice questions on...”, “Translate...”, “Correct...”).
- **Planning** – we give an open task in which the model has to create a structure, plan or strategy (“Plan a four-lesson unit on...”).

Mixing these up weakens the result. “Could you write an e-mail to parents?” is phrased as a question, although we want an action. “Write an e-mail to parents about...” is clearer – and the clearer the expectation, the better the answer.

The building blocks of an educational prompt

When teachers use AI to prepare teaching materials, the following elements have the greatest influence on the relevance, precision and pedagogical usefulness of the response. Not every prompt needs all of them, but each missing element is something the model will have to guess.



The building blocks of a structured prompt: role, task, learner level and learning objective, context, output format and evaluation criteria

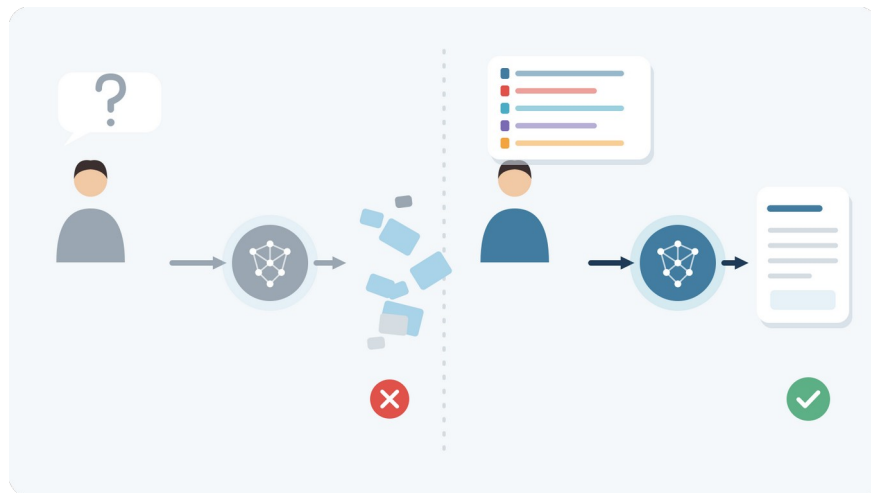
- **Role (persona):** in what capacity should the model answer? (“Act as an experienced VET teacher of electrical installation.”)
- **Task description:** what exactly should be produced? One clear verb is better than three vague ones.
- **Learner level:** age, year, prior knowledge, language level, special needs. The same topic needs a very different explanation for first-year apprentices and for adult re-trainees.
- **Learning objective:** what should learners know or be able to do afterwards? This keeps the output focused.
- **Context:** the curriculum, the time available, the equipment in the workshop, the attached syllabus or previous worksheet.
- **Output format:** table, bullet points, worksheet, dialogue, quiz, length limit, language.
- **Evaluation criteria:** how will we judge the result? (e.g. technically correct, uses the vocabulary of the trade, includes safety rules, can be completed in 15 minutes).

Example of a structured prompt

Act as an experienced vocational teacher of electrical installation. (role)
Create a worksheet about residual-current devices (RCDs). (task)
The learners are first-year apprentices, aged 15–16, with basic knowledge of circuits. (learner level)
After the lesson they should be able to explain why an RCD trips and how to test it safely. (objective)
We have 20 minutes and a demonstration board in the workshop. (context)
Give 6 short questions and 2 scenario tasks, with an answer key, in a table. (format)
Check that every statement is technically correct and that safety rules are included. (criteria)

From a vague request to a structured prompt

“What should I teach about RCDs?” – the model will answer, but it has to invent almost everything: the audience, the depth, the format and the purpose. The result is usually generic. When we add role, task and context in short, clear sentences, the model has much less to guess and the answer becomes directly usable.



A vague request leads to a generic, scattered answer; a structured prompt leads to a focused, usable result

Longer is not automatically better. It is not worth “talking the AI’s head off”: several short, focused sentences – or a task split into sub-tasks – work better than one long, convoluted paragraph. Compare these two instructions for the same task:

Convolutd: “Look through the document thoroughly and pick out the most important data and information that could be relevant for a summary, then transform them into an easier-to-understand form, then create visual charts from them so that the data is even more illustrative, and finally shorten everything into clear bullet points.”

Clear: “Summarise the key data of the document. Create charts from the summarised data. List the most important information in bullet points.”

Structured questioning techniques

Start with questions

Effective prompting often begins before the actual instruction. What is the goal? What background information is missing? How will I decide whether the answer is good? A simple and powerful technique is to ask the model to ask *us*: “Before you start, ask me the questions you need to create a good worksheet.” This turns the prompt into a dialogue and reveals the gaps in our own request.

Show examples

A good example is often worth more than a long explanation. If we have a worksheet, quiz format or style we like, we can attach it and ask for “something similar”. One good and one bad example can increase precision dramatically, because the model can see the boundary of what we want.

Add constraints

Constraints narrow the space of possible answers: word limits, number of items, reading level, required terminology, “do not use technical abbreviations without explaining them”, or “use only the attached textbook chapter as a source”.

Ask for reasoning, not only for the result

Language models need tokens to “think”. If we force a calculation or a multi-step decision into a one-word answer, errors become much more likely. For such tasks, ask the model to work step by step and to give the final answer at the end. Where precision matters – calculations, tables, data – ask it to use its tools, for example: “use code to calculate this” or “search the web and cite your sources”.

Ask neutral questions

The way a question is framed steers the answer. “What are the advantages and disadvantages of electric cars compared with conventional cars?” leads to a balanced answer. “Why are electric cars so much better than conventional cars?” leads to a one-sided list. AI systems tend to be very validating: they reflect and amplify the assumptions built into our questions. When we want an honest evaluation, we should phrase the question neutrally.

Let the AI write the prompt (meta-prompting)

We can also ask the model to help us formulate a better prompt: “Write a short, unambiguous prompt for ChatGPT that helps a beginner learn the basics of TypeScript. The prompt should ask for 1) five main topics, 2) one mini exercise for each, 3) a weekly study plan.” Reviewing the prompt the model produces is itself a good lesson in structured thinking.

Iteration: prompting is a dialogue

Prompting is rarely a single shot. A useful five-step routine – popularised, among others, by Google’s Prompting Essentials course – is: **Task → Context → References → Evaluate → Iterate**. Define the task, give the context, add references or examples, evaluate the answer against your criteria, and refine the prompt.



Write, generate, evaluate, refine – the iteration cycle of prompting

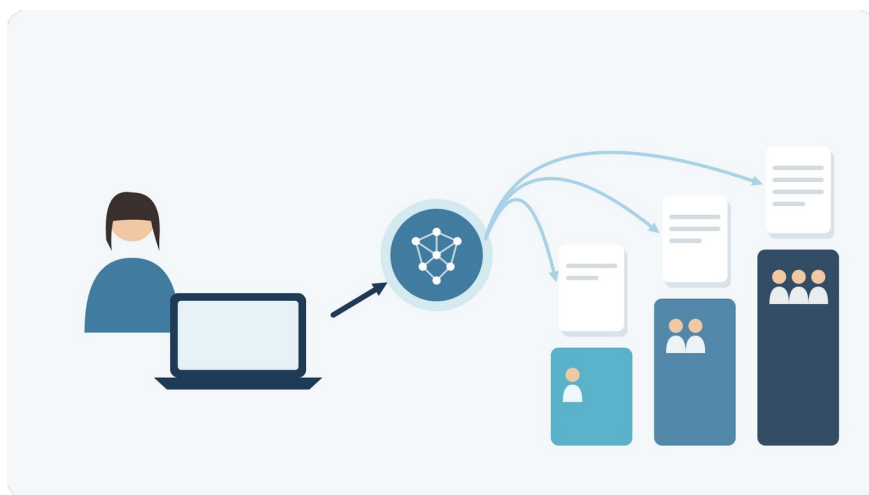
If the answer is not what you expected, try these iteration methods:

- Revisit the building blocks: which one was missing or unclear?
- Split the prompt into shorter sentences or smaller sub-tasks.
- Rephrase the task or try an analogous task.
- Introduce constraints (length, level, sources, format).
- Give feedback on the specific part that is wrong instead of starting from zero.

Two further practical points. First, the choice of model matters: a fast model is enough for everyday questions, while complex planning, analysis or calculations deserve a stronger “thinking” model. Second, the language of the prompt matters less than its clarity: current models work well in other languages (e.g. Hungarian), too, and a semantically muddled prompt is a much bigger problem than a few typos.

Adapting the output to the learners

One of the most valuable uses of structured prompting in vocational education is differentiation. By changing only the learner level and the objective in an otherwise identical prompt, the same topic can be prepared for different groups: a simplified explanation with everyday analogies, a standard worksheet, and an extension task for advanced learners.



The same structured prompt, varied only in learner level, produces differentiated materials

Takeaways for teachers

- Be clear about what you want before you type: goal, audience, format, criteria.
- Use the building blocks as a checklist; every missing element is a guess for the model.
- Prefer short, clear sentences and sub-tasks to long, convoluted paragraphs.
- Show examples and add constraints; ask the model to ask you clarifying questions.
- Ask neutral questions when you want an honest evaluation.
- Iterate: evaluate the answer against your criteria and refine the prompt.
- Stay in control: check facts, safety rules and pedagogical appropriateness before classroom use.

Effective AI use depends on thoughtful task design, not only on knowledge of individual tools. The passive user types, accepts and moves on; the active user asks, checks, adds and iterates – and gets exponentially more value from the same tool.

References

- Google (2024–2026): Google Prompting Essentials. Online course, Coursera.
- OpenAI: Prompt engineering guide. OpenAI Platform documentation.
- Anthropic: Prompt engineering overview. Claude documentation.
- Lengyel, Zs. (2026): Introduction to the concepts of artificial intelligence; Concrete applications for content generation. VITA training presentations.

Links

- Google Prompting Essentials: coursera.org/learn/google-prompting-essentials
- Practising prompting – meta-prompt (micro-learning, in Hungarian): dmc.prompt.hu
- OpenAI prompt engineering guide: platform.openai.com/docs/guides/prompt-engineering
- Anthropic prompt engineering overview: docs.anthropic.com

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