Using AI to Review and Improve Teaching Materials

Author: Neus Marsellés - INS Escola del Treball de Lleida (IET)

Reviewer: Mária Hartyányi, iTStudy Hungary Számítástechnikai Oktató- és Kutatóközpont

Learning goal

Teachers in vocational education regularly create worksheets, practical tasks, assessment rubrics, workshop instructions, safety notes and short explanations. These materials may work in class, but they can still contain unclear instructions, hidden assumptions, accessibility barriers or weak links with the intended learning outcomes.

Artificial intelligence can help teachers review these materials from different perspectives, but it must be used as a reflective partner rather than as an automatic judge.

This micro-learning content shows how to turn AI suggestions into a structured review process. The aim is to help teachers ask better questions, interpret AI feedback critically, decide what to accept or reject and keep final pedagogical responsibility. The approach is generic: it can be used in any VET speciality, from health care and administration to mechanics, catering, ICT, electricity, commerce and beauty services.

Why use AI as a reflective reviewer?

When teachers know their subject very well, they may not notice what a learner sees for the first time. A task that is obvious to an expert may be ambiguous for a beginner.

A rubric may mention professional quality without explaining what evidence learners should produce. A practical activity may assume equipment, vocabulary or prior knowledge that not all learners have. AI can act as an additional reader that asks: is this clear, aligned, inclusive and usable?

AI-assisted review is valuable because it can quickly generate questions and suggest alternative approaches.

While its feedback may not always be accurate, it can help teachers examine their materials more critically. This is particularly useful when sharing an existing resource with a new group of learners, adapting it to a different level, or creating a more accessible version.

What AI can check

A useful review should be based on explicit criteria. If the teacher simply asks whether a material is good, the answer may be too general. Instead, the prompt should ask the AI to examine specific dimensions of teaching quality.

- **Clarity**: Are the instructions understandable? Are the steps, expected output and deadlines clear?
- **Alignment:** Does the activity match the learning outcome, assessment criteria and expected level?
- **Inclusiveness:** Does the language avoid stereotypes and unnecessary cultural, gender or ability assumptions?

- **Readability:** Is the language appropriate for the learners, with key terms explained when needed?
- **Accessibility**: Could learners with different needs access the material, instructions and assessment evidence?
- **Improvement options:** Are the suggestions specific enough to help the teacher revise the resource?

The AI review cycle

A single prompt is usually not enough for a professional AI review. AI-supported review is a structured process in which successive steps, repeated as needed, lead to the outcome.

The teacher:

1. **Defines the context:** specifies the speciality, the learners' level of preparation, the intended learning outcomes, the time frame, the classroom or workshop conditions and any constraints.
2. **Requests a structured review:** asks the AI to identify strengths and risks on the basis of the given criteria and to formulate suggestions for improvement.
3. **Refines the review with targeted follow-up requests:** asks separately, for example, about clarity, accessibility or the consistency of assessment and learning outcomes.
4. **Weighs the suggestions and decides on the changes:** accepts the suggestions, marks them for adaptation or rejects them, and then makes the necessary changes. If needed, the revised version is reviewed again.



Figure 1. Teacher-led AI review of vocational teaching materials. (Source: ChatGPT Codex)

A generic review prompt

The following prompt is not a fixed script. It is a model that teachers should adapt to their own speciality and learning context. The most important part is

the context before the material: who the learners are, what they should learn and what the teacher wants to improve

Functional prompt:

Act as a reflective teaching-material reviewer for vocational education and training. Review the material below considering clarity, alignment with the stated learning outcome, inclusiveness, readability, accessibility, assessment coherence and possible improvements. First identify strengths. Then identify risks or unclear points. Then suggest specific improvements. Do not rewrite the whole material unless requested. Mark which suggestions require teacher judgement.

After the first answer, teachers should ask a follow-up question. For example: focus only on clarity and accessibility; suggest concrete changes for lower-level learners without reducing the professional challenge. This second step teaches that AI use is iterative and that better prompts come from reading the first answer critically.

From suggestions to teacher decisions

AI suggestions must be assessed using professional judgement before they are copied directly into a teaching resource. A structured framework helps us evaluate the feedback and plan revisions: we assign each AI suggestion to one of three categories and briefly explain our decision.

- **Accept**: the suggestion improves the material and fits the learning outcome.
- **Adapt**: the idea is useful, but it needs the teacher's context, terminology or safety rules.
- **Reject**: the suggestion is inaccurate, too generic, unsafe, unsuitable for the level or inconsistent with assessment criteria.

By documenting decisions, it becomes possible to track which of the AI's proposals were included in the material and for what reasons. This also makes future revisions and improvements easier. AI supports teachers' professional judgement, but teachers remain responsible for the quality of the teaching materials, the learning outcomes and everything that happens in the classroom.

Example

Situation

A vocational teacher in construction has prepared a practical task brief on building a brick wall. The brief sets out the work stages and assessment criteria, but the teacher wants to make sure the instructions are clear enough for all learners.

He submits the task to an AI tool and asks it to review its clarity, accessibility and the consistency of the assessment criteria.

The AI makes several observations:

- Some technical terms are not explained.
- The required personal protective equipment is not clearly specified.
- The assessment criteria are described too abstractly.

- The expected outcomes of the task are not clear enough.

The teacher reviews these suggestions and decides to:

- Add explanations of the technical terms.
- Describe the work process more clearly.
- Clarify the assessment criteria.
- Include a reminder of the safety requirements.

However, he rejects the suggestion to shorten the practical task because he believes it meets the curriculum requirements and develops important vocational skills.

This example shows that AI does not replace the teacher's professional judgement. It helps identify aspects worth reviewing and, where necessary, improving.

Example from higher education
In a 2025 US study, student teachers received feedback on their lesson plans from both a peer and AI. The findings indicated that AI feedback was particularly useful for checking logical consistency, structure and technical aspects, including alignment with the stated learning objectives. Peer feedback, however, offered greater pedagogical nuance and emotional sensitivity. The study therefore suggests that a hybrid approach combining AI-assisted review with peer feedback is worth considering.

Ethics, privacy and limits

Teachers should not upload personal learner data, confidential school documents, private assessment records or sensitive workplace information into public AI tools. Materials should be anonymised or fictionalised when possible. Teachers should also check that AI suggestions do not reduce professional standards, ignore safety requirements or make the task easier in a way that weakens learning.

AI may misunderstand vocational practice, invent requirements, over-simplify specialist language or propose changes that are not realistic in a workshop, laboratory or placement context. For that reason, the final review must always include human judgement, subject expertise and, where relevant, centre rules and legal requirements.

Takeaways for teachers

Discussions about how AI can reduce teachers' workload tend to focus on the resources it can generate – such as teaching materials, tests and lesson plans – and the formats it can produce. Less attention is paid to its role in reviewing materials teachers have created themselves. This microlearning content explores how AI can help teachers assess the quality and suitability of their own resources.

To make AI-assisted reviews of teaching materials useful, it is worth following a few simple principles.

- **Provide enough context**. Specify the vocational field, the learners' current level, the learning objectives and the intended teaching

context. The more relevant information the AI receives, the more precise its suggestions will be.

- **Ask for feedback on specific aspects.** Instead of asking a general question such as “Is this material good?”, ask the AI to assess clarity, accessibility, assessment criteria, readability or alignment with learning outcomes.
- **Make your follow-up requests precise.** If the initial response is too general, ask the AI to examine one specific aspect in greater detail or suggest alternative solutions.
- **Always evaluate AI suggestions critically**. Not every recommendation will suit your learners or vocational field. The final decision always rests with the teacher.
- **Keep improving your teaching materials.** Reviewing teaching resources should not be a one-off activity. Each group of learners and each teaching situation offers an opportunity to improve the materials further.

References

Yang-Heim, G. Y. A., & Lin, X. (2026). Preservice teachers’ perceptions of AI- and human-generated feedback on lesson plans. *Cogent Education*, *13*(1). https://doi.org/10.1080/2331186x.2026.2624898

Copyright 2026 VITA Consortium

This work may be reused and adapted under the terms of the Creative Commons Attribution-ShareAlike 4.0 International License (CC BY-SA 4.0).

Images generated with Codex in the style of the original module figure.

Funded by the European Union. Views and opinions expressed are those of the author(s) only and do not necessarily reflect those of the European Union or the National Agency.