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TIPS, TOOLS & INTELLIGENCE FOR DEVELOPING TALENT

FEBRUARY 2025
ISSUE 2502

# Partner With AI for Instructional Design

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TECHNOLOGY APPLICATION

technology application
VOL. 42 • ISSUE 2502 • FEBRUARY 2025

# PARTNER WITH AI FOR INSTRUCTIONAL DESIGN



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Printed in the United States of America.

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*TD at Work* (ISSN 2373-5570, Electronic ISSN 2373-5589, ISBN 978-1-960231-82-6, eISBN 978-1-960231-83-3) is published monthly by the Association for Talent Development, 1640 King Street, Alexandria, VA 22314. *TD at Work* is available for subscription in print or digitally. ATD national members receive a digital subscription to *TD at Work,* plus archive access, as part of their membership dues. The subscription rate for the Monthly All-Access (12 print and digital issues, plus archive access) is $129 (ATD national members) and $179 (national nonmembers). The monthly digital subscription rate for 12 issues is $109 (nonmembers). Periodicals postage paid at Alexandria, Virginia, and additional entries. POSTMASTER: Send address changes to *TD at Work,* 1640 King Street, Alexandria, VA 22314. Claims for replacement of subscription issues not received must be made within three months of the issue date. 

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**Imagine an L&D team in the near future, where instructional designers each have their own artificial-intelligence assistant.** The assistants handle routine tasks, analyze learner data, and serve as brainstorming partners for content design.

In that future, AI isn't just a tool but an integral team member, working alongside L&D professionals to enhance learning outcomes. Such a shift necessitates a new set of worker skills—specifically, the ability to effectively prompt AI models to achieve company, team, and individual success.

AI is transforming industries across the world, and the field of L&D is no exception. From automating administrative tasks to creating personalized learning experiences, generative AI offers endless opportunities for instructional designers and training professionals. However, to fully leverage AI's potential, it's essential to understand how to communicate effectively with intelligent technology systems.

In this issue of *TD at Work*, I outline:

- What AI is and the benefits of using it
- How to prepare before prompting AI tools
- A framework for creating AI prompts
- Cautions on ethics, transparency, and bias
- Examples of AI in L&D

## Why AI?

Adopting AI is becoming essential for numerous reasons:

- **Enhanced efficiency.** AI can automate time-consuming tasks such as grading assessments or scheduling training sessions, freeing L&D teams to focus on strategy and content creation.
- **Personalized learning.** AI can analyze learner data to provide personalized recommendations, improving engagement and retention.
- **Data-driven decisions.** AI can interpret large and complex datasets, offering insights into learner behaviors and program effectiveness.
- **Innovation in instructional design.** AI can brainstorm creative ideas for simulations, scenarios, and other interactive content.

L&D professionals can lead organizations through change management and AI integration, demonstrating its advantages and uses. By becoming proficient in AI prompting, you can unlock the advantages, positioning yourself and your organization at the forefront of learning innovation.

## Prompting and Critical Thinking

Prompting is not just about asking AI systems questions and requesting tasks; it's about asking the right questions. Before jumping into prompts, take a moment to assess your needs and the problem AI must solve.

Critical thinking bridges the gap between simply using AI and truly optimizing its potential. It enables you to maximize the value AI can provide and mitigate potential risks. The below framework will ensure that your AI prompts are accurate, meaningful, ethical, and relevant to organizational goals.

1. **Define the objective.** What is the goal of using AI for a particular task? For example, is it about saving time, adding creativity, or enhancing personalization?
2. **Identify resources and limitations.** What data, tools, or context does the AI engine require? Identify constraints such as budget, time, or ethical guidelines.

### What Is AI?

The term *artificial intelligence* is a broad phrase that represents many different technologies, from chatbots on websites to images of robots. By understanding the specific types of AI and their applications, you can better leverage them in L&D.

- **Artificial intelligence:** This involves the simulation of human intelligence by machines, including decision making, language understanding, and learning. AI aims to solve problems that typically require human-like thinking.
- **Machine learning:** This is a type of AI that enables computers to learn from data and improve over time without someone explicitly programming the model for each scenario. The technology uses examples to teach an AI program.
- **Generative AI:** This is a subset of AI focused on generating new content such as text, images, or music. Generative AI can use different models to create content such as lesson plans or quiz questions.
- **Large language models:** This is a type of model used within generative AI that trains on vast amounts of text data to understand and generate human-like language. LLMs are particularly useful for conversational interactions and content creation. Examples include Microsoft Copilot, OpenAI ChatGPT, and Google Gemini.
- **Artificial general intelligence:** This is a theoretical form of AI that could have the ability to understand, learn, and apply knowledge across a wide range of tasks—similar to human intelligence. Artificial general intelligence is a future concept, not a current reality.

3. **Map risks.** Determine potential risks, such as misinformation, bias, or unnecessary use of AI when simpler solutions are available. Think critically about whether the AI-generated content could inadvertently perpetuate stereotypes or make incorrect assumptions.
4. **Consider human-AI interaction.** Appreciate where the process needs human judgment. Some tasks that benefit from AI assistance may still require human insight for final review, approval, or adjustments.

### Define a Problem Statement

Before using an AI program, clearly define the problem you're trying to solve. A well-crafted problem statement guides your interactions with AI; provides the AI tool with a clear objective; ensures all team members understand project goals; guarantees the technology's solutions align with your goals; and establishes benchmarks for evaluating the success of the solution.

Use these guidelines to construct your statement.

**Identify the specific challenge or opportunity.** What learning need are you addressing? Is there a gap in knowledge or skills?

*Example*: Our customer service team lacks effective communication skills, leading to decreased customer satisfaction scores.

**Determine significance.** How does solving the problem benefit learners and the organization?

*Example*: Improving communication skills will enhance customer loyalty and reduce churn rates.

**Specify the outcome or goal.** What does success look like? How will you measure the impact?

*Example*: Increase customer satisfaction scores by 15 percent within the next quarter.

**Understand your audience.** Who are your learners?

*Example*: Our team consists of remote employees with varying levels of technical experience.

**Articulate the constraints.** What limitations exist? Consider time, budget, technology, or other resources.

*Example*: Learners must be able to access training online and complete it in a two-week timeframe.

Combine the elements into a concise, actionable statement: The remote customer service team must improve communication skills to increase customer satisfaction scores by 15 percent within the next quarter. That goal requires an online training program that accommodates varying schedules and skill levels. Learners must complete the program within two weeks.

### Is AI the Solution?

While AI has incredible potential, it isn't always the best choice for every problem. A decision-making matrix can serve as a support tool, enabling you to evaluate whether AI is a suitable solution for the challenge at hand (see "Sample Decision-Making Matrix"). By using a structured approach, you can avoid common pitfalls such as overreliance on AI or investing time and money in AI solutions that don't provide meaningful returns.

## Structured Prompts

If, after defining the problem, you choose to use AI, clearly communicate your needs to the AI system. Prompts ensure that the AI engine understands the objectives and provides responses that are both relevant and actionable.

A structured prompt has seven components (listed below). Every prompt, however, does not need to include all the factors. Consider which aspects best serve the audience, problem statement, goals, and timeline.

**Role and goal.** Define these elements to narrow the AI application's responses so it can provide customized, targeted results.

*Example*: Your role is to empower new investors with the confidence to ask questions. The goal is for the new investors to become clients and entrust their money to your services.

> **A well-crafted problem statement guides your interactions with AI.**

**Request.** The request you ultimately want the AI model to fulfill is fundamental to every prompt.

*Example*: Develop an introductory training module.

**Context.** The background or framing for the prompt enables the AI tool to generate relevant ideas. Why is the problem important? What effect should a solution have? Who is the audience and what are its constraints?