



AI in Talent Development: A Playbook for Next-Gen L&D

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SOLUTIONS



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Introduction

The goal of artificial intelligence (AI) is not necessarily to copy human thinking, but to use technology in innovative ways that can augment and assist humans. L&D professionals are slowly incorporating AI into their existing processes and broader L&D ecosystems.

Recent ATD research found that nearly 70 percent of TD professionals think they will need a higher level of competency in AI in five years than they do today.

This playbook will introduce you to the world of AI and how it is bolstering TD performance, delivering customized content, and improving the quality and impact of instructional design projects. It will also examine the ethical considerations that should be implemented to maintain privacy and data security.

It will also introduce you to some of the resources that ATD can offer to support you and your department on its AI journey.

This playbook will introduce you to the world of AI and how it is bolstering TD performance.



What Can AI Do for L&D?

By Myra Roldan

For corporate learning teams, AI enables promising applications such as personalized learning at scale, intelligent tutoring systems, and automated content generation.

However, AI still has distinct limitations in the learning context. For example, while AI can deliver customized content and recommendations, it lacks empathy, emotional intelligence, and true mentorship abilities of human coaches.

AI-generated content requires careful human curation to adjust tone, refine messaging, and insert authentic details. Although AI assessment engines can efficiently score employees and surface patterns, we must contextualize and appropriately act upon AI insights to avoid oversimplified or biased solutions. A Deloitte review found that, if unchecked, biased AI training data widens skills and opportunity gaps in the workforce. AI can learn bias and penalize individuals in a variety of areas, such as gender, race, and disability status.

Striking the right balance between AI and human intelligence is essential. With responsible design and implementation, learning teams can harness AI's capabilities and value for learners while proactively mitigating the risks of over-automation.

Learning teams can use AI to provide a high return on investment in four areas: curating and customizing learning content, personalized learning paths, process automation, and learning data analytics.

Curating and Customizing Learning Content

Through internal and external content curation, we can gather critical information for specific projects and use it to customize training solutions. For many L&D professionals, generative AI holds great promise in providing customized content curation at scale with large language models.

Using AI, learning platforms can automatically generate personalized reading lists, podcast recommendations, and microlearning content for each employee based on their interests, knowledge gaps, and learning goals. L&D must train the AI tool with the company's learning

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materials, as well as each employee's past performance and learning data. Then, the AI tool can use natural language processing prompts to produce tailored, curated content that aligns with each learner's needs. To truly personalize the learner's journey, AI can collect learner feedback data to continuously improve its understanding of the learner's preferences.

Personalized Learning Paths

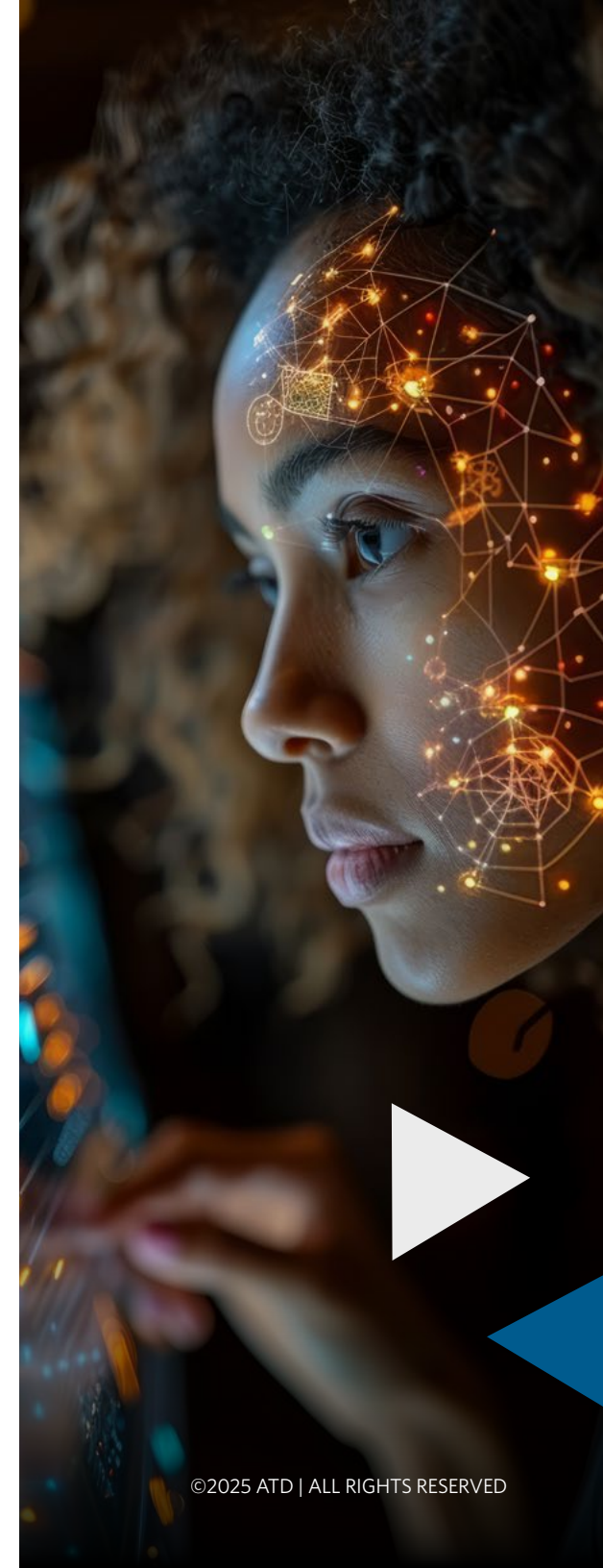
Similar to content curation capabilities, AI machine learning (ML) algorithms can analyze employee profiles and performance data to construct individualized learning paths using existing internal learning content, providing every learner with maximally relevant content to improve their capabilities and productivity. Going beyond merely recommending content, AI can sequence and pace learning activities, assess mastery, and modify the path in response to the learner's evolving needs.

ML algorithms combined with the expansive scope of company data unlock hyper-personalization. As the system ingests more data points over time, the personalized paths become smarter and more significant, providing employees with the right learning solution at the right time in the right format. Using that method, companies could maximize engagement and retention and realize on-the-job performance gains.

Process Automation

One of the main pain points that many L&D professionals have shared with me over the years is administrative tasks such as intake processing of requests, course scheduling, managing enrollment, allocating resources, tracking completions, and other repetitive manual workflows.

AI automation tools can handle many high-volume administrative tasks involved in corporate learning, saving teams countless hours. AI tutors can guide learners with convenient, 24/7 support, enabling L&D professionals to focus on more strategic initiatives. The workload reduction, coupled with powerful analytics from AI systems, unlocks the potential for learning teams to function at a strategic level.



Learner Data Analytics

With AI analytics, real-time data enables continuous optimization, even midway through a course. As learners participate in virtual or in-person training, algorithms can ingest engagement data, knowledge assessments, and feedback surveys to produce analytics dashboards. The dashboards provide visibility into the effectiveness of the learning solution, knowledge retention levels, and learner satisfaction. For example, when metrics indicate certain modules are not resonating with learners or concepts are unclear, you can adjust the course at that moment.

Over time, AI analytics uncover insights such as macro trends, systemic knowledge gaps, and opportunities to improve modalities to refine overall learning strategies. For key learning programs, AI can quantify the downstream impact on employee productivity and business key performance indicators by demonstrating the ROI on critical training investments, enabling learning teams to build credibility with senior leadership and business units.

The insights unlocked by AI analytics empower learning organizations to evolve from reactive to proactive, continuously improving quality, documenting value, and becoming a strategic driver of organizational success.

This was excerpted from the January 2024 TD at Work "[Unlocking the Power of AI.](#)"



Myra Roldan is a technologist, author, and international public speaker

on curation, augmented and virtual reality, voice, artificial intelligence, and design. She brings a unique mix of technical, business, and learning experience innovation to the field of adult education and competency development.



Using AI for Instructional Design

By Michelle Lentz

Instead of viewing AI as a tool that provides one-off answers, see it as a collaborative partner that contributes to ongoing work and success. That perspective encourages individuals to develop a relationship with AI, improving the quality and impact of instructional design projects.

By leveraging AI systems to take on some of the repetitive or time-consuming tasks, L&D professionals can focus on higher-level strategic work, augment creativity, boost efficiency, encourage continuous learning, enhance problem-solving, and promote human connection—all essential aspects of effective learning design.

Create a Template

Your interactions with AI will become more sophisticated and efficient over time. One of the most effective ways to achieve this is by evolving your prompts to reusable templates, turning one-time instructions into evergreen tools to streamline your workflow and enhance the consistency of the model's outputs.

Picture a scenario where your job involves creating module outlines for various training programs. Initially, you may spend time crafting a new prompt for each project and specifying the learning objectives, target audience, content scope, and instructional strategies. This can be time-consuming and may lead to inconsistencies across different modules. Note, however, the patterns in your prompts and the AI tool's responses. Specific phrases, structures, and specifications consistently yield high-quality results. With those insights, refine your prompts, incorporating the effective elements into a standard template.

Saving and reusing a refined prompt changes a simple directive into an assertive tool you can easily adapt for any topic or audience. Templates save time, ensure consistency across training materials, and enable individuals to focus on strategic planning and creative aspects of instructional design rather than getting bogged down with repetitive tasks.

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Each time you start a new project, update the placeholders (depicted below in brackets). Then the technology will generate a consistent, high-quality module outline that aligns with your established standards.

Develop a foundational prompt, such as: *AI, you are an experienced instructional designer. Create a detailed module outline for [topic] aimed at [audience]. The module should include clear learning objectives based on Bloom's taxonomy, interactive activities, and assessment methods that align with the objectives. Ensure the content is engaging and suitable for a virtual learning environment.*

Consider another scenario where you must generate assessment questions. Create a prompt template such as: *AI, you are an instructional designer specializing in assessments. Generate five multiple-choice questions on [topic] that assess higher-order thinking. Each question should align with the learning objectives uploaded here and include one correct answer and three plausible distractors. Use language appropriate for mid-level managers.*

Iteration

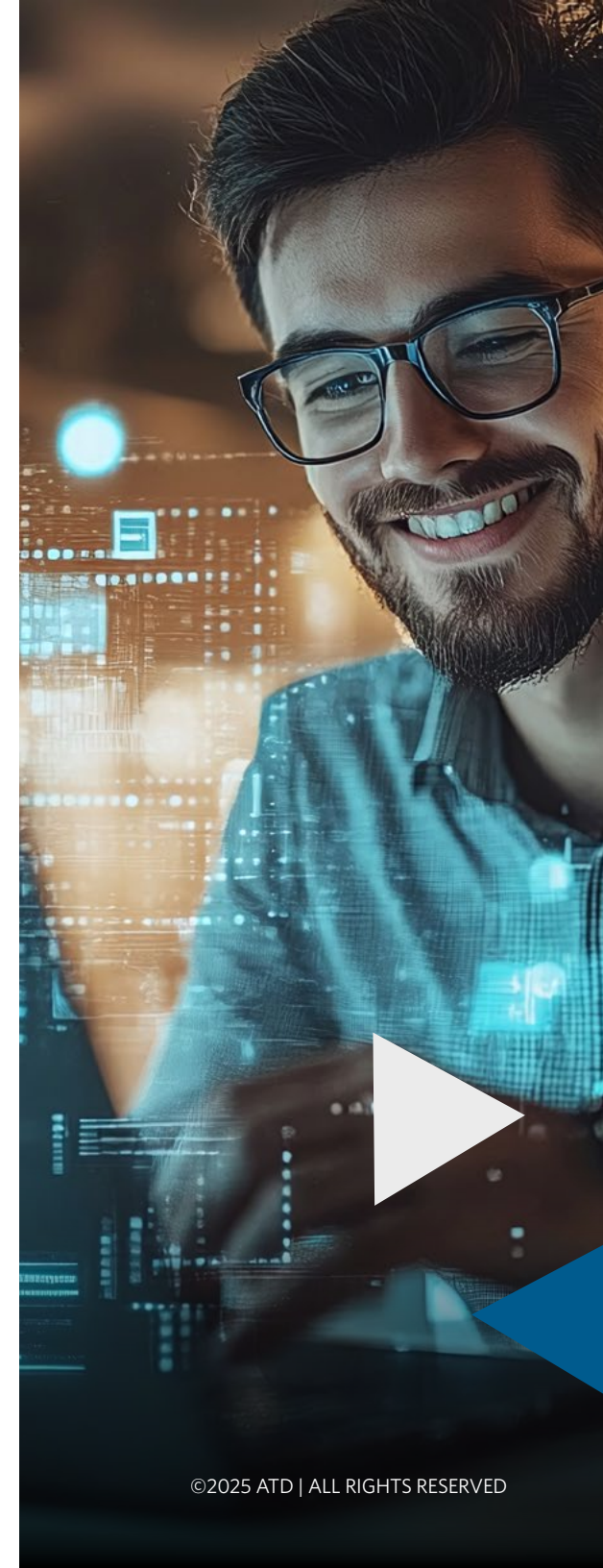
The iterative process of refining prompts is key to evolution. After each interaction with the AI application, take a moment to critically evaluate the output. Does it meet your expectations? Are there areas for improvement?

For example, if you find the language too formal or does not engage your audience, modify the prompt to include style guidelines. Try writing: *Ensure the language is conversational and engaging, suitable for early-career professionals.*

Over time, the refinements accumulate, resulting in a prompt that consistently yields outputs perfectly tailored to your needs.

AI Library

Developing a library of reusable prompts can significantly enhance productivity. The library becomes a personal toolkit, filled with assistive tools and templates ready to help you with various aspects of your work. Whether for generating course outlines, creating assessment questions, drafting communication plans, or developing interactive activities, you will have a set of reliable prompts at your fingertips.



Role Play With AI

AI can be a powerful tool to simulate various scenarios in L&D. By role playing with AI systems, you can craft learner personas, challenge your ideas with different perspectives, and engage with potential stakeholders.

Create Learner Personas

AI engines can generate detailed personas based on audience information to help you better understand learners and customize content. The AI-generated personas embody different types of learners, providing insights into their needs, preferences, and barriers, which is valuable for instructional designers seeking to create differentiated learning pathways. Create personas based on diverse demographics such as age, gender, job role, education level, and personal motivations or challenges.

Consider this sample prompt: *You are an instructional designer developing a training program on effective leadership for early-career professionals in a manufacturing company based in the Midwest region of the US. Your audience includes college-educated new hires who are still new to the organization, as well as tenured employees promoted from within the frontline workforce. Create several detailed and diverse personas, including by demographics, professional background, learning preferences, challenges, and motivation.*

The AI tool will return several personas, which you can iterate to match your audience. Once you create the personas, run virtual focus groups, asking the AI model to play the part of each persona as you question the profiles on their training needs.

For example, if all the learner personas are present for a focus group on new leadership training, ask questions such as:

- *What does effective leadership mean to you?*
- *Which leadership skills do you believe would be most beneficial to your current role?*
- *Are there any situations in your work where you felt unprepared or uncertain in a leadership capacity?*
- *What kind of support would be helpful as you develop leadership skills?*

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Play Devil's Advocate

AI engines can also assume different roles, such as skeptical stakeholders or key decision makers in an organization. Role-playing those interactions prepares you for real-life conversations. The AI program may surface hidden concerns, help you build resilient strategies, and approach your proposals with a well-rounded perspective.

Playing devil's advocate with AI is an effective way to identify potential weaknesses in your ideas or strategies. By asking AI agents to provide challenges to your proposals, you can uncover gaps you may not have previously considered, enabling you to proactively address them before presenting them to stakeholders or learners. For example: *AI, act as a devil's advocate for my proposal to introduce leadership development modules with AI integration. I have attached the outline. Present three potential challenges or risks that a skeptical L&D manager may raise.*

Once the AI system provides potential challenges, field in-depth questions and potential solutions. An iterative approach helps you refine strategies, strengthen arguments, and develop comprehensive proposals.

As another perspective, asking the technology to roleplay as a stakeholder enables you to anticipate the expectations and requirements of key decision makers such as a director of L&D, chief financial officer, or chief technology officer, so that you can address their specific concerns. For instance: *You are the chief technology officer of a midsize widget company that is considering adopting AI for employee training. What key factors would you need to see in an AI training proposal to give it your approval?*

To expand on role playing as a stakeholder, follow the same trajectory as with personas and prompt the AI engine to represent multiple stakeholders and develop a focus group.

Viewing AI as an active team member unlocks new opportunities for creativity, efficiency, and effective learning experiences. AI tools can augment L&D's capabilities, resulting in practitioners focusing on the meaningful work that drives real change.

This is an excerpt from the February 2025 TD at Work "[Partner With AI for Instructional Design](#)."



Michelle Lentz is an artificial intelligence and learning strategist

with more than 20 years of experience in L&D and technology. She has driven change in training teams at organizations including UPS, Oracle, Trivantis, and ELB Learning. Lentz is a founding director of L&D Cares. She holds a certification in AI in business from Arizona State University.



The Hidden Cost of AI Illiteracy: Are Your Employees Flying Blind?

As organizations move swiftly to adopt AI tools, there's a dangerous assumption taking root: that employees instinctively know how to use them.

By Debbie Richards

Artificial intelligence (AI) is rapidly becoming embedded in the digital workplace, woven into everything from productivity apps to performance management systems. As organizations swiftly adopt tools like Microsoft Copilot, ChatGPT, and AI-enabled LMS platforms, a dangerous assumption is taking root: that employees instinctively know how to use them well.

They don't.

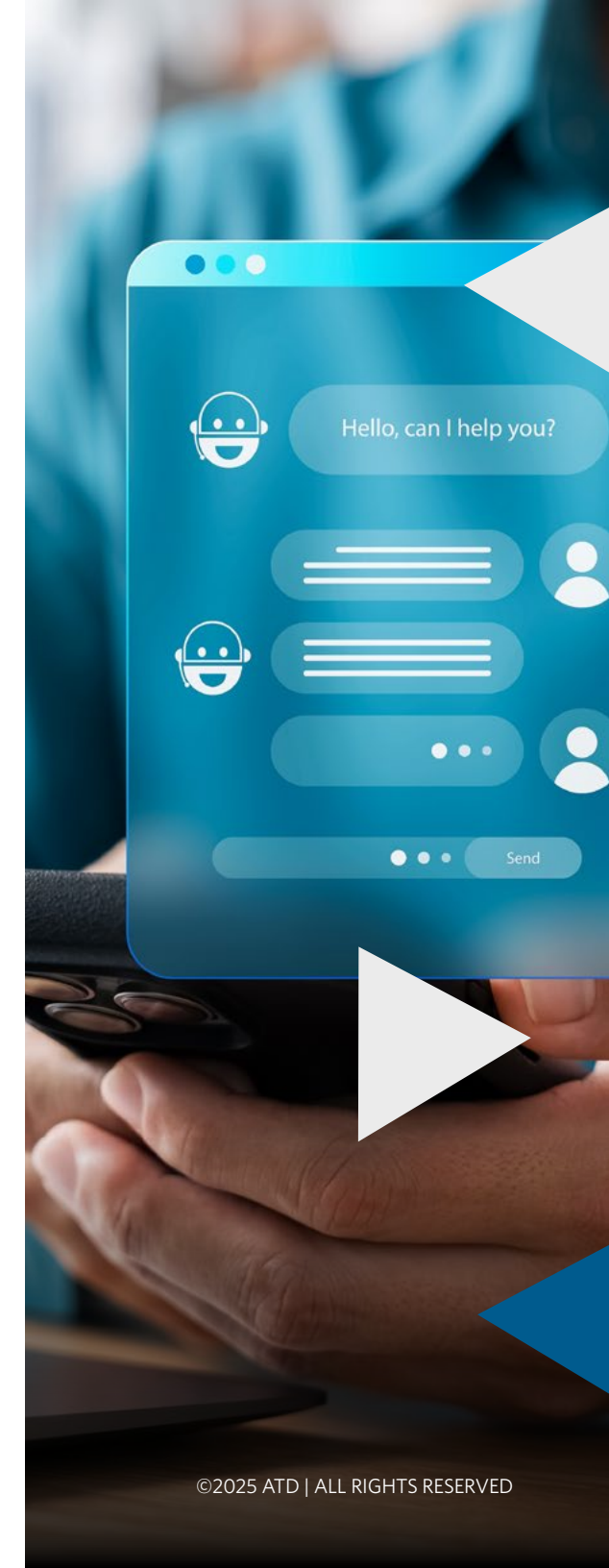
While AI tools can seem intuitive, they often mask a hidden layer of complexity—that, if not understood, can lead to misjudgments, misuse, or missed opportunities. **AI is being handed to employees without a user manual—and the consequences are piling up.**

This is the hidden cost of AI illiteracy: silent errors, lost productivity, compliance risks, and disengaged employees who feel overwhelmed or left behind. However, with AI literacy, employees can feel empowered, in control, and ready to face the challenges of the digital workplace. And talent development professionals are uniquely positioned to address it—if we act now.

What Happens When Employees Don't Understand AI?

Without basic AI literacy, employees might:

- **Misuse it**, producing flawed content or making risky decisions
- **Enter sensitive data** into public tools, triggering security or legal issues
- **Avoid AI tools altogether**, leaving productivity gains unrealized
- **Over-trust AI outputs**, assuming everything is factual, ethical, or aligned
- **Feel threatened or disoriented**, accelerating disengagement or resistance to change



Real-World Example: Microsoft Copilot

According to Gartner, **more than 80 percent of enterprises are piloting or planning Microsoft Copilot**, yet only **16 percent have put it into full production**. Why? A significant factor is the lack of readiness—not just technical integration but user understanding.

In several organizations I've supported, Copilot was enabled across Teams, Outlook, and Word with little to no employee education. Some users ignored it. Others treated it like a magic box. It wasn't a technology failure. It was a **literacy failure**.

AI Isn't Plug-and-Play—It's Power-Tool-and-Training

Think of AI as a power tool: handy but risky without training.

Would you hand a chainsaw to someone without showing them how to use it safely? Of course not. Yet we routinely introduce AI tools with no structured onboarding, no risk mitigation, and no framework for critical thinking.

When that happens, employees don't just underuse AI—they misuse it. And because the outputs "look right," the risks can go unnoticed.

Common outcomes of AI illiteracy include:

- Policies and procedures generated by AI that include outdated or non-compliant language
- Marketing content written by AI that sounds great—but misrepresents the brand
- DEI-related recommendations that unintentionally reinforce bias
- Learning content with hallucinated facts or fake citations

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What AI Literacy Really Looks Like

AI literacy **is not just a technical skill set**—it's a thinking skill set.

An AI-literate employee:

- **Knows what generative AI is** and how it produces content
- **Understands the limits** of what AI can and can't do
- **Checks sources** and validates AI outputs
- **Thinks critically** about ethics, bias, and accuracy
- **Collaborates with AI** but takes ownership of the results

This mindset must be cultivated across all levels—not just tech teams but HR, L&D, leadership, and frontline managers.

What Talent Development Can and Must Do

As TD professionals, we are the architects of workforce capability. We've helped employees navigate every major shift from digital transformation to hybrid work. Now, we must do the same for AI.

1. Infuse AI Literacy Into Core Learning Pathways

Update existing programs to include AI awareness:

- **Leadership:** Using AI for decision support—not delegation
- **Compliance:** Understanding the risks of public-facing prompts
- **DEI:** Recognizing bias in AI-generated recommendations
- **New hire onboarding:** Including your organization's AI use policies and expectations

2. Create Safe Spaces for Exploration

Host AI labs or sandbox sessions. Let employees play, test, and learn together. Encourage peer learning. Recognize “early adopters” and equip them as internal AI mentors or champions.

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3. Establish Practical Guardrails

Don't overwhelm learners with legalese. Develop clear, scenario-based guidelines:

- What tools are approved for use?
- Can I use AI to draft emails, policies, or training?
- What data is OK to input?
- When must human review be required?

4. Model Responsible Use Within L&D

Use AI to enhance your own design processes—such as writing learning objectives, analyzing skills gaps, or generating draft content—and share the “how” transparently. Show that AI can augment creativity and productivity without replacing human judgment.

Bonus Step: Partner across the organization.

AI literacy isn't just L&D's job; it's a **cross-functional effort**. Collaborate with:

- **IT and cybersecurity** to define tool permissions, safe data use, and tech rollouts
- **Legal and compliance** to codify policies and monitor for risks
- **Communications** to ensure messaging is clear and aligned
- **Leadership** to model curiosity, not fear

Final Thought: Empower Before You Automate

We're long past the point of asking, “Should we use AI?” The real question is: “Are our people prepared to use it wisely?” AI is a force multiplier, but only when employees understand how to use it responsibly. If we skip the step of building AI literacy, we're not accelerating the future of work; we're jeopardizing it. Let's commit to educating before we automate. Let's create cultures of curiosity, not confusion. Let's empower our people to think critically, adapt confidently, and collaborate with AI and not fly blind.

The future of talent development depends on it.



Debbie Richards is a highly accomplished learning

architect and technology enthusiast who has dedicated more than 30 years to designing meaningful learning experiences. Her expertise is in creating user-friendly learning solutions, integrating tools, platforms, and content to deliver exceptional results.

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How ATD Can Help Prepare Your Organization

In today's dynamic workplace, talent development teams are at the heart of innovation and growth. To support their expanding role, they need access to tools, resources, and learning that keep them ahead of the curve. That's where [ATD's Enterprise Solutions](#) comes in.

ATD has created standards and best practices for the training field for nearly 80 years. Companies from around the globe collaborate with us to train their teams on the skills and capabilities needed to meet today's challenges and tomorrow's opportunities. We know what good looks like, and we can help you ensure your L&D team has access to the resources and training to grow their knowledge and skills and increase the impact of their work in your organization.

ATD offers a wide variety of solutions to help talent development teams find success on their AI journey.

Team Training Programs

- [Using AI to Power Productivity Workshop](#)
- [Applying AI in Learning & Development Certificate](#)
- [AI For Talent Development Workshop](#)

Enterprise Membership Team Resources

- Research reports, whitepapers, and case studies
- *State of Industry* reports
- Webinars
- Tools, templates, and guides
- *TD* magazine
- ATD Community

[Contact us to learn more about how ATD can equip your team for success.](#)

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