

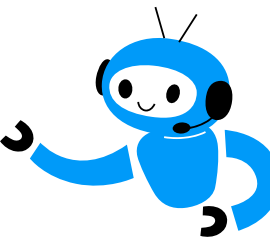


THE AI ADVANTAGE IN L&D:

A Strategic Guide

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ABOUT LITMOS

Litmos develops learning solutions for top-performing companies. An established leader since 2007, Litmos learning solution includes the easiest-to-use LMS, comprehensive learning content collections, integrations with top workflow tools, and services to support success. Thousands of companies trust Litmos learning solutions to deliver instruction and intelligence to employees, customers, and partners. Acquired by CallidusCloud in 2011, SAP in 2018, and by Francisco Partners in 2022, Litmos continues to innovate award-winning learning technology and set the standard for customer experience and satisfaction. The solutions are used by more than 30 million people in 150 countries, across 35 languages.

Find more information at www.litmos.com.

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Information and insights that inspire innovation. Harnessing the collective wisdom of learning professionals and their unique perspectives on the business of training, our research informs and guides the entire market landscape — from assessments to workforce development. Our experienced analysts share leading-edge insights and best practices for the corporate training professional by capturing the perspectives of learning professionals, learners and training companies across a diverse array of industries about relevant and emerging topics, such as learning methods, leadership development, learning technologies and measurement. Our deep ties with the training community are the foundation of our peer-based actionable information and the reason Training Industry is the most trusted source of information on the business of learning™.

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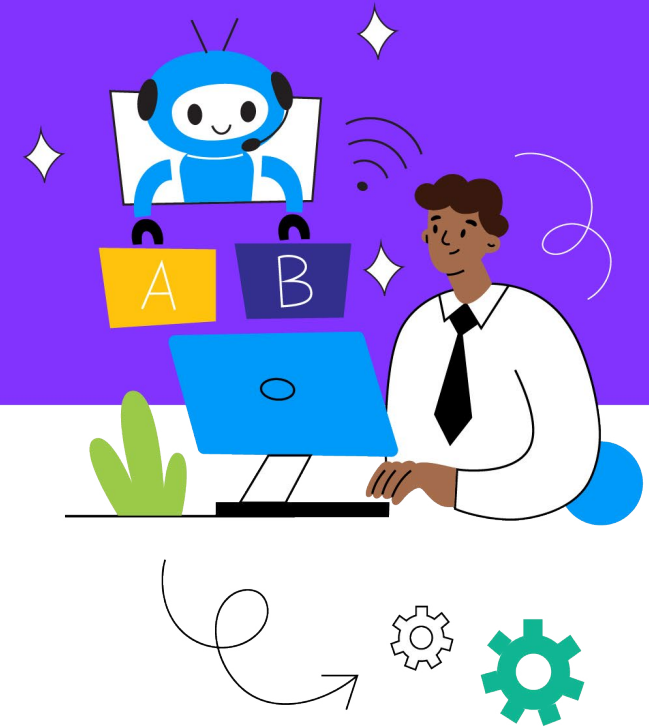
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INTRODUCTION: THE RISE OF THE MACHINES

At several points in recent history there have been events that were heralded as paradigm-shifting, market-disrupting junctures of people and technology. The introduction of the desktop computer in the early 1980s and the burgeoning adoption of the internet in the late 1990s revolutionized the way people lived their lives and worked.

In late 2022 and early 2023, another such event began to unfold: the interaction of the general public with several large language models (LLMs) flying under the banner of artificial intelligence (AI) **chatbots** and search engines. These technical, acronym-laden concepts may sound like they belong in a science-fiction novel, but they have become a part of our daily reality and shifted the way people work with, and alongside, computers.



The growing popularity of AI has been explosive. As evidenced by data from Google Trends (Figure 1), interest in AI began increasing in November of 2022 with the release of OpenAI's ChatGPT to the public. The continued increase in the search term's popularity signals that people across the U.S. are anxious to learn more about the revolutionary new technology and how it might affect their jobs.

Figure 1.
Search Popularity of "AI" in the US, 2022-2023

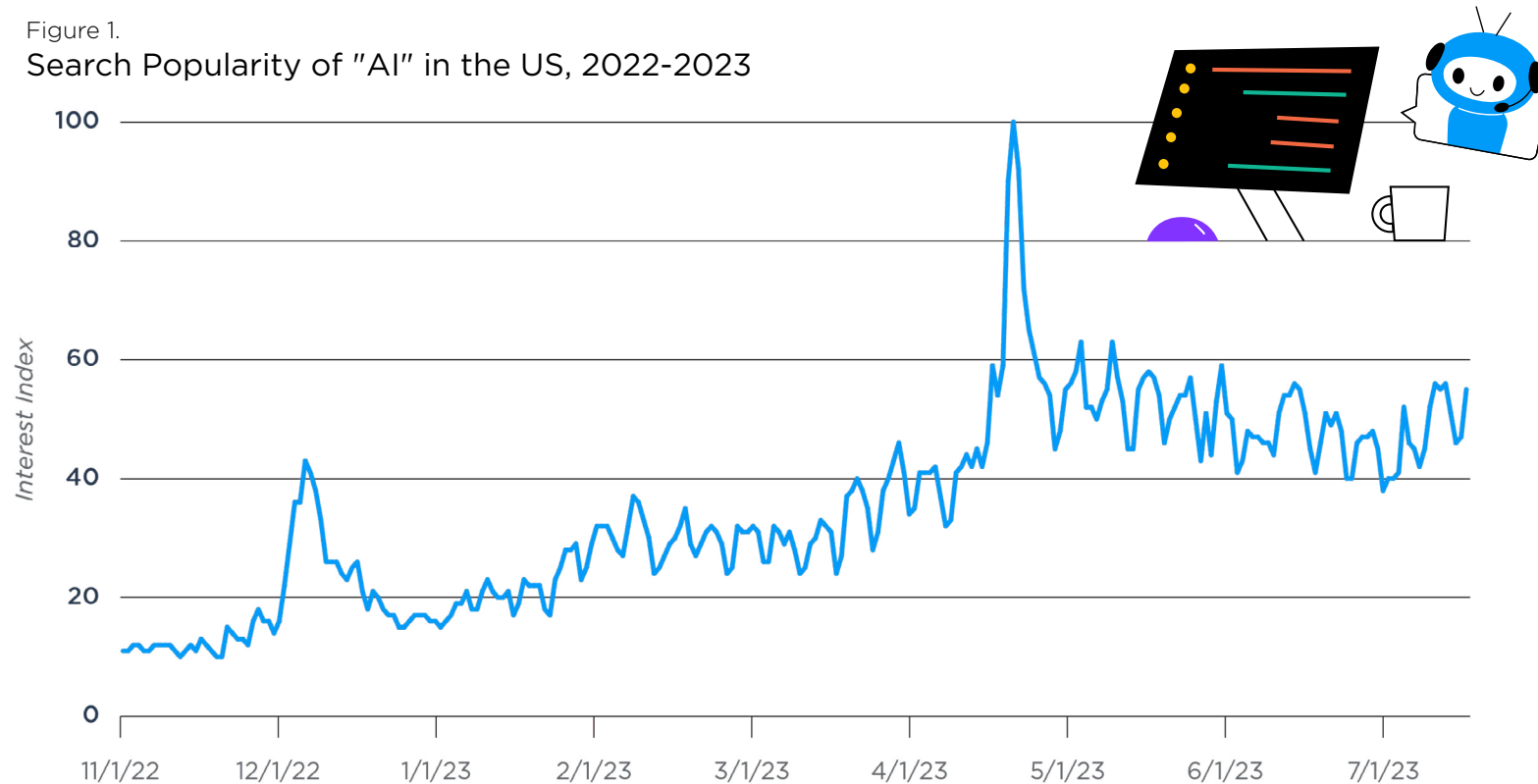
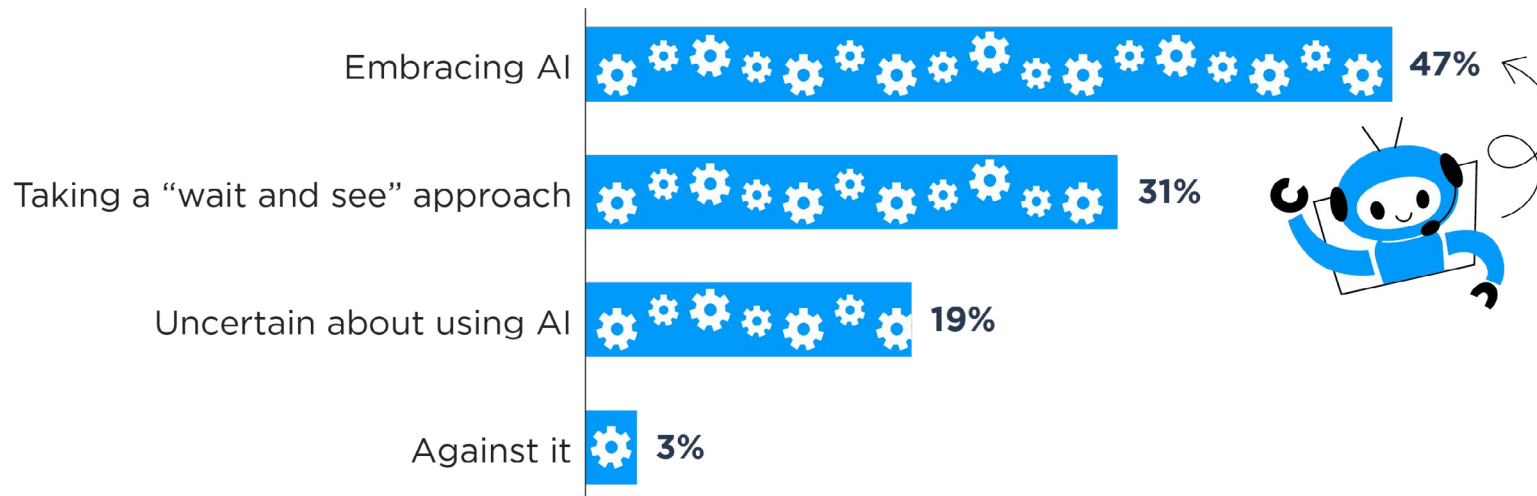


Figure 2.
Enterprise Disposition to Using AI



AI AND L&D

What do organizations think about utilizing AI in the workplace? We asked a sample of 201 learning and development (L&D) professionals and, as shown in Figure 2, nearly half of them stated that their employers welcome the use of AI with open arms. But what might be the most notable data point in Figure 1 isn't about the enthusiasts, but their opposition — only 3% of our sample said their company was actively against the use of AI through statement or policy.



WHAT EXACTLY DO WE MEAN BY “AI”?



When we talk about new, game-changing tools like OpenAI’s ChatGPT or Google’s Gemini, it’s important to understand what type of AI they represent. After all, the term “AI” has been applied to a multitude of different technologies for decades. ChatGPT, Bard and other chatbots are LLMs. LLMs are trained on massive datasets of text, including any e-books, forums, social media posts, articles or other sources that are publicly available on the internet. Using [machine learning \(ML\)](#), they’re able to model the associations between words and the contexts in which they appear. They are now capable of doing this to a degree of such complexity that they’re able to output quality, human-like content in a matter of seconds.

LLMs allow humans to interact with computers using everyday language as it is spoken or written (as opposed to a coding language). New models are becoming increasingly adept at bridging the divide between the imperfect way we humans use language and the rigid way computers process language. This means that users with little or no understanding of programming or the mechanics of ML can easily use LLMs to automate processes and generate content in seconds for tasks that would take significantly more time (even in the hands of a technical expert).

Nevertheless, what we see back in [Figure 2](#) is that the majority of L&D professionals aren't gathering the villagers and handing out pitchforks to attack any information technology (IT) mainframes. Many are still uncertain about how AI may impact their roles and the way their organization does business. Worry and trepidation, however, don't seem to be the main sentiments amongst those working in corporate training — instead, their uncertainty may stem from being unsure where and how this new technology can be harnessed to improve learning initiatives. In the next section, we'll explore some of the ways that L&D leaders can apply AI to employee training and highlight some of the tools that already exist in the market.





THE MANY FLAVORS OF AI CAPABILITIES

AI is not a new concept in L&D. For years, algorithms and automations have been deployed and refined to help organizations personalize learning and increase employee proficiency. With the introduction of LLMs, however, the level of sophistication has increased dramatically. When someone invoked the use of AI prior to 2022, it often meant something tangibly different from the applications we're seeing in the present day.

Although the possibilities are broad, we'll focus on three primary ways AI can impact L&D, including its ability to:

1. Curate and/or create learning content.
2. Facilitate and enhance training in different delivery modalities.
3. Support people, from learners to L&D staff.

Over the course of the pages that follow, we will discuss the use of AI in the following contexts:



Authoring tools



Content curation



Personalization



Translation and localization



Coaching and feedback



Job aids



Simulations



Learner support and assistance



Automated insights and strategy refinement



Coding support

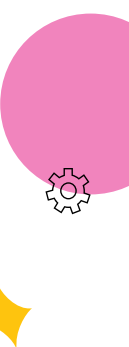


Internal marketing campaigns



AI FOR SUPPORTING CONTENT

In this section, we'll talk about the ways that organizations can use AI in service of the learning content they provide to employees. In general, this is one of the most popular use cases for AI identified by learning leaders.





Authoring Tools

AI has revolutionized the process of authoring training content, offering a range of capabilities to streamline and enhance the creation of courses, job aids and other supplementary **L&D materials**. Now, the course authoring process can easily be automated, allowing organizations to generate initial drafts of courses effortlessly.

By providing an AI model with learning objectives and a topic, you can generate a comprehensive first draft, with the model handling design aspects and other elements of content creation. These include the

creation of imagery, the development of eLearning slides and even the production of instructor manuals. It is important to note that the initial draft serves as a starting point, not a finished product. But a rough first draft can provide enough content to initiate discussions with your **subject matter experts** (SMEs), getting the ball rolling toward more comprehensive and meaningful content more quickly than you could otherwise have done.

With AI-powered authoring tools, organizations benefit from remarkable efficiency in generating training

content. These tools can alleviate the task of content creation, freeing up valuable time and resources and allowing L&D teams to focus on refining and enriching the content. This collaborative process between AI and human experts enables organizations to capitalize on the expertise of SMEs while benefiting from the speed and accuracy offered by AI tools.

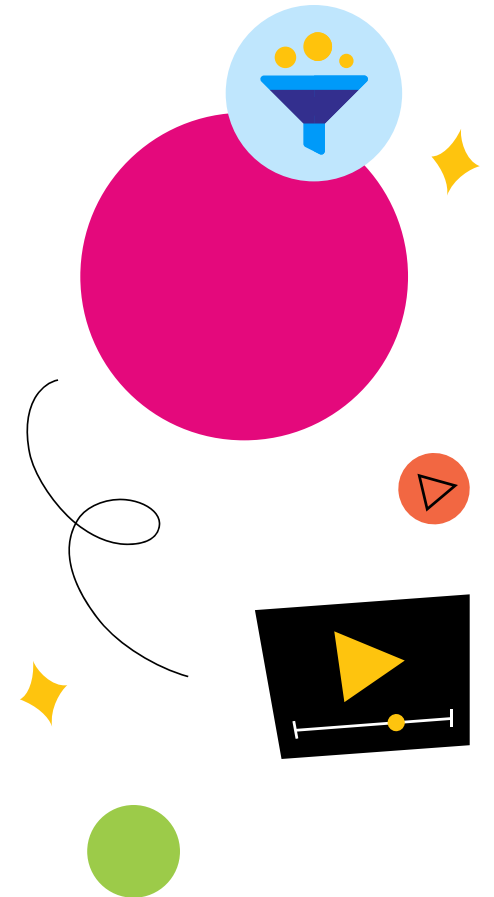


Content Curation

AI tools can independently select the most suitable content from a vast array of available resources, effectively tailoring recommendations to learners as they progress through their learning journeys. By closely monitoring the consumption patterns of individuals engaging with specific courses, assignments and assessments, AI algorithms can curate content based on factors such as popularity, social context, article quality and even recommendations from leadership. While the AI system excels at this curation process, it still requires human intervention; trainers and administrators should be prepared to override recommendations when necessary.

Several AI tools have emerged to support the actual building and curation of courses. These tools aid in the creation of comprehensive and well-structured courses, streamlining the

course-building process and ensuring the content is curated effectively. Additionally, AI-powered video platforms offer a way to easily create engaging and visually appealing training videos. These can help trainers deliver dynamic and interactive content that enhances the learning experience. Other AI video tools enable the creation of customizable avatars that can convey any written text. This allows trainers to personalize content delivery and provide learners an interactive and engaging experience. Together, these AI tools provide a comprehensive ecosystem for curating and delivering corporate training content, enabling organizations to deliver personalized, high-quality and impactful learning experiences.





Personalization

Personalization tools excel in guiding trainers through the process of assembling pre-existing courses from their catalog around specific subjects, ensuring that learners have access to the most relevant and comprehensive content. The processes of personalization and curation often work hand in hand, allowing trainers to curate and customize content to meet the unique needs of individual learners or specific training programs. The endgame of tools that personalize learning is to release trainers from the need to manually curate content to meet the needs of any given learner, instead letting the AI do the

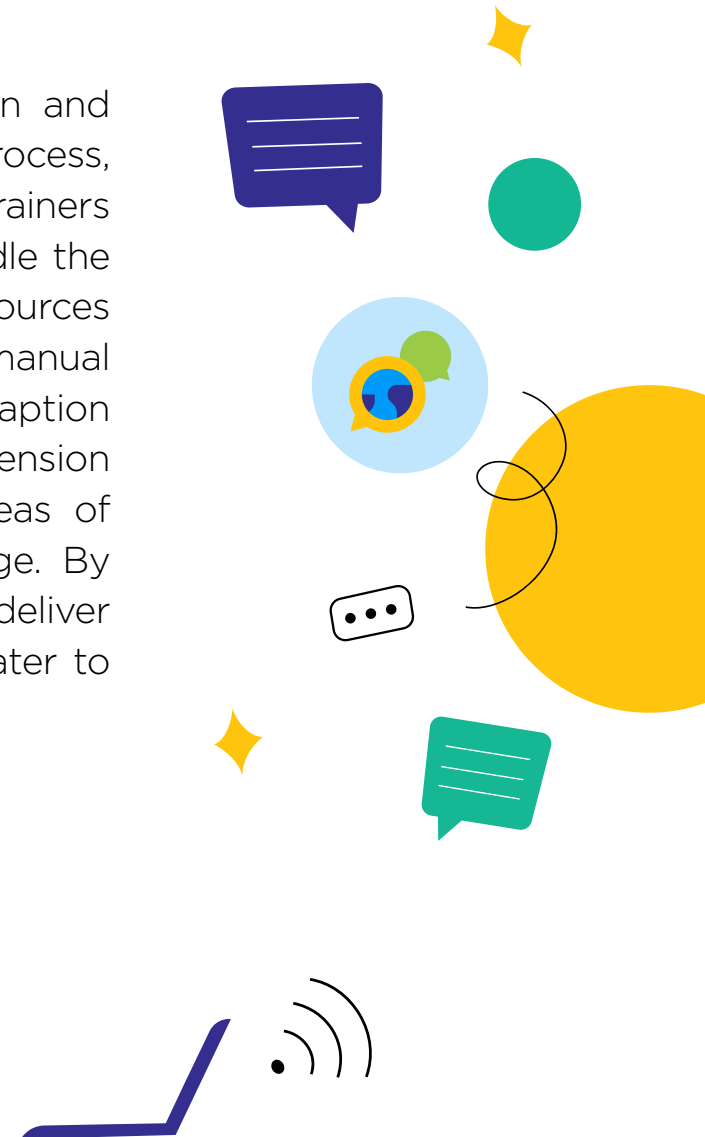
work. But although the administrative burden is lifted, the focus of these solutions falls squarely on the learner.

This personalized approach enables learners to acquire knowledge and skills in a focused and efficient manner, ensuring the best learning experience possible on a learner-by-learner basis, which can fuel a **higher level of** training effectiveness across the enterprise.

Translation and Localization

Using AI translation tools, trainers can submit transcripts or training material and receive translations in different languages. While the translations may not be flawless, AI tools can deliver a significant portion of the content accurately, enabling effective communication across language boundaries. Moreover, even within coaching tools, AI can generate caption transcripts for entire events, ensuring that participants have access to written records of the training session. These transcripts are particularly useful, as AI algorithms can identify specific phrases that may be incorrect or require adjustment, providing trainers with valuable insights for improving language accuracy and fluency.

The integration of AI tools in translation and **localization** significantly streamlines the process, making it more accessible and efficient. Trainers can rely on AI-powered solutions to handle the initial translation tasks, saving time and resources that would otherwise be spent on manual translation efforts. The availability of caption transcripts not only facilitates comprehension but also enables trainers to identify areas of improvement in terms of language usage. By leveraging AI tools, organizations can deliver training content in multiple languages, cater to diverse audiences and foster inclusivity.





AI FOR SUPPORTING DELIVERY



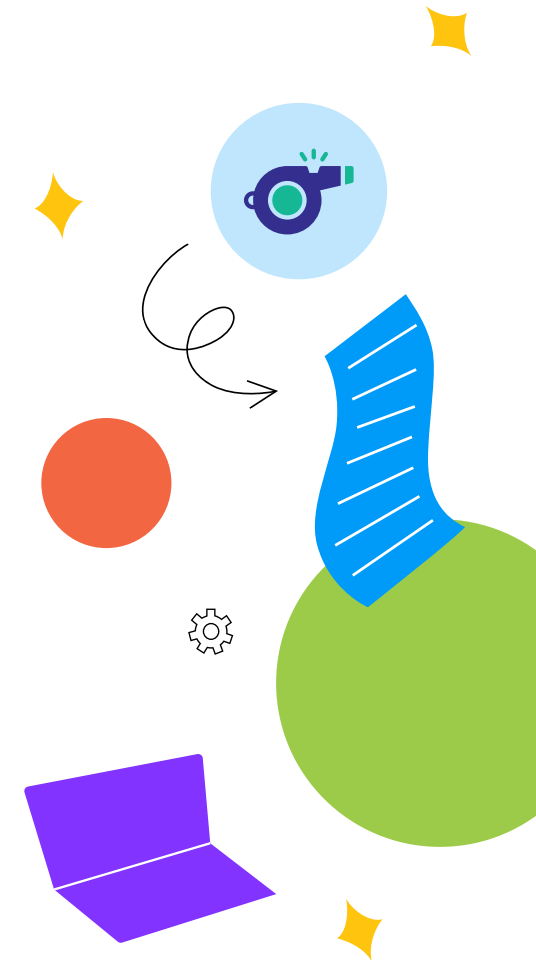
In this section, we'll look at the ways AI can be used inside training delivery to shape the experience of different modalities.



Coaching and Feedback

AI now offers a range of capabilities to enhance performance evaluation and skill development with personalized **coaching**. This area of application allows trainers to establish a rubric for feedback and leverage AI algorithms to provide valuable insights and recommendations. By observing sessions, exercises or conversations, AI can generate comprehensive feedback for both the coach and the learner, not only highlighting performance levels but also suggesting areas for improvement. These tools enable the seamless integration of video-based evaluation models, allowing trainers to simply drop in a video and generate data on various attributes such as engagement, persuasive arguments, information-sharing and eye contact. Learners benefit greatly from this immediate and targeted feedback, allowing them to practice and improve their skills with real-time guidance.

Coaching and feedback powered by AI have long been integral to customer service interactions, and organizations are now embracing their potential in other areas of corporate training. For instance, AI-powered sales coaching programs provide a platform for trainers to upload videos of sales interactions, allowing algorithms to analyze the content and provide valuable insights on communication effectiveness. Other tools can analyze Zoom meetings by identifying various elements within the session and assessing their impact on overall communication. This comprehensive evaluation helps individuals make targeted improvements.





Job Aids

AI can also tailor job aids to specific contexts and needs, ensuring they align with the unique requirements of individuals and organizations. These types of tools allow trainers to modify and adapt job aids based on various factors such as job roles, responsibilities and organizational structures. This capability empowers trainers to create job aids that precisely reflect the specific workflows and processes within their organization, resulting in resources that are highly relevant, practical and actionable.

For example, by granting these tools access to existing processes, they can automatically create workflows that outline the necessary steps. Even in cases where there may be uncertainty about the exact steps, AI tools are adept at generating educated guesses to provide a starting point. This functionality enables trainers and learners to document and visualize processes, enhancing comprehension and efficiency quickly and efficiently.

Simulations

AI contributes to the customization of **simulation-based training**, tailoring scenarios to meet the specific requirements and objectives of individual learners and organizations. Through the integration of AI algorithms, simulations can adapt to learner responses, adjusting the learning environment and challenges based on individual performance and skill level. This customization fosters an engaging and personalized learning experience, allowing learners to practice real-life scenarios and receive immediate feedback within a safe and controlled virtual environment.

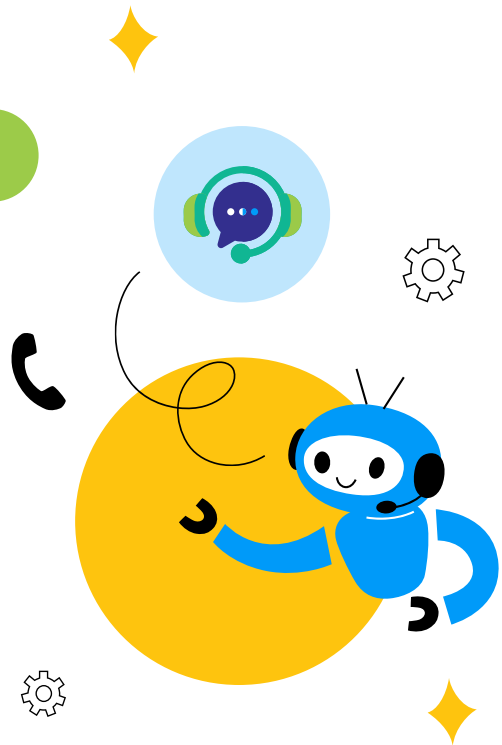
AI-enhanced simulations leverage increased processing power to comprehensively analyze learner interactions within the game environment. This analytical prowess allows trainers to pinpoint the exact moment at which a learner deviates from the intended learning path by contextualizing their actions within the simulation. By identifying these deviations, trainers gain valuable insights into areas where instruction may have fallen short or failed to meet specific learner needs, enabling targeted improvements in the training program.





AI FOR SUPPORTING PEOPLE

In this section, we'll summarize the ways that AI can directly support employees and L&D staff.



Learner Support and Assistance

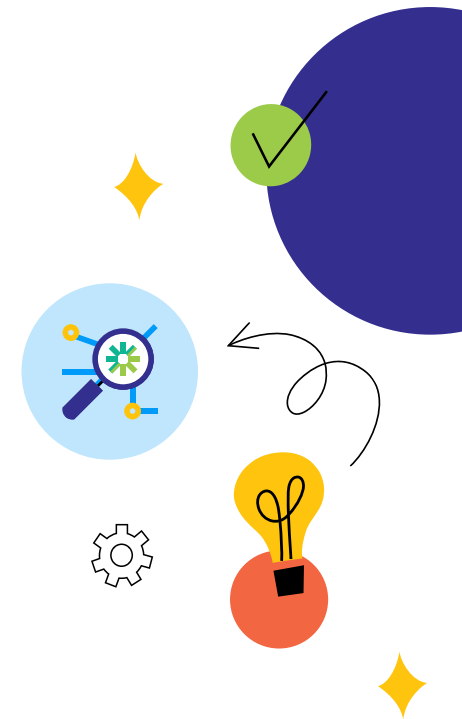
The role of AI in learner support and assistance extends beyond mere information provision. AI assistants can cater to individual learner needs, adapting to specific challenges or areas where learners are struggling. For example, AI-assisted coaching can generate a deeper level of insight for managers, highlighting both individual mistakes and broader trends regarding areas that need improvement. By leveraging AI algorithms, trainers can create a tailored and targeted learning experience that addresses each

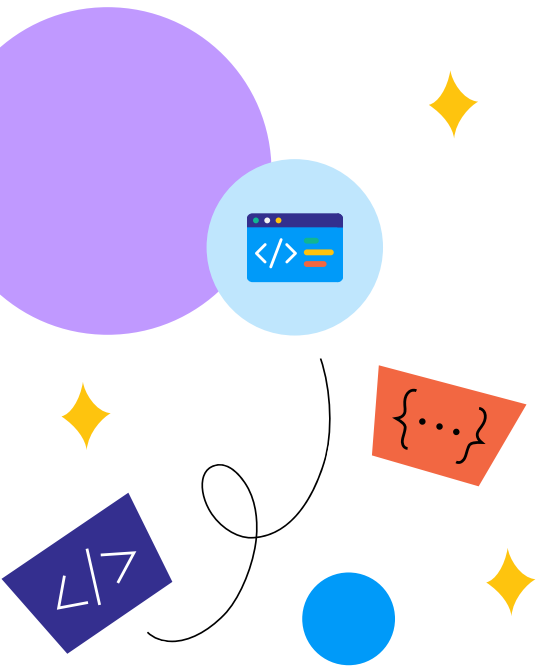
learner's unique requirements. The AI-powered assistance not only aids learners in acquiring knowledge but also enhances their overall experience by fostering a sense of support and guidance throughout the training process. This personalized approach ensures that learners receive the necessary help and resources to overcome obstacles and achieve their learning objectives, resulting in a more effective and fulfilling corporate training experience.

Automated Insights and Strategy Refinement

Trainers can leverage AI-powered tools that offer prompts based on specific competencies, enabling them to explore and identify the skills required to achieve mastery in those areas. These platforms can help trainers gain valuable insights into the effectiveness of their training programs by gathering detailed learner analytics, ensuring that training aligns with the desired learning outcomes and organizational goals. Providers then offer the ability to automatically generate learning paths based on that data.

AI-powered tools allow users to type in a competency, for which it then provides a comprehensive list of the skills that should be established to achieve mastery. This automated insight not only saves time but also enhances the strategic decision-making process, allowing trainers to refine their training strategies based on data-driven recommendations.





Coding Support

AI tools have revolutionized coding support, offering remarkable capabilities to streamline coding processes and facilitate interconnectivity between existing learning systems. These tools provide the ability to generate code and bridge the gap between different systems. For example, when faced with the challenge of transferring code from a **learning management system** (LMS) to another platform, AI tools can provide initial drafts of code, serving as a valuable starting

point. While some iterations may be necessary to refine and optimize the code, these AI-powered tools significantly expedite the process and help trainers overcome the complexities of coding.

By automating and simplifying these processes, AI tools empower organizations to create a cohesive learning environment where different systems work together harmoniously.

Internal Marketing Campaigns

It often falls upon trainers to take on the responsibility of creating impactful campaigns that drive positive change within the organization. AI tools can serve as powerful assets for generating internal marketing campaigns, enabling trainers to captivate learners' interest and drive engagement. Leveraging the capabilities of these tools, trainers can employ AI-generated content to draft compelling emails that pique learners' curiosity and motivate their participation in the training programs. Providers use AI to send automated email updates to learners,

prompting them to continue their learning journeys. AI can answer questions such as how to set up an internal page for the course, how to effectively communicate about the training or how to refine email marketing strategies.

This AI-powered support equips trainers with the necessary resources to design captivating campaigns that not only inform learners about the training but also inspire them to actively engage and embrace the learning journey.



WHY WE DID THE RESEARCH



Training Industry serves a community of learning leaders who are shaping the future of L&D. Recent polling of this community has uncovered a recurring theme — a multitude of questions surrounding AI and its potential applications and ethical considerations. Further, at our in-person conferences, AI is a popular topic, and we see learning leaders and training managers eager to learn more about what these tools can do and how to advance from theoretical uses to real-world application. It is evident that L&D professionals recognize the transformative power of AI and seek to explore its possibilities while remaining mindful of the potential pitfalls. We are committed to addressing these questions while providing expert guidance and facilitating a dialogue that helps our readers navigate the intricacies of AI. The aim of

this research is to equip learning leaders with the knowledge and understanding they need to harness AI effectively, ethically and with the best interests of their organizations and employees in mind.

We also feel that AI is not a threat to jobs in L&D. Instead, Training Industry feels that this is an area where learning leaders can grow their digital skills in order to harness the potential of these tools. Though the looming threat of more advanced AI tools making trainers' roles obsolete will always be part of the conversation, we believe that L&D as a whole stands to benefit from the use of AI to make employee learning more effective.

BEST PRACTICES FOR USING AI IN L&D

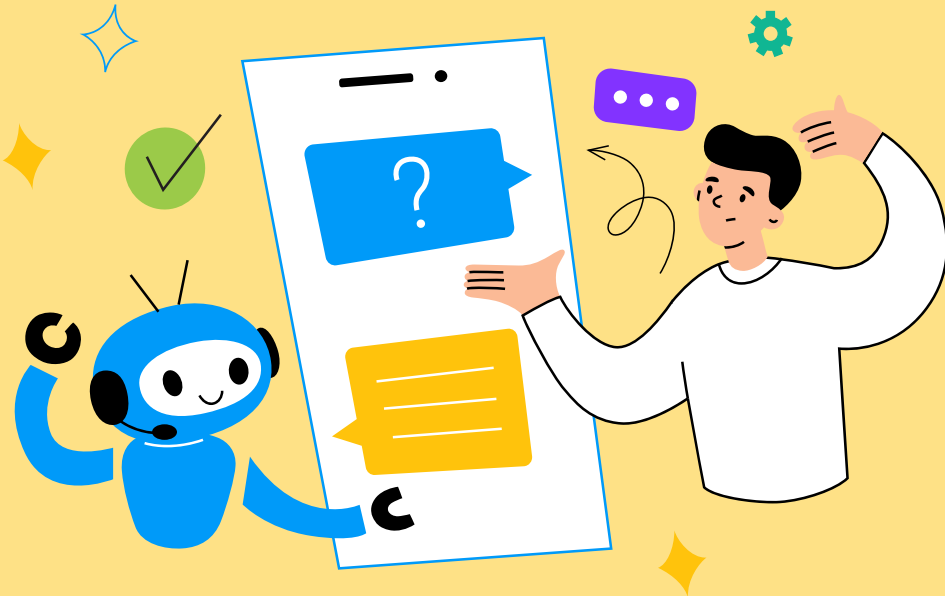


With all the rich possibilities, no organization should be wary of using AI to support L&D. But that doesn't mean there aren't areas where caution isn't warranted. Although the LLMs underneath most commercially available AIs are improving all the time, learning leaders need to be aware of their strengths and weaknesses in order to use them effectively. Following are some suggested best practices for organizations wishing to incorporate more AI into their L&D strategy and operations:

START MECHANIC, END ORGANIC

Due to the tendency for AI to produce “hallucinations” in explanations, L&D staff should never rely on an AI for anything where factual accuracy is important. An AI can greatly accelerate the planning process, however, and create outlines and suggest topics quickly and efficiently. A human, preferably an SME, needs to review the AI output and adjust as needed to ensure that learning content or strategies are in fact valid. In other words, AI can be a fantastic partner for brainstorming, but it should not be assumed that the content it creates is completely legitimate or accurate.





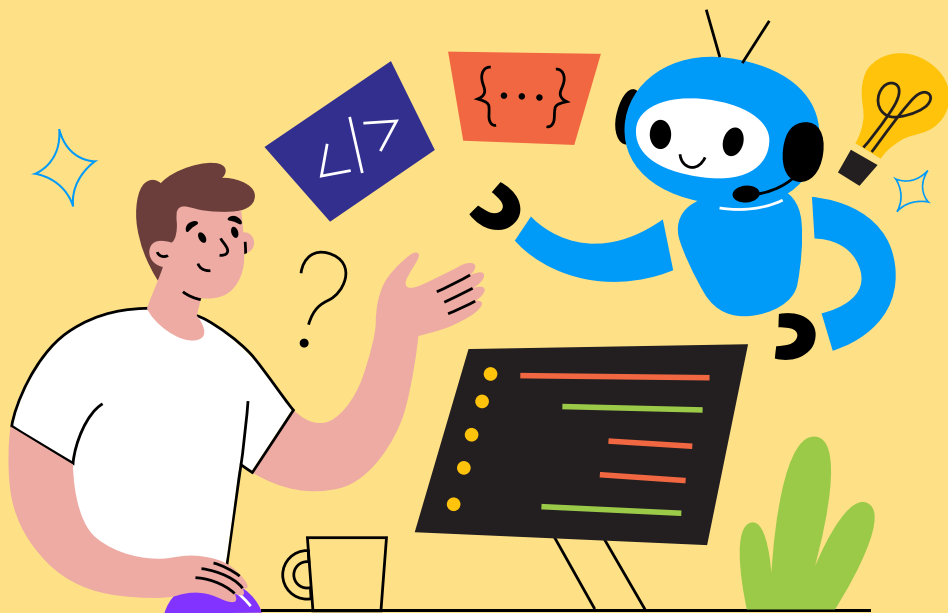
FORGET THE “INTELLIGENCE” BIT

While popular media may teem with warnings about the imminent sentience of AI and the doom it will bring to jobs and civilization, we’re still talking about tools. AI is a tool, plain and simple. It will learn, and do so efficiently, but precisely what it learns is the key issue. An AI chatbot will only answer the questions (or prompts, as they’re called) that it is fed — it will not extrapolate or innovate beyond the task handed to it. Now, while it is true that an LLM can be “trained” on proprietary information, the process of training a custom LLM is complex and costly, and often requires IT personnel and bandwidth that a typical L&D function doesn’t have access to. Is it an inordinately resourceful and efficient tool? Yes. But that’s only true when it is being used by someone who understands how to capitalize on its strengths and work around its drawbacks.

RINSE AND REPEAT AND THEN REPEAT AGAIN

Anyone who has used a popular LLM has likely experienced that slightly different prompts will garner similar but different answers from the AI, whether in depth of detail or overall length. This is a feature, not a bug, of how LLMs are created and how they operate. In practice, this allows a learning leader to triangulate the information or response they're looking for, even if it requires manually editing several answers together in order to achieve the desired outcome. To that end, get into the habit of hitting "regenerate response" often when using AI. Since you can now produce content in seconds, there's no need to settle for the first (or fifth) results you get. Also, as different LLMs may be trained on different source material, combining results from different AI instances may be the best way to ensure that no stone is left unturned while gathering multiple takes on an overarching question or problem.



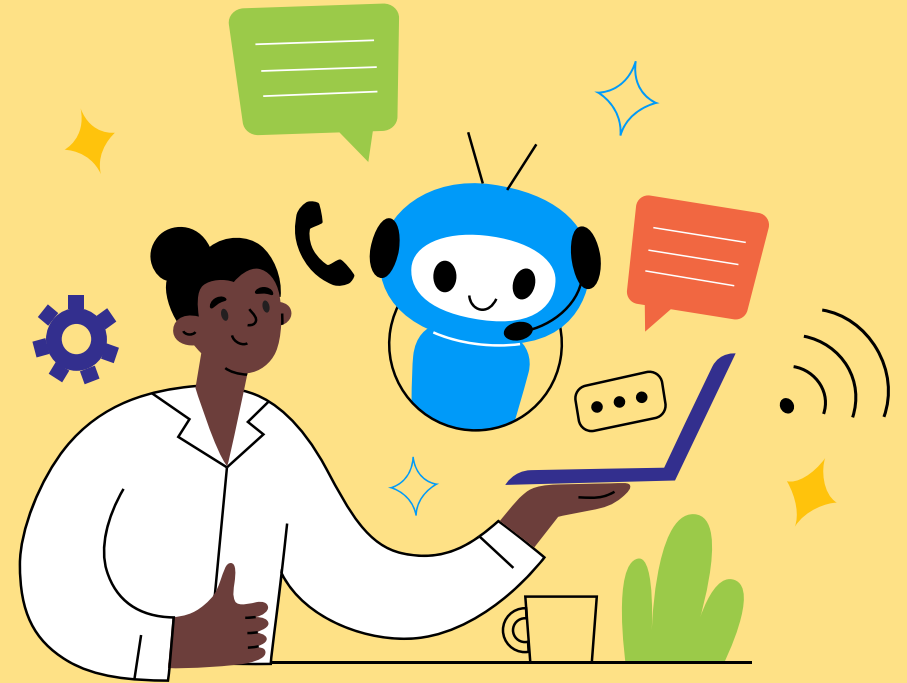


IT SLICES, IT DICES, IT HELPS WITH DEVICES

Of all the different use cases described in the previous section, one of the ways that an AI tool can be extremely useful is when it comes to writing computer code in a variety of languages (e.g., Python, CSS). The code is seldom perfect, but an AI can help L&D staff learn to use code and troubleshoot issues. Need to create visualizations and don't know how? AI can help. Having problems figuring out what to do with an application programming interface (API)? AI can help. It may not ultimately solve the problem, and it won't make you an expert user, but LLMs can increase your technical capacity to chase solutions that previously may have seemed too daunting to attempt.

ENHANCING ACCESSIBILITY FOR THE MASSES

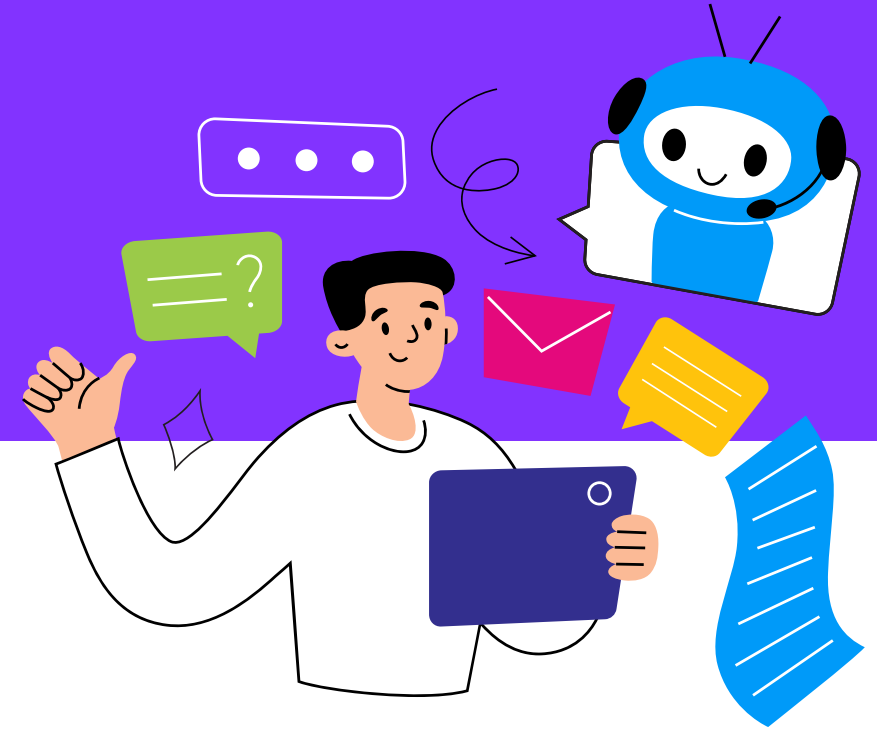
L&D video content is great, but for cases where it isn't already captioned, AI can help. With the ability to automatically generate captions based on images and video, AI can greatly reduce the time it takes to make sure your training initiative is accessible to all learners. Similarly, when there's a need for localization of training content, AI can again reduce the amount of time needed to translate learning into other languages. In either case, however, the appropriateness and accuracy of the translation likely needs to be reviewed by a human.



CONCLUSION

We're in the midst of a shift in the basic ways that humans interact with computers. Even the most agile businesses have been left struggling to keep up with the increasing pace of change brought on by LLMs and generative AI. As anxiety-inducing as it may seem, however, it's also a time of great opportunity for L&D. The discussed use cases and best practices should provide a solid starting point for understanding AI — and aligning your L&D function on its uses in your organization.

By keeping a human-first perspective in your approach to AI, you can ensure that your L&D efforts are accurate, effective and adaptable, no matter what changes new tech throws at us.



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By keeping a **human-first perspective** in your approach to AI, you can ensure that your L&D efforts are **accurate, effective and adaptable**, no matter what changes new tech throws at us.



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