

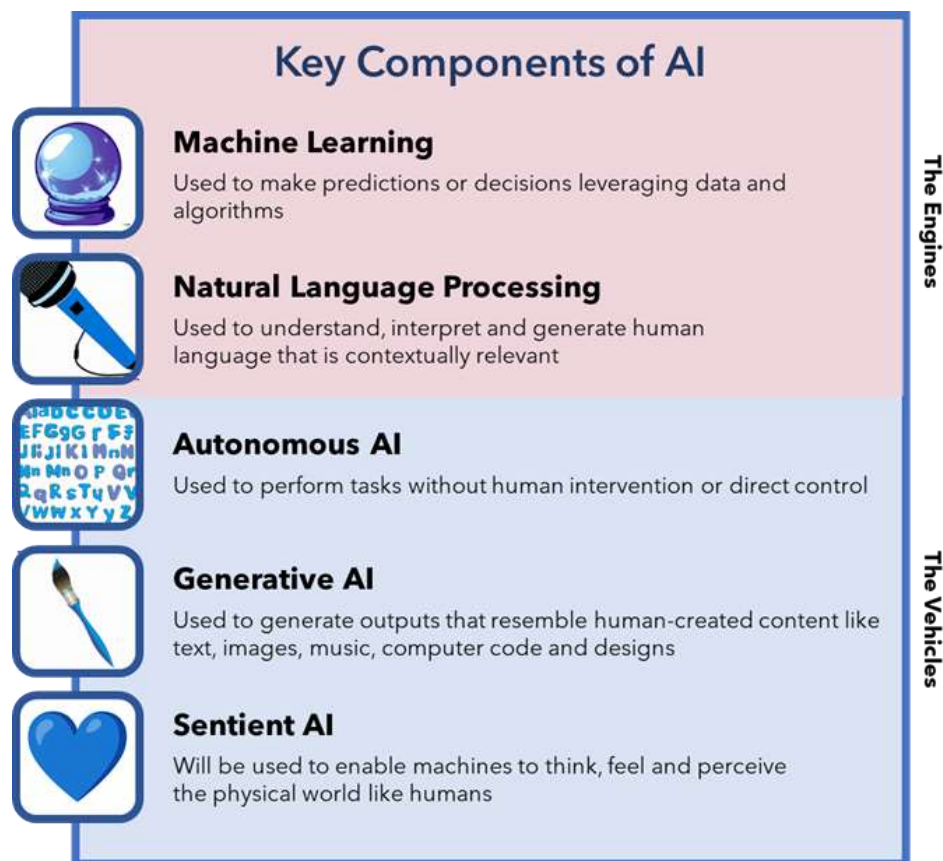


Generative AI for Learning and Development

AI is revolutionizing the business landscape, offering unprecedented opportunities to drive innovation, streamline processes, and enhance decision-making. AI already helped to inject innovation into learning and development. New developments in generative AI offer the promise of more rapid and targeted capability building, enhanced employee engagement, productivity and competitiveness.

Trusted Insights for What's Ahead™

- **The wider use of AI tools, particularly generative AI, is likely to be a game changer for organizational learning**, enabling firms to rapidly upskill and reskill employees through personalized, adaptive, and interactive approaches to learning.
- **Generative AI will further democratize learning** by embedding it in everyday work processes and organizational culture, empowering individuals and teams to access learning content as they need and even devise their own learning programs.
- **With more learning happening beyond the purview of the learning and development (L&D) function, learners will need practical training** to use AI safely and effectively, as well as cognitive skills like critical thinking to leverage the output for professional or commercial advantage.
- **L&D practitioners will be freed from routine tasks (course creation, learning evaluation) to focus on strategic priorities**—they will act as “curators”, helping to monitor the data generated by AI and providing a curious and questioning voice in the continuing debate about the better use of generative AI in individual and organizational learning.



Source: The Conference Board

Generative AI Defined

Generative AI refers to the branch of artificial intelligence that focuses on creating new content or generating original output. It involves training models on large datasets of existing content to recognize patterns, interpret language, and connect disparate data points to generate creative and novel outputs, such as text, images, music, or even videos, based on patterns and correlations found in the training data. It can also act on other datasets, for example genetic databases, and generate new drugs for particular diseases or write computer code for programs, including new algorithms to help itself get better.

Generative AI: A Likely Game Changer for Organizational Learning

While the use of various AI tools grows in the workplace, the advent of generative AI represents a new opportunity for businesses to further elevate individual and organizational learning, providing new and timely ways to share and use knowledge across the organization.

A new generation of learning tools will be more easily embedded into the workflow to enable workers to instantly access knowledge and expertise to perform a task or develop new skills. Essentially, these tools act as personal assistants, bringing the possibility of significant increases in performance and productivity.

Using generative AI based tools, learners can devise their own learning courses and tap into learning content in a medium that suits them, whether this is through quizzes, newspaper articles, podcasts etc. Learners can work on a real task or learning assignment, then gain instant feedback, evaluation, and coaching to correct and improve their understanding and execution.

For the organization and the L&D specifically, generative learning is the next chapter in the ability to support employees, one by one at scale and affordability. In the words of **Guillaume Delacour, Global Head of People Development at Swedish-Swiss multinational industrial corporation ABB**: “The role of L&D will definitely be impacted—in the preparation of classes, in the curation of content, the level of personalization, and in the interactivity you can bring. In this sense, it is a bit like a dream come true for training professionals.”

Commercial learning providers also recognize the opportunities offered by generative AI. Providers such as Cornerstone, Degreed, Docebo, LinkedIn Learning, EdCast and Udemy are in a race to enhance their learning experience platforms (LXP), a software platform that delivers personalized learning experiences. Cornerstone, for example, announced in April 2023 various new offerings enabled by Generative AI. These offerings include piloting a virtual coach that can answer questions, provide feedback on assignments, and suggest further learning and instruction in areas where the learner needs greater understanding. An AI assisted course building feature can auto-generate course content—including a course structure, readings, assignments, and glossaries.¹

The companies most adept at exploiting the power of individual and organizational learning already reap important benefits—and the advent of generative AI could well widen the gap between these companies and others. For example, a study of more than 100 large global businesses found that those with high performing and adaptive L&D functions had the following traits:²

- Better business growth—they were 53 percent more likely to have experienced business growth—while spending 27 percent less on L&D;
- Much more likely to pursue innovative solutions and to leverage various AI tools;
- Provided better employee experience, with senior leaders receiving 15 percent higher rating from their employees; and
- Achieved higher overall Glassdoor ratings—13 percent higher than the other companies in the study.

In the following sections, we assess the potential impact of the latest developments in AI on organizational learning through a combination of focus group discussions and short surveys

with US and European based senior learning and talent practitioners within 25 multinational companies, follow-up interviews, and desk research.

Benefits for Learning and Development

The L&D and talent management (TM) executives we spoke believe AI and in particular generative AI has considerable potential benefits for learning and development—although they also voice some strong concerns. However, making the business case by articulating the longer-term positive impacts to the organization—whether those are in job redesign, organizational processes, information, analytics, markets, or employer brand—is critical. Benefits include the following:

- **Productivity improvements**, especially in research and communication; as one respondent comments: “Generative AI could be a huge game changer in terms of performance support and knowledge management.”
- **Personalized tutoring and feedback** based on the learner’s individual needs and progress; as one respondent says: “AI can help personalize learning—automatically creating learning content, adaptive testing, virtual assistance 24/7, and predictive analytics.”
- **Rapid learning and knowledge exchange** in the moment of need. “It is a great way to jump start your thinking or put you down a path of research,” comments one respondent. Another says: “Generative AI has excellent potential for quick learning in the flow of work.”
- **Making learning content production faster, less expensive**, and with a broader basis in terms of information; one executive comments: “NO learning function can meet the demand for infinite technical training that’s needed. Generative AI may be a very helpful tool.”

Simon Brown, Chief Learning Officer at Novartis, shares his thinking on how generative AI might transform learning. He comments:

“Overall, I’m excited and optimistic about the opportunity it [generative AI] presents. As new tools come out and existing providers build generative AI into their tools, I think we will see a supercharging of productivity. We will do the things we currently do much cheaper, easier, faster, and better. Tasks like designing an online training course, which would normally take weeks to develop, will take five minutes to get a good quality first draft from a single prompt. That is Step One.”

“Step Two with this technology is to consider: what are the things that we aren’t doing today that we could be doing, such as far greater personalization and scaling one to one tutoring. How does the nature of learning change? If you can use a personalized learning assistant, you can access more personalized feedback on what you are doing right or

wrong, and what development is required, at the time you really need it. How we all interact with learning will completely change.”

What Are the Challenges?

However, respondents voice strong concerns about the use of generative AI tools on a day-to-day basis. For example, one executive says: “If different parts of the business are able to source learning and development solutions with no advisement or expertise, they may be investing in solutions that are not aligned with their needs or the organization at large.” Another flags the following drawbacks: “Is there a risk of inadvertently using intellectual property without crediting sources? Another risk may be watering down of content or losing our brand tone and voice.”

Simon Brown at **Novartis** comments:

» *There are lots of risks associated with the technology, not least that in its raw version it is prone to hallucinate or lie.³ There is also an inherent bias in what has been captured in the models. So, we need to be sure that we have introduced the right checks and balances to offset these biases.*

Guillaume Delacour at **ABB**, observes:

» *Generative AI can lead to a loss of human connection because, if a tool like ChatGPT knows more than colleagues and my manager, why should I bother talking to them? In the process, it could also lead to a loss of the ability to think critically and to make well-thought-out decisions.*

Solutions to These Challenges

Focus group discussion among heads of L&D and talent management was devoted to possible solutions to these challenges. Among those proposed are:

Basic training in how to use generative AI tools creatively and ethically. One executive shares how his organization is undertaking various initiatives to raise awareness about developments in AI. This campaign includes a session with some 50 HR practitioners to explain generative AI and its potential impact on HR.

He comments:

» *These and other initiatives are because we want to make sure that people are well informed before using the tools from a risk perspective. We also want to put in place playlists to help people build their knowledge around generative AI and understand how to use some of the skills that derive from it.*

Regular and systematic monitoring. One executive insists: “AI systems should be closely monitored to detect inaccuracies and the potential for bias. This oversight can be achieved through regular testing, auditing, and ongoing monitoring by the L&D team.” The team can work with tech experts to implement various evaluation methods, including performance metrics and feedback loops, to assess the reliability and quality of learning content and make necessary adjustments to ensure the content meets the required standards.

Transparent AI decision making. An executive says: “The reasons behind any AI decision must be understandable and explainable to the people who are affected by those decisions. L&D practitioners have an important role to play here.” L&D practitioners need to be prepared to ask some tough questions about the payoff between accuracy and “explainability” of algorithms. A study of AI models on nearly 100 representative datasets found that 70 percent of the time, a more-explainable model could be used without sacrificing accuracy. The authors urge organizations to “think carefully before integrating unexplainable, “black box” AI tools into their operations, and take steps to help determine whether these models are really worth the risk before moving forward.”⁴

Opportunities for collective learning to reduce the risk of learning becoming a social isolated and disconnected experience. L&D practitioners can intentionally design and facilitate collaborative learning experiences using generative AI and other tools. These experiences can include generating content to stimulate discussion and ideation, interactive group work on shared platforms, learning games, and immersive learning experiences through virtual reality technology. Problem-solving activities can encourage collaboration and peer-to-peer learning and coaching, helping to create a continuous learning culture within teams and business units.

Prioritizing the development of critical thinking and higher analytical skills for all employees. Courses should be built around cognitive skills that enable workers to maximize the benefit of AI-assisted learning. For example, OECD identifies various “higher order skills” learners need for the successful transfer of increasingly complex knowledge and skills. These skills include problem-solving, decision-making, and critical thinking. The latter entails inductive and deductive reasoning, analytical skills, ability to infer, evaluate ideas and solutions, self-awareness, and reflective skills to apply learning to the organizational, social, or cultural context.⁵

The belief of one executive is that organizations have a limited time to equip workers:

» *We are not going to be replaced by AI, we are going to be replaced by skilled people using generative AI who will be super productive. Generative AI produces bland data—we will still need a human with expertise, who can manipulate and drill into the content. We all have, at best, a year to know how to use generative AI, otherwise we are going to be out of a job.*

Partnerships with thought leading learning practitioners and educational institutions.

With generative AI at an early stage of its evolution, now is an ideal time to partner with external thought leading learning practitioners and educational institutions to add a business perspective

to any discussions, initiatives, or pilot studies to develop the application of generative AI in learning processes and tools. For example, Stanford University has recently launched an Accelerator for Learning and an Institute for Human-Centered AI to stimulate cross sector partnerships and provide seed grants to explore innovative uses of generative AI in education.

The Future Role of the L&D Function

Focus groups discussion also touched on how the wider use of generative AI tools is likely to transform the role of the L&D function.

Executives point out that L&D practitioners have a significant role in developing new and more stimulating digital learning materials faster and more effectively. However, they also think that L&D experts will need to ensure the quality and relevance of generated content, fine tune AI models in line with specific learning objectives, and balance AI generated content with human review and editing. In this sense, L&D practitioners will be freed to take a more strategic role on leveraging organizational learning for business impact. They will also develop a new role as “curators” of the content being generated.

To make this transition, according to **Novartis Chief Learning Officer Simon Brown**, L&D leaders will need to draw on their instinctive skills of inquiry and experimentation, while also being mindful of the risks. As he concludes: “We must realize that in the era of AI, there is no single right answer. We need to be curious. So, dip your toe in the water, experiment, and learn. And, above all, share the results and conclusions across the community, inside the company and, if appropriate, outside the company, so that we can all learn from and leverage what has been found to be successful.”

About the Authors



Michel Syrett, Senior Fellow, Human Capital Center Europe



Kimo Kippen, Program Director, Learning and Development, and Talent & Organization Development Executive Councils, Senior Fellow, Human Capital Center Europe



Marion Devine, Principal Researcher, Human Capital Center Europe

Endnotes

¹ Unleashing the next chapter of personalized and interactive online learning with generative AI, machine learning, and virtual reality - Coursera Blog

² NIIT & Josh Bersin Academy, *Adaptive Learning Organization*, 2023.

³ if a piece of data is wrong, as it is reinforced and regurgitated it will have the possibility of turning into 'the truth'

⁴ François Cadelon, Theodoros Evgeniou, and David Martens, *AI Can Be Both Accurate and Transparent*, Harvard Business Review, May 12, 2023,

⁵ OECD, Skills for 2030: Conceptual Learning Framework.



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