# AI in Learning and Talent Development

## Embracing Its Future Potential in the Workplace



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# Contents

## Survey Overview

### Target Survey Population

The target population for this research was talent development professionals across different organizations and industries. Participants from 292 unique organizations from 46 countries completed the survey.

### Survey Instrument

The survey was composed of 16 questions including those related to the demographics of the respondents.

### Procedure

ATD Research distributed a link to an online survey to the target population in August 2022. The survey closed in September 2022.

# About the Sponsor

## A Note from UMU

Artificial intelligence (AI) is the key to unlocking new possibilities in the learning and development (L&D) industry and fostering effectiveness, efficiency, and experience in corporate learning. AI empowers enterprises and L&D departments throughout the entire training process, from teaching and learning to practicing and assessing. AI also creates new learning scenarios to drive performance. For example, enterprises have used AI in sales enablement and to enhance the coaching abilities of their managers and have seen significant changes in behavior. The age of AI is already here, and the L&D industry is in a great position to benefit from its use.

UMU is proud to support ATD in leading this research on AI in talent development. Thanks to the recent waves of breakthroughs in the field, we believe that enterprises will soon find AI to be an indispensable and powerful tool in training. We are confident that enterprises that embrace AI will be ahead of the game in learning results and performance improvement, especially in the VUCA era. The world is changing faster than ever. AI is evolving at an even quicker speed and will bring fundamental changes to the L&D industry before anyone realizes it. We are certain that with AI, L&D professionals will become a strong force in driving productivity and business results.

## About UMU

UMU is on a mission to develop global learning resources, connect people with knowledge, speed up knowledge transfer, and enable everyone to engage, share, and achieve. UMU's AI-enabled learning platform empowers enterprises and L&D professionals to drive performance and results.

Founded in 2014, UMU has served more than 100 million users across 200 countries and regions, and over thousands of customers. Among UMU's clients are 18 top 20 global pharmaceutical companies, four top 5 global medical device companies, four top 10 global insurance companies, and four top 10 automobile companies, as well as other leading industry brands.

Together with these customers, UMU has made many breakthroughs in the area of AI. Backed by self-owned innovation patents, UMU has been continuously innovating in AI products that empower L&D professionals to generate video courses, create individualized learning experiences, achieve at-scale and individualized practice, and provide immediate and formative feedback during practice, among other learning scenarios.

With AI, UMU is transforming learning effectiveness, efficiency, and experience for enterprises. Partnering with UMU helps enterprises design effective courses, deliver result-driven learning programs, gain insights on organizational health, and improve individual and organizational performance. For more information, please visit **umu.com**.

# Introduction

ATD surveyed learning and talent development professionals around the globe to understand our industry's use of applications that are artificial intelligence (AI) enabled as part of organizational talent and learning initiatives.

> For the purposes of this study, AI is defined as "a wide collection of use cases and programming approaches that allow [for the creation of] machine-based solutions to everyday problems."[1]

Learning and talent development initiatives rarely use AI as a standalone application. Instead, AI is often embedded in a range of applications to support talent and learning initiatives, including language translation, automated scheduling, and onboarding. For example, when you talk to Siri, use an app for directions, or chat with a customer service bot on a website, you are using AI-driven technology.

Fortune Business Insights projects the global artificial intelligence market to grow from $387 billion in 2022 to nearly $1.4 trillion by 2029.[2] Correspondingly, an SAS survey found that AI and machine learning are top investment priorities over the next one to two years, which is well ahead of data technology stalwarts such as data visualization (25 percent), data analytics (22 percent), and big data (17 percent).[3]

But there is a caution: The SAS data found that 63 percent of respondents also claimed their largest skills shortages were in AI and machine learning.

In *AI in Learning and Talent Development*, ATD Research examined how prepared learning and talent development (TD) teams were to implement AI, how they used AI, the outcomes they experienced from using AI, the barriers they encountered when trying to implement AI, and what they needed to be better prepared for this technology. ATD Research further analyzed the data according to usage in China, Japan, the United States, and many countries in the rest of the world. To add context to the findings and make the recommendations more actionable, this report also provides examples and insights from talent development professionals.

1.  Margie Meacham, *AI in Talent Development* (Alexandria, VA: ATD Press, 2020).

2.  Fortune Business Insights, "Artificial Intelligence [AI] Market Growth, Trends | Forecast, 2029," April 2022, fortunebusinessinsights.com/industry-reports/artificial-intelligence-market-100114.

3.  SAS, "How to Solve the Data Science Skills Shortage," Coleman Parkes Research, sas.com/en_us/training/for-businesses.html#skillsreport.

## About the Research

ATD Research surveyed 292 talent development professionals globally. For the purposes of this report, respondents were separated into four geographic areas: China, Japan, the United States, and the rest of the world (which comprised the 43 other countries represented in the data; see the Appendix).

About a quarter of respondents were managers in their organizations, while 16 percent were directors, and 16 percent were individual contributors. The top five industries represented were finance, insurance, and real estate; healthcare and pharmaceutical; information; management; and manufacturing.

### Country of Residence



China 27%

Japan 16%

United States 10%

Rest of the World 47%
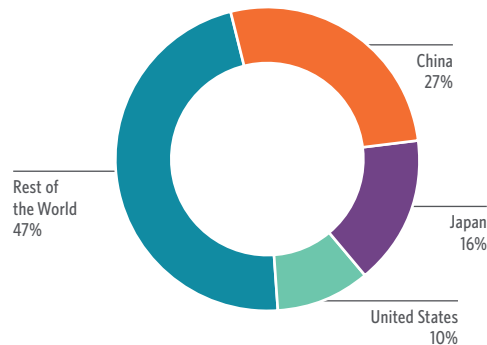
## Key Findings

- AI use is low. Of those surveyed who were using AI, a quarter were using it for personalized learning experiences and to measure learning experiences and business impact. Twenty-four percent were using it for language translation, and 23 percent were using AI for their new-hire onboarding. Nearly half of respondents reported not using AI for learning at all.
- Customer service and sales enablement had the highest AI application use (25 and 20 percent, respectively), with compliance training at the bottom.
- The top outcome when using AI for learning and talent development initiatives was increased time and speed at which learning could be deployed (41 percent). Increased time or speed at which learning could be deployed were among the top three in China, Japan, and the rest of the world.
- The top three barriers to using AI were budgetary constraints (62 percent), lack of knowledge on how to implement AI (57 percent), and lack of resources (56 percent).

# SECTION 1

# AI Level of Preparation

Although AI is somewhat new within learning and talent development, *AI in Learning and Talent Development* found that 41 percent of global learning and development professionals thought their team was very prepared or somewhat prepared to use AI. However, an equal percentage (41 percent) believed their team was only somewhat or very unprepared to add this technology to their initiatives and programs.

"AI is still a new technology, an emerging technology—a technology that is obscure to a lot of people in corporate settings," says Dongshuo Li, UMU founder and CEO. "When working with corporate clients, my impression is that they are in awe of AI and there's this aura around it that makes people feel so cool."

When asked about their team's level of AI preparation, the answers varied considerably across regions. Fifty percent of the rest of the world reported themselves as very or somewhat prepared to implement and use AI applications, with China at 48 percent and the US at 42 percent (Figure 2).

**FIGURE 2**

## Level of Preparation by Country

*How prepared is your team with the necessary knowledge and skills to implement and use AI-enabled applications for your company's learning and talent initiatives?*
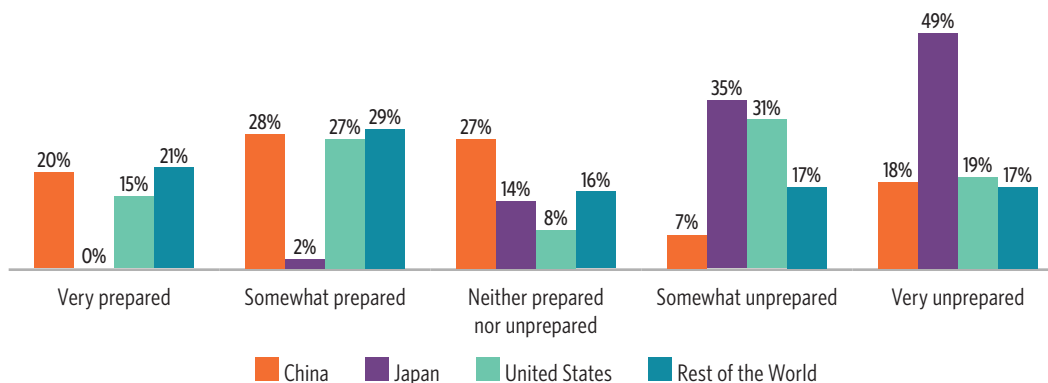


"Applying AI within workplace learning is likely to be much more challenging right out of the gate," says JD Dillon, chief learning architect at Axonify.[4] "Not only is this technology

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4.   JD Dillon, "AI," Chapter 5 in *ATD's 2020 Trends in Learning Technology*, edited by Justin Brusino (Alexandria, VA: ATD Press, 2020).

changing the way work is done around us, but it will also fundamentally alter how we do our jobs and enable performance."

Respondents also were asked to identify what their teams would need to be better prepared to use AI in learning initiatives (Figure 3). Top responses included more knowledge on how AI works (65 percent), better understanding of the positive impact AI can produce (61 percent), and more knowledge on how to implement AI into their learning initiatives (60 percent).

FIGURE 3

## How to Be Better Prepared by Country

*What would your team need to be better prepared to use AI-enabled applications for your talent and learning initiatives? (Select all that apply.)*

**Need more knowledge on how they work**
- China: 57%
- Japan: 63%
- United States: 59%
- Rest of the World: 71%

**Need understanding on positive impact**
- China: 68%
- Japan: 54%
- United States: 52%
- Rest of the World: 62%

**Need more knowledge on implementation**
- China: 65%
- Japan: 44%
- United States: 45%
- Rest of the World: 67%

**Need more benchmarking data**
- China: 67%
- Japan: 48%
- United States: 35%
- Rest of the World: 55%

**Need to partner with internal stakeholders**
- China: 57%
- Japan: 50%
- United States: 42%
- Rest of the World: 28%

**Not sure where to start**
- China: 30%
- Japan: 17%
- United States: 31%
- Rest of the World: 36%

Legend: ■ China ■ Japan ■ United States ■ Rest of the World

"We are still in the realm of 'narrow AI,' in a wait-and-see approach," explains a survey respondent from Japan. "I'm still observing."

JD Dillon notes that while L&D professionals shouldn't try to become experts in AI, they do "need to be able to have informed conversations and make educated decisions regarding how [their] practices should evolve through AI."[5]

AI is slowly making its way into the learning world, but a lack of knowledge and skills about the technology is hindering its implementation. However, as one respondent in China noted, "AI is the trend of future learning, and we should actively face it and embrace it."

## AI: A World of L&D Possibilities

*Megan Torrance is CEO of Torrance Learning, an organization that helps clients connect learning strategy to design, development, data, and ultimately performance. She is a leading advocate and expert in the use of xAPI (the Experience API). Torrance was interviewed for this report at ATD22.*

Within learning and development, AI is an emerging field that can do far more than recommend content. And it is on an upward trajectory with enormous possibilities. A newer use of AI is adaptive learning, which is the ability to respond to individual learning needs based on actual job performance. AI also can help organize pieces of learning content (such as videos, blogs, PowerPoints, and PDFs) by combing through large quantities of learning assets, combining them by content, ordering them by complexity, and tagging them to company-specific competencies. The scale of an effort like this would be practically impossible without AI. Soon, we will be able to use AI to review multiple sources of learning content and automatically summarize them into shorter learning segments or even fuller courses.

Learning and talent development professionals are likely not yet using today's AI capabilities to their fullest. But, the learning applications they are already using may be leveraging AI behind the scenes without their knowledge.

Learning and talent development professionals can get started by exploring how their organizations are already using AI and then looking at possible use cases and AI applications to support the learning function. This is definitely an area to keep in mind as you develop your mid- and long-term organizational learning strategy.

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5.  Dillon, "AI."

# Using AI

ATD Research asked participants about their plans for current and future use of AI-enabled applications for L&D initiatives (Table 1). Of survey respondents who were currently using AI, 25 percent were using it for personalized learning experiences and to measure learning experiences and business impact. Another 24 percent were using it for automatic language translation, and 23 percent were using AI for new-hire onboarding.

According to respondents, they were most likely to use AI-enabled applications within the next 24 months in measures of learning and business impact (46 percent), analytics (45 percent), personalized learning experiences (45 percent), and real-time training support for talent and learning initiatives (45 percent).

**TABLE 1**
## Use of AI-Enabled Applications for Talent and Learning
*Review this list of possible uses of AI-enabled applications for talent and learning initiatives and note whether your company is currently using, plans to use within the next 24 months, or has no plans to use.*

|  | Currently Using | Planning to Use Within 24 Months | Not Planning to Use |
|---|---|---|---|
| AI-embedded VR learning experiences | 16% | 41% | 43% |
| Analytics | **14%** | 45% | 41% |
| Automatic language translation | 24% | **34%** | 42% |
| Chatbots | 15% | 38% | **47%** |
| Curation or development of content | 21% | 43% | 36% |
| Measures of learning and business impact | **25%** | **46%** | **29%** |
| New-hire onboarding (or for those eligible for promotions) | 23% | 36% | 41% |
| Personalized learning experiences | **25%** | 45% | 30% |
| Real-time training support | 20% | 45% | 35% |

Note: The highest and lowest values in each column have been highlighted.

When asked which departments were currently using AI within their organizations, respondents said the highest use was found in customer service (25 percent) and sales enablement (20 percent; Table 2). Compliance training (13 percent) was least likely to use AI. Respondents noted that they were most likely to use AI-enabled applications in the future for product training (42 percent), employee onboarding (41 percent), leadership development (41 percent), and technical training (41 percent).

TABLE 2
## Use of AI-Enabled Applications

*In what areas does your company use AI-enabled applications?*

|  | Currently Using | Planning to Use Within 24 Months | Not Planning to Use |
|---|---|---|---|
| Compliance training | **13%** | 35% | **52%** |
| Customer service | **25%** | **33%** | 42% |
| Employee onboarding | 16% | 41% | 43% |
| Leadership development | 18% | 41% | 41% |
| Product training | 17% | **42%** | 41% |
| Recruiting | 17% | 36% | 47% |
| Sales enablement | 20% | 35% | 45% |
| Technical training | 19% | 41% | **40%** |

Note: The highest and lowest values in each column have been highlighted.

## AI-Enabled Talent Development Applications
*JD Dillon highlights a few examples of what is possible today with AI in learning.[6]*

### Personalization
AI can use data to proactively identify the knowledge and skills gaps of individual employees and provide the right support to the right people at the right time at the speed and scale of a global business. This doesn't just mean putting online courses in front of employees; it can include the full range of potential support tactics, including videos, coaching, performance support (like simple job aids), or contact information for subject matter experts.

### Impact Analysis
Today, marketers use an incredible amount of data to determine how digital advertising activities influence consumer buying decisions. Talent development can apply similar tactics to improve measurement practices and, through the application of specialized machine learning, determine how L&D solutions are (or are not) affecting targeted business goals. These insights can then be used to proactively adjust TD strategies.

6. JD Dillon, "The Path to AI," *TD*, January 2020, td.org/magazines/td-magazine/the-path-to-ai.

### Smart Coaches

Managers aren't always watching employees do their work. Therefore, many coaching conversations are generic or misinformed. AI can support more accurate, robust coaching to promote content related to engagement, personality, and strengths. It also can fill in the gaps when a real-world manager is not available and provide timely, targeted feedback directly to employees. For example, a busy manager may receive a timely text message on her way into a meeting that reminds her to acknowledge team members' key contributions or ask questions about specific deliverables on a project they are about to discuss.

### Smart Assistants

AI-powered smart assistants work proactively alongside employees to provide guidance and coaching whenever needed but without being specifically asked. Think of this as performance support but on an entirely new level. Autocomplete within your email client is a simple example; another is conversational prompts built into call center software.

### Translation

Employees are often limited to a select set of options that may not include their preferred language. Unfortunately, translating content is a time-consuming and expensive process. AI can translate content in real time into any available language with rapidly increasing accuracy, without the need for extra work by L&D. For instance, smartphones enabled with machine translation and speech recognition help people bridge language gaps.

### Authoring

A considerable amount of time, money, and capacity are spent building training content. In many cases, TD professionals are acting as liaisons between SMEs and employees. Today, machines can write content faster and at a quality level that is similar to human authors. In fact, you are likely reading AI-written online articles all the time—but you just don't know it. Authoring capabilities will help TD professionals shift their content mindset from creation to curation.

# Outcomes and Results for AI Usage

The top outcome when using AI for learning and talent development initiatives was increased time and speed at which learning could be deployed (41 percent; Figure 4). Survey respondents also noted increased employee engagement (40 percent) and reduced cost of developing learning assets (37 percent). Twenty-one percent of respondents reported not using AI.

Gartner's TalentNeuron report data shows the total number of skills required for a single job has been increasing by 10 percent year-over-year since 2017.[7] Jobs have become more time-consuming, and AI can help increase the speed and accuracy of many of those tasks. In the latest Sage Intacct 2022 Close the Books Survey of CFOs, time savings was cited as the top benefit of AI, with 71 percent of CFOs envisioning significant productivity gains (up to 40 percent).[8]

"The current role of AI is mainly reflected in improving efficiency and enhancing interactive experience," one Chinese respondent noted. "With the development of equipment and algorithms, it is believed that there will be more convincing value."

A Nigerian respondent agreed, writing, "AI makes life easy because the amount of time committed to cumbersome and traditional ways of recruiting and retaining talent is drastically reduced."
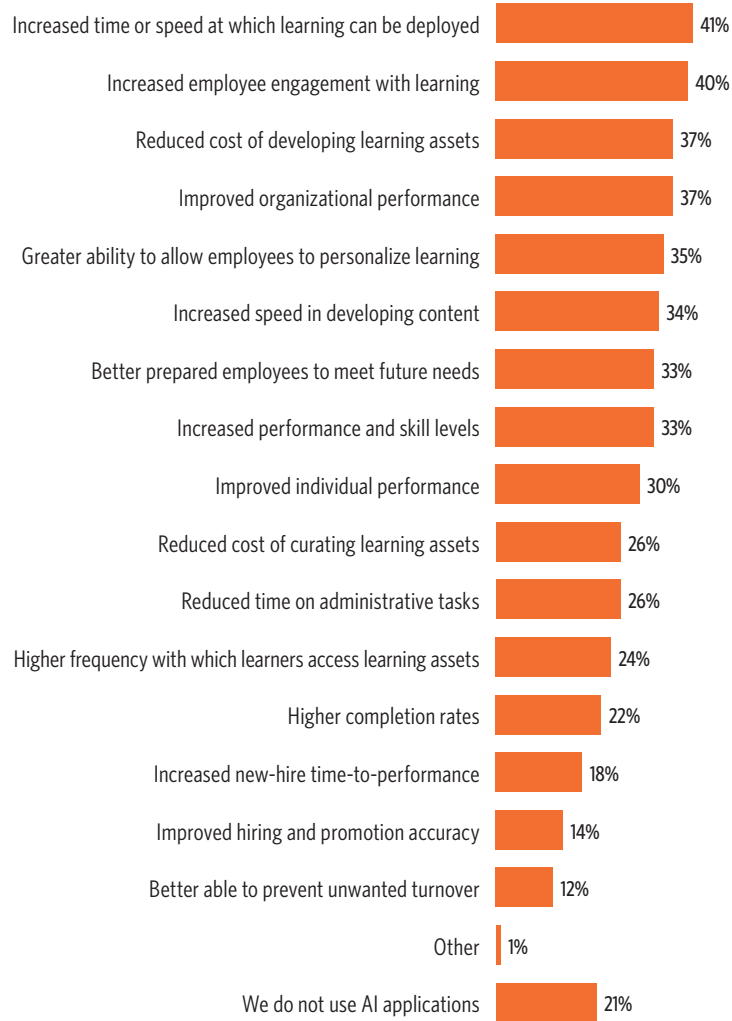
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7.  Gartner, "Gartner Top 3 Priorities for HR Leaders in 2021," Gartner Human Resources Insights, October 23, 2020, gartner.com/smarterwithgartner/gartner-top-3-priorities-for-hr-leaders-in-2021.
8.  Sage, "Unlock Value With the Keys to a Faster Close," Sage Intacct E-Book, rc.sageintacct.com/ebooks/unlock-value-with-keys-to-faster-close-with-sage-intacct?_ga.

FIGURE 4

## Most Important Outcomes for Talent and Learning

*For your company, select the five most important outcomes to using AI-enabled applications for talent and learning initiatives.*

| Outcome | Percentage |
|---|---|
| Increased time or speed at which learning can be deployed | 41% |
| Increased employee engagement with learning | 40% |
| Reduced cost of developing learning assets | 37% |
| Improved organizational performance | 37% |
| Greater ability to allow employees to personalize learning | 35% |
| Increased speed in developing content | 34% |
| Better prepared employees to meet future needs | 33% |
| Increased performance and skill levels | 33% |
| Improved individual performance | 30% |
| Reduced cost of curating learning assets | 26% |
| Reduced time on administrative tasks | 26% |
| Higher frequency with which learners access learning assets | 24% |
| Higher completion rates | 22% |
| Increased new-hire time-to-performance | 18% |
| Improved hiring and promotion accuracy | 14% |
| Better able to prevent unwanted turnover | 12% |
| Other | 1% |
| We do not use AI applications | 21% |

When looking at the geographical breakdown of the data, China, Japan, and the rest of the world all ranked increased time or speed at which learning could be deployed in their top three most important outcomes for using AI-enabled applications (Table 3). A top choice in China and the US was increased engagement (48 and 45 percent, respectively), while improved individual performance was the top outcome in Japan (57 percent).

Survey respondents from China, Nigeria, and Uzbekistan described AI as "a game-changing instrument, as the future of learning, and as one of the must-have technologies for future business growth."

**TABLE 3**
## Outcomes by Country

|  | China | Japan | United States | Rest of the world |
|---|---|---|---|---|
| Better able to prevent unwanted turnover | **6%** | 9% | 14% | **15%** |
| Better prepared employees to meet future needs | 27% | 13% | 38% | 43% |
| Greater ability to allow employees to personalize learning | 44% | 33% | 34% | 30% |
| Higher completion rates | 24% | 13% | 10% | 26% |
| Higher frequency with which learners access learning assets | 25% | 20% | 14% | 26% |
| Improved hiring and promotion accuracy | 13% | **7%** | **7%** | 19% |
| Improved individual performance | 8% | **57%** | 34% | 33% |
| Improved organizational performance | 24% | 50% | **45%** | 38% |
| Increased employee engagement with learning | **48%** | 20% | **45%** | 42% |
| Increased performance and skill levels | 23% | 41% | 31% | 36% |
| Increased speed in developing content | 33% | 33% | 17% | 38% |
| Increased time or speed at which learning can be deployed | 39% | 41% | 28% | 46% |
| Increased new-hire time-to-performance | 18% | 13% | 21% | 19% |
| Reduced cost of curating learning assets | 22% | 9% | 21% | 36% |
| Reduced cost of developing learning assets | 38% | 20% | 17% | **47%** |
| Reduced time on administrative tasks | 34% | 15% | 21% | 25% |
| Other | 3% | 2% | 3% | 0% |
| We do not use AI applications | 19% | 24% | 28% | 20% |

Note: The highest and lowest values in each column have been highlighted.

"AI would offer much more customized learning and reinforcements to measure learner engagement, effectiveness, and experience," said one US survey respondent. Another US respondent added that AI "will limit the redundancy of information that employees know and allow us to drill down and help them learn what they don't know."

## Using AI to Empower Career Development Opportunities

*Novartis is using artificial intelligence technology to democratize talent development through its Talent Match and Match Learn solutions.*[9]

Talent Match provides employees with personalized recommendations for internal career development opportunities, including job openings, special projects, and mentor pairings, on top of providing the full overview of offerings across Novartis. The platform enables transparency around hiring and promotions and breaks down silos.

Match Learn provides associates with learning recommendations based on their career goals. It also encourages workers to explore growth opportunities and career trajectories outside their current areas of work. The program emphasizes bite-size learning opportunities that employees can participate in over the course of their normal work, which should encourage more frequent use. It promotes knowledge sharing and the transferability of expertise to different functional areas, which should propel the organization forward.

"We are still on the journey to fully benefit from and get the maximum impact out of AI," says Novartis Global Talent Leader Sara Steiner. "The technology itself isn't solving anything. It's the way we use, apply, and embed it that is making the difference. After starting off with pilots, we are now focusing on large scale deployment."

Match Learn Product Manager Philip Tillmann Moore adds that "even the concept of people driving their own learning in their own careers, with the support of AI, is actually a skill and behavior that people have to learn."

Although AI was not new to Novartis, it was new to the HR and L&D departments. Like any new piece of technology, there were lessons learned during implementation.

"AI is only as good as the data that you feed it, right? Especially when it comes to our Novartis data," continues Moore. "So, skill tagging is a big thing. And AI is not the end all be all. So as much as I think colleagues find value in getting a suite of daily learning recommendations on their learning goals, it doesn't replace the need for L&D professionals to actually build learning experiences and create very specifically targeted things for certain audiences."

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9.  Stephanie Castellano, "Ready for Growth," *TD*, June 15, 2022; Interview with Novartis, 2022.

# Barriers to Implementation

The top three barriers to using AI were budget, lack of knowledge, and lack of resources. More than six in 10 respondents (62 percent) cited budgetary constraints as a major barrier to effectively implementing AI applications in their organization (Figure 5). Lack of knowledge on implementation was a barrier for 57 percent of respondents, and 56 percent mentioned lack of resources. Finally, 51 percent found the absence of a strategic plan or approach for implementing AI to be a major barrier.

**FIGURE 5**

## Barriers to Implementation

*Which of these potential barriers to effectively implementing AI-enabled applications do you experience in your organization? (Select all that apply.)*

| Barrier | Percentage |
|---|---|
| Budgetary constraints | 62% |
| Lack of knowledge on implementation | 57% |
| Lack of resources | 56% |
| Absence of a strategic plan | 51% |
| Lack of buy-in from leaders | 37% |
| Concerns with data privacy | 31% |
| Too difficult to measure benefits | 26% |
| Not aligned with our strategy | 17% |
| Concerns about job loss | 12% |

"AI is a necessary technology," explained a survey respondent from China, "but the initial cost and labor are too much, and it is not easy to promote." Cost often plays a factor in whether companies decide to adopt new software or technology.

Listed among the most important outcomes of AI by survey respondents were reduced cost to develop learning assets, increased speed at which learning could be deployed, and improved organizational performance, all of which could make return on investment substantial (Figure 4). In addition, AI could help cut operational costs, automate and

simplify business processes, and improve communications. Proving those cost savings could help justify including the costs of AI implementation in the L&D budget.

"AI will greatly reduce the time-consuming basic training work," said a survey respondent from China, adding that this also helps to "reduce the manpower and material resources invested in the learning project process, standardize and improve the entire learning process, and focus more energy on organizational efficiency."

Lack of skills and knowledge in AI was a critical concern among decision makers. However, as JD Dillon notes, "AI is the fastest-growing technology in the history of the workplace. L&D cannot afford to take five or 10 years to figure this one out."[10] According to a Coleman Parkes Research study, only 36 percent of US business leaders thought their organization had sufficient skills to work with AI and facilitate machine learning, and 63 percent said their employees' AI abilities were insufficient.[11]

The increased use of AI is also exposing a skills gap in data and analytics among those in the talent development industry. "L&D isn't good with data," Dillon continues. "It's an industry-wide, readily acknowledged fact." This gap also was reflected in an ATD 2021 Talent Development Capability Model™ pulse survey. L&D professionals who took the assessment ranked themselves the lowest in data and analytics proficiency (33 percent).

The knowledge and skills required as part of the digital workplace include insights to identify patterns, make predictions, nudge behaviors, and fine-tune performance. "As digital literacy levels increase, adoption rates rise, and data sets within organizations increase, AI applications will continue to fundamentally transform how different corporate learning scenarios are approached by learning professionals and experienced by employees," says Dongshuo.

Future readiness is another capability in the Talent Development Capability Model. As learning and talent development professionals stay abreast of workplace changes, it is critical that they monitor emerging trends and technologies to improve productivity, reduce costs, engage the workforce, and encourage innovation.

"As a field, we don't want to miss or lag behind," says Tony Bingham, president and CEO of ATD. "Future readiness includes understanding emerging technologies and broader business trends that can have an impact on talent development, and clearly AI is one of them."

10. Dillon, "AI."

11. SAS, "How to Solve the Data Science Skills Shortage."

MIT professor Catherine D'Ignazio and research scientist Rahul Bhargava describe data literacy as the ability to:[12]

- Read data (understand what data is and what aspects of the world it represents).
- Work with data (create, acquire, clean, and manage it).
- Analyze data (filter, sort, aggregate, compare, and perform other analytic operations on it).
- Interpret the data (use it to communicate a message or story to a particular audience).

"The field will start to be responsible for roles that require more complex thinking and more problem solving," Bingham adds. "TD professionals need to be preparing our organizations for this; it's not just about understanding AI and its capabilities within talent development, but also its impact on organizations and what we need to be doing to prepare our organizations."

The pace of change and the rise of analytics in the workplace has forced TD professionals to take a broader look at what analytics they should be measuring, the meaning behind the analytics they capture, how to align the findings to strategic business goals, and how to communicate data findings to executives.

When examining breakdown by country, China listed its top barrier as budget, while Japan and the rest of the world said the biggest hurdle was lack of knowledge and skills on the talent team.

## Don't Be Intimidated by AI

*Often called the "Brain Lady," Margie Meacham is CEO of learningtogo.com, which specializes in practical applications of neuroscience to enhance learning and performance. She is an expert in designing and implementing AI applications for learning. The following is an excerpt from her book* AI in Talent Development *(ATD Press, 2020).*

The term, artificial intelligence, can be intimidating to some. We tend to picture high-end, sci-fi solutions, some with malicious intent. But right now, for most of us, AI is really about the intelligent automation of key learning tasks and applications. Looking five-years out, AI will incrementally have more of simple, practical, and intelligent automated systems that make the jobs of learning professionals easier so they can focus on higher end cognitive skills.

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12. Catherine D'Ignazio and Rahul Bhargava, "Approaches to Building Big Data Literacy," in Bloomberg Data for Good Exchange Conference, September 28, 2015.

There are already many applications of AI in use. More advanced chatbots offer intelligent and realistic conversations around a host of learning experiences, including corporate compliance, onboarding, sales effectiveness, and performance coaching. These bots can recognize each individual learner and continue the conversation wherever they last left off. They're always available, whenever the learner needs help, information, or practice. I'm seeing an increased use of these bots to enhance learner engagement, and I expect to see even more soon.

AI can make many of our existing tasks in L&D more efficient, giving us humans more time for deeper, more strategic thinking. For example, AI can create assets such as presentations, leaders guides and participant guides, even web pages. AI also can capture, analyze, and present data on individual learning performance. This information can be used to recommend courses tailored to the specific needs of the learner, all with little or no human intervention. For those who work in Human Resources, you may already be working one or more AI-enabled systems to recruit and evaluate candidates, perform background checks, and complete other tasks.

Will a robot take away my job? It is a classic question that is being asked in every industry. But for the foreseeable future, we will always need humans who understand the science of learning. We'll need specialists to conduct needs analyses, identify clear learning objectives, and envision where and how technologies, including AI, can be applied. So, I don't think learning professionals will lose our jobs unless we fail to keep learning and developing ourselves.

# Action Plan

As the data in this report shows, there is a hesitancy among learning and talent development professionals around the globe to adopt AI into their learning initiatives. ATD offers some recommendations for how TD professionals can begin embracing AI.

## Upskill on AI, Digital Literacy, and Data Analysis

The digital skills gap is widening.

Global research from Salesforce examining skills readiness found that only 17 percent of workers considered themselves advanced in 14 workplace digital skills, while almost half considered themselves beginners. "People are still struggling with basic internet tools and digital literacy," Dongshuo explains. "There's a problem with digital literacy, people not knowing how to use AI or what it is. They've never used AI in the past and they're afraid that they will push some boundaries that they shouldn't push."

To become more familiar with AI, Meacham suggests grounding "yourself in a basic understanding of AI. You don't have to become a data scientist or a programmer, but you do need to understand what AI is and what it isn't."[13] TD professionals should look at AI as they would any other tool that they would use to design any learning solution. She continues, "I would be very careful about just running out and buying a big, shiny, expensive AI-driven solution until you know what problem you are trying to solve."

"People get scared to start tackling AI because you never reach a point where you have it fully figured out until you get into it and roll up your sleeves," says Sara Steiner, global talent leader at Novartis. "Don't aim for it to be a perfect solution ahead of engaging in it. The perfect solution does not exist yet, but trying out, learning, and iterating gets you a step closer to the ideal state."

## Think of AI as a Learning Strategy

Approach AI like any other tool you would use to create learning initiatives. Start with the end goal and then think about what software you will need to meet that goal effectively and efficiently. That will help you align with your organization's goals and identify the metrics needed to reach them.

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13. Margie Meacham, "How Can I Incorporate AI Into My Learning Programs?" ATD Blog, January 8, 2021, td.org/insights/ask-a-trainer-how-can-i-incorporate-ai-into-my-learning-programs.

Dillon suggests establishing an AI vision for talent development. "Once you understand how AI is transforming the workplace, shape an AI story that integrates TD with the future of work. How must learning and support opportunities evolve to meet workers' changing needs, and how can you use AI to power these resources in new and innovative ways? You may not identify every potential AI use case early on, but you can establish an overall vision for how AI will influence the role TD will play in enabling human performance and business impact moving forward."[14]

## Partner With AI Experts

Chances are AI is already being used in your organization. Because data privacy is a complicated part of this technology, partnering with experts inside and outside your organization is critical for transparency and trust. According to ATD Research's survey, more than 80 percent of talent development professionals who use AI have partnered with HR and IT. AI users also partnered with operations (52 percent), legal and compliance (42 percent), and research and development (41 percent).

"It's kind of a classic decision with all technology: Do we build it or do we buy it? If you're going to buy it, you still need a staff that understands what it's supposed to do and how they can make changes to it and update it and continue to enhance it because out of the box it's not going to be perfect," Meacham explains.

Many HR departments are using AI to review job applications and candidate resumes, keep the engagement conversation going, identify employees who are disengaged or at risk of leaving, suggest job openings or career paths for current employees, and help in the performance management process.

Chances are your HR department knows the data and analytics that they are using with AI, the technology that supports it, and the different ways AI can increase productivity. Dillon adds, "Don't wait for someone to come up to you to explain how the whole thing works. Start the conversation with your team and with others in your organization. Find people in your organization who are already working with AI. Explore online resources and connect with subject matter experts. Improve your knowledge and awareness so that you can start building the foundation of your AI strategy."

14. Dillon, "The Path to AI."

"In almost every case, we've seen that new technologies have made workers' lives better overall: They have made them more efficient, more effective, and taken away some of the tasks that they did not enjoy doing," Bingham says. "I expect that AI is going to do the same. When thinking about starting a journey with AI, our advice is to start small. Partner with another function in your organization that's open to working together to apply this new technology. As you slowly move forward and begin to show some success, communicate that success and you'll begin to gain traction."

# Appendix

Countries that make up the "rest of the world" category:

- Australia
- Azerbaijan
- Belgium
- Brazil
- Canada
- Chile
- Colombia
- Costa Rica
- Egypt
- France
- Germany
- Ghana
- Hungary
- India
- Indonesia
- Israel
- Italy
- Jordan
- Kenya
- Malaysia
- Mexico
- Namibia
- New Zealand
- Nigeria
- Oman
- Pakistan
- Philippines
- Poland
- Portugal
- Republic of Benin
- Samoa
- Saudi Arabia
- Singapore
- South Africa
- South Korea
- Thailand
- The Netherlands
- Turkey
- United Arab Emirates
- United Kingdom
- Uzbekistan
- Vietnam
- Zambia

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The Association for Talent Development (ATD) champions the importance of learning and training by setting standards for the talent development profession. ATD is the largest, most trusted organization for the professional development of practitioners in training and talent development, serving a worldwide community with members in more than 100 countries. Since ATD was founded in 1943, the talent development field has expanded significantly to meet the needs of global businesses and emerging industries. ATD's mission is to empower professionals to develop talent in the workplace. Learn more at td.org.

The resources we provide to help talent development professionals increase their impact and effectiveness include our research. ATD's researchers track trends, inform decisions, and connect research to practice and performance. By providing comprehensive data and insightful analyses, ATD's research products, which include research reports, briefs, infographics, and webinars, help business leaders and talent development professionals understand and more effectively respond to today's fast-paced industry.

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