AI in L&D:

Intention and reality

By **Donald H Taylor** and **Eglė Vinauskaitė**

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Introduction

Key findings of this research

This is our third report in 11 months looking at the use of AI in L&D. Our first was published on 30 November 2023, the launch anniversary of ChatGPT. That year, there had been an unending torrent of news, advances and speculation about generative AI, and we wanted to see what L&D practitioners were doing with it. The answer from those we surveyed was: not much. Even in this self-selecting group of people with an interest in AI, 45% of employers were doing no more than experimenting with it.

The second report, published the day before the London Learning Technologies Conference in April 2024, showed that L&D was using AI and included seven case studies exploring how sophisticated some of these uses were. In the survey, however, we saw that the most significant expected benefit of AI was faster content creation.

This contrast between the uses of AI identified in the case studies and in the survey is something we explore further in this report, concluding that there are three ways in which L&D is using AI. This might sound like material for a three-step process or maturity model, where you begin at a basic level and, over time, reach a level of expertise. We have seen no evidence, however, that this is happening. As a result, we have connected these three uses of AI in what we call an Immaturity Model. We hope it will help people understand that the strategic, sophisticated use of AI in L&D results from a complex journey involving not just what L&D does but also the attitudes and behaviours of the organisation beyond the L&D function.

The model we have created for this report builds on Eglė's original Complexity Scale and draws on a data set that includes not just our latest survey (with 420 respondents from over 50 countries) but also the case studies in this and previous reports as well as hundreds of conversations with L&D practitioners in the nearly two years since the launch of ChatGPT. We plan to develop the model further so that it can guide L&D professionals in their use of AI.

The result of all these case studies and modelling is a lengthy report. If you are short of time, you may want to start at the back with the conclusion. On one page, it expresses the core of our thinking. You can then work backwards for more detail on the Immaturity Model, read the case studies, and finally, the survey data.

The current burst of enthusiasm for AI began in late 2022 with the launch of ChatGPT, even though AI itself goes well beyond generative AI. This enthusiasm is justified, not because of the many vague predictions about what AI may be able to do in the future, but because of the power of what it can do now. It offers L&D an opportunity to extend our role and to put learning and performance at the heart of the business. L&D has had moments of opportunity in the past, but probably few as great as this. It is an opportunity L&D must grasp.

Donald H Taylor,
Eglė Vinauskaitė

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About the survey

The main quantitative piece of this research is an eight-question online survey conducted between 25 July and 30 August 2024. The questions followed a similar pattern to the survey published in November 2023, **Focus 01, AI in L&D: The state of play**, allowing us to compare the two reports.

The first two questions were optional and asked about personal details and where people worked.

They were followed by four questions asking:

▸ **Q3** about their progress using AI in L&D (multiple choice, obligatory);

▸ **Q4** for details of how they were using AI (free text, optional);

▸ **Q5** about the benefits they expected to see from using AI (multiple choice, obligatory);

▸ **Q6** about barriers experienced in using AI (multiple choice, obligatory).

The survey was publicised via a combination of social media (largely LinkedIn) and email newsletters. The 420 respondents were self-selecting. As such, they are unlikely to be representative of the overall population of L&D practitioners. They are more likely than most to have strong opinions about AI, and to have experienced working with it.
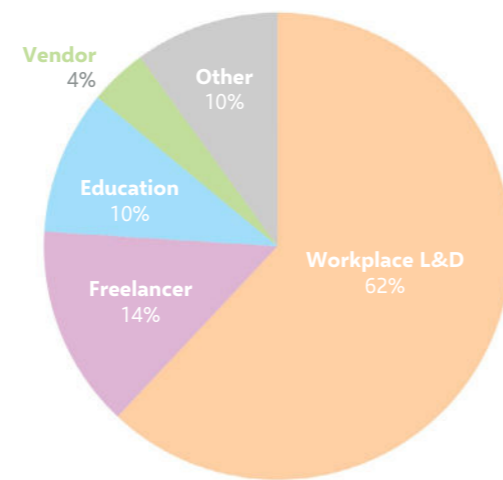

Figure 1: Where respondents worked

Almost all respondents (99%) answered the question "Which best describes where you do most of your work?" with the majority working on an L&D team in the workplace.

The tool used, Survey Monkey, provides IP addresses. These showed respondents were largely based in North and Central America (31%), the United Kingdom (19%) and the rest of Europe (22%).

About the report

This report has three parts. The first examines the survey results we split. this into quantitative and qualitative analysis, with the latter exploring the answers to question 4, where respondents shared – in nearly 10,000 words – the detail of their work with AI.

The second part is a collection of case studies exploring in detail how organisations are using AI. While these case studies may include the use of generative AI to create content, in none of the studies is content production the main use of AI.

Finally, in part three, we propose a model that extends Eglė Vinauskaitė's Complexity Scale for the use of AI in L&D, first proposed in **Focus 02, AI in L&D: From talk to action.**

This Immaturity Model attempts to explain a paradox we have observed over the past year. L&D practitioners increasingly use AI in content creation, but this does not necessarily lead on to more complex uses. Why is this?

Throughout the report, where permission has been given, quotes are attributed. If a quote is not attributed, permission has been given to use the quote anonymously.

Caveats

Navigating the nuances behind the data

When considering this report, please also consider these caveats around the data set and the interpretation of results.

Respondents are likely to be more tech-savvy than most

Most respondents choose to contribute after seeing an invitation on social media or email. They are, therefore, a self-selecting group. Because they are contacted – and answer – electronically, respondents are certainly users of technology, and probably more likely to feel positively about technology than the general population. This method of canvassing votes means that anyone working offline is excluded.

Year-on-year comparisons may be unsound

Because the 2023 survey was anonymous, it is impossible to guarantee whether the same people responded in 2023 and 2024. In fact, given that more people contributed this year, at least some of the respondents were new. This could lead to variations between surveys arising from changes in the make-up of the surveyed population rather than changes in the views of L&D.

Where are we now?

The state of play of AI in L&D

Question 3 asked respondents 'How would you describe your progress in using Artificial Intelligence in workplace L&D?'

Six multiple choice answers were provided:

1. Our organisation has no intention of using AI as part of L&D

2. Our organisation has not begun exploring the role of AI in L&D

3. Our organisation has experimented with AI tools in L&D but has not implemented anything

4. Our organisation is currently piloting the use of AI in L&D

5. Our organisation is using AI in some parts of our work in L&D

6. Our organisation is using AI extensively as an integral part of our work in L&D

The wording of the question was the same used in the 2023 survey, and the wording of answers was very similar. The main difference was replacing 'We' in the 2023 survey, with 'Our organisation'. For clarity in the following discussion, these options have been abbreviated and labelled (A) to (F) as can be seen in Figure 2.
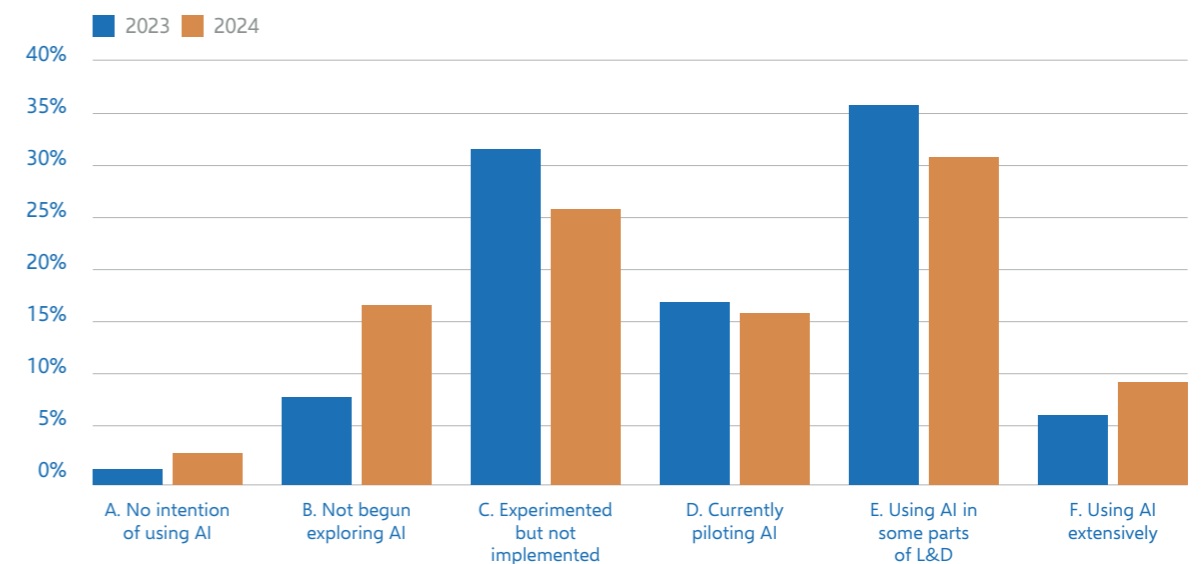

Figure 2: Progress in using AI in L&D 2024 vs 2023

Caution is needed in comparing the 2023 and 2024 surveys (see Caveats for more on this). The surveys had different numbers of participants (317 in 2023, 420 in 2024), with a different geographical spread, and so are not directly comparable.

Having said that, two large differences between the surveys need an explanation.

The share of respondents choosing 'B. Not begun exploring AI' was twice as large in 2024 as in 2023 (17% vs 8%). Similarly, this year's vote for 'F. Using AI extensively in L&D', was almost twice that of last year (9% vs 5%).

The increase in the vote for 'B. Not begun exploring AI' is probably best understood as new people, previously uninterested in AI, joining the survey for the first time this year.

If this was the only change from last year, we would expect the share of votes across all the other options to drop. However, the vote for 'F. Using AI extensively in L&D' rose. We believe this is due to two things. First, some extensive AI users discovered the survey this year, and joined it. In addition, some respondents who last year answered 'E. Using AI in some parts of L&D' have progressed to using it extensively.

Taking the 2024 figures as a snapshot, however, they illustrate a situation we have been anecdotally observing in the industry since 2023: there is a small group of L&D organisations forging ahead with AI, a sizeable group testing it out and doing something, and a group that isn't using it in any strategic way, and it's not a small group.

Such distribution has persisted for over a year, and our Immaturity Model (see later) attempts to explain why some organisations are seemingly struggling to bridge the gap to sophisticated use of AI.

Benefits

Question 5 asked respondents to "Select up to 3 benefits you expect to see from your use of AI in L&D". This wording was the same as in the 2023 survey. The order of the 12 options was randomised.

Because the 2023 question had 11 options, and this year we had 12, we do not compare the votes for each option, year-on-year. With more options in 2024, we would expect the share of votes for each option to be smaller this year, and this is what happened. We can, however, examine the relative popularity of the options, year-on-year. Did any option prove more popular this year, and rise up the rankings?

As can be seen in Figure 3, the relative positions of the top 4 options remained the same. In the lower half of the table the rankings shift a little, but the percentages involved here are very small. In 2024 'Identify skills' received 4% of votes and 'Provide extra skills practice' 3.8%. Given these narrow margins of difference, some shifting is probably inevitable.

The most striking thing about the options' rankings for this year and last is that the first two options retain last year's dominance. L&D practitioners remain convinced that the key benefit of AI is in creating content faster, and with improved efficiency.

2023 Results

Create learning content faster	1
Improve efficiency/reduce costs within L&D	2
Personalisation/adaptive learning	3
Facilitate information discovery	4
Provide extra skills practice	5
Identify skills	6
Provide extra knowledge testing	7
Maintain skills taxonomies	8
We're not using AI	9
We don't expect to see any benefits	10
Other	11

2024 Results

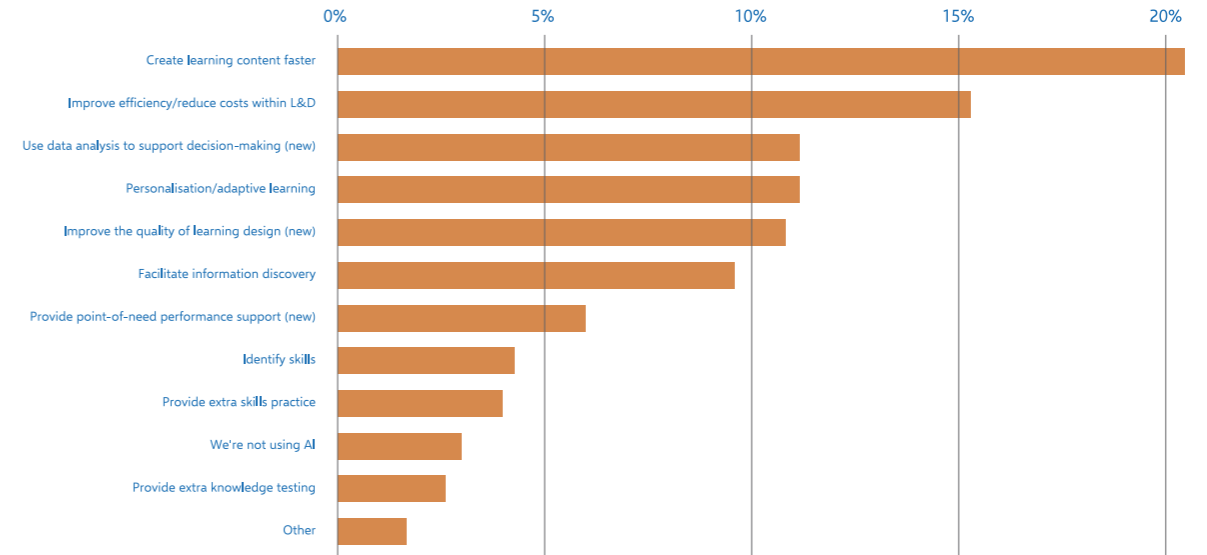| 1 | Create learning content faster |
2	Improve efficiency/reduce costs within L&D
3	Use data analysis to support decision-making (new)
4	Personalisation/adaptive learning ▼
5	Improve the quality of learning design (new)
6	Facilitate information discovery ▼
7	Provide point-of-need performance support (new)
8	Identify skills ▼
9	Provide extra skills practice
10	We're not using AI ▼
11	Provide extra knowledge testing ▼
12	Other ▼

Fig 4: Expected benefits of using AI in L&D, 2024

While 'Create learning content faster' placed #1 with 20.6% of all votes cast, the new option 'Improve the quality of learning design' only reached #5 with 11.4%. This demands the question: are respondents so focused on creating content at speed that they ignore the possibility of AI being used to improve quality? Or do practitioners consider that AI cannot improve the quality of content? If so, is this because the content is already of good quality, thanks to the role of the practitioners, or is it that they consider AI incapable of producing good quality content, or is it that they don't know how to use AI for this?

Finally, this result also poses an uncomfortable question: is quality simply not the top priority for L&D practitioners?

Another striking point: is that skills remain firmly in the bottom half of the table of expected benefits. Added together, the total voting share for 'Identify skills' (4.0%) and 'Provide extra skills practice' (3.8%) would still only place skills as a whole at #7 on the table. This is despite the considerable current discussion around the value of AI for skills in L&D, and the successful work taking place right now in using AI for skills. For more on this, see the Ericsson case study.

This contrast between the survey results and the case studies lies at the heart of this report. On the one hand, the survey results show practitioners focused on the internal efficiencies of the L&D department. In contrast, the case studies illustrate often deeply complex uses of AI to solve business problems. Why the difference? This is something that we address in the third section of this report – the Immaturity Model.

''We use it for content generation, image generation, and prescribing learning content based on skills assessments.''

Deborah Decker,
L.A. Care Health Plan

''Looking at how to speed up the creation of digital assets. Looking at how AI can help with adaptive learning and identifying individuals' skills gaps.''

Kate Hudson,
The Henry Ford Academy

Barriers

Question 6 asked, "What barriers, if any, are you experiencing in your work with AI?" Respondents could choose any number of barriers from a randomised list of 12 options. On average, they selected just under three each.
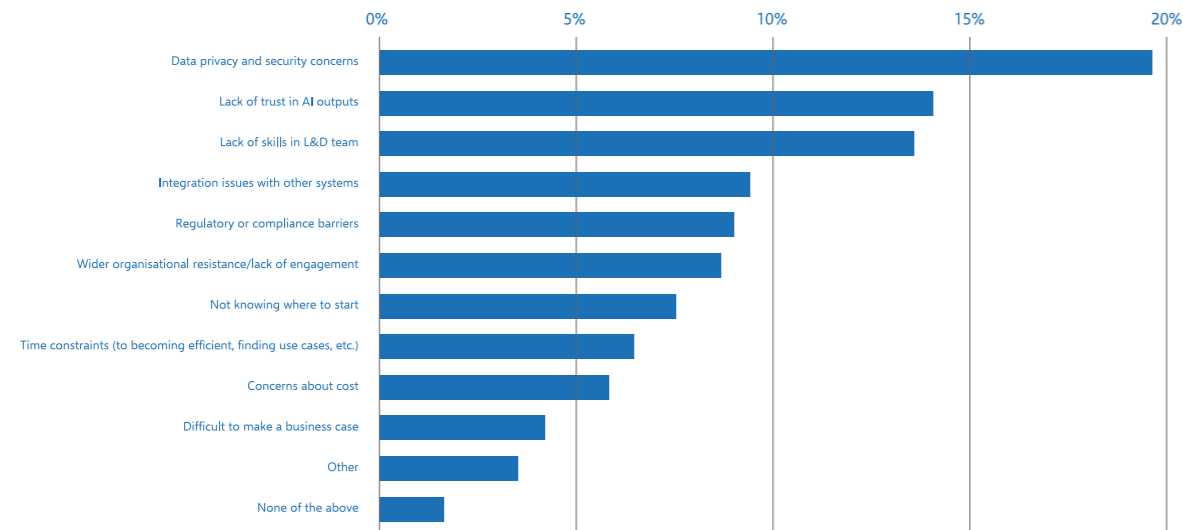
Figure 5: Barriers to using AI in L&D, 2024

Two things stand out in these results.

First, distrust dominates. As shown in Figure 5, the two most selected answers accounted for almost a third of all votes: Data privacy and security concerns (19.5%) and Lack of trust in AI outputs (13.4%).

As both generative AI providers and learning technology vendors are working to implement state-of-the-art information security protocols and earn that trust, it will be interesting to see whether this uncertainty continues in the future or whether organisations and L&D professionals grow more comfortable with AI and the complexities of data security surrounding it.

Lack of trust in AI outputs was evident in the free-text answers to Question 4, which asked for details of what respondents were doing with AI. Practitioners emphasised that while they are happy with what generative AI helps them do, they would never let it complete tasks unsupervised. Part of that distrust is baked in due to this technology's limitations, but arguably, another part is determined by how AI is used. These issues of use can be overcome with process improvements and a greater familiarity with how AI works.

If that comfort with AI increases, we might expect the third-ranked barrier, the lack of AI skills in L&D, to also fall down the table. The market has already noted this perception that L&D is underskilled in AI, and many AI courses targeted at L&D practitioners are now available.

The fourth blocker on the list, 'Integration issues with other systems', might provide insight into what's to come. While certainly not a top-ranking issue in our sample, it is nonetheless one that keeps coming up among L&D organisations leading the way with AI: beyond the simplest use cases of AI for content development, the more strategic and sophisticated AI implementations require specialist tools and quality data, which, in turn, need to seamlessly integrate with the existing technology ecosystem to be of any use. In a way, it might be that many L&D practitioners haven't reached a level of AI use where that would become a blocker.

Finally, it's peculiar how low 'Concerns about cost' and 'Difficult to make a business case' are on the list, especially given how high the use of AI for content development is and how difficult L&D seems to find moving towards higher impact, more sophisticated uses of AI.

The cost of enterprise-ready generative AI quickly racks up if an entire team or a department uses it.

Additionally, the AI that enables multimedia development, skills practice, analytics or performance support is usually acquired from vendors developing AI tools tailored for these purposes, adding to the overall cost.

If cost and making a business case are not significant issues for most practitioners, is it because L&D largely does not intend to move beyond individuals using free, general-purpose AI tools? And if that is the case, is it due to a lack of exposure – not knowing what could be achieved beyond simple ChatGPT prompting – or a lack of strategic vision and ambition?

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''AI tools are coming out on the market at such a rate that it is difficult to tell which are most valuable and which are poor copies of other available tools.''

How AI is actually used

AI for LX Design

The most common use of AI

Due to the nature of generative AI, the learning experience design (LXD) process seems to be its most natural use case in learning. After all, learning design and content development are arguably some of the most common and resource-intensive tasks in many L&D teams.

A year ago, the use of AI in LXD could be broadly summarised in Figure 6: extensive use of AI for learning design and content development tasks, with few using it in either Discovery or Follow-up stages–before designing or after deploying the learning experience.
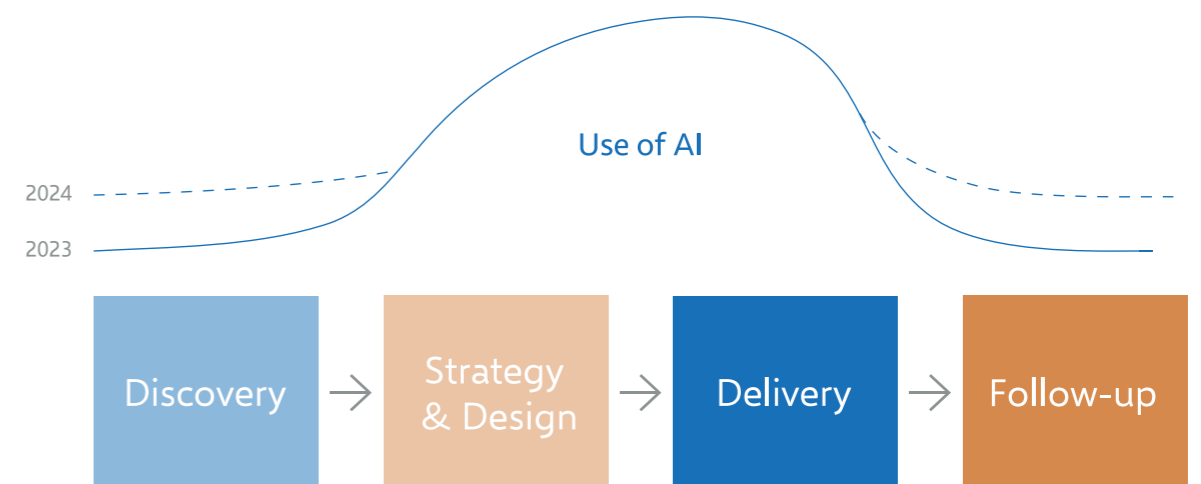

Figure 6: Focus of AI use in LXD

This year, however, we are seeing much more use of AI for content and user research (Discovery) and analysis tasks (Follow-up). In fact, the number of respondents who mentioned using AI for some kind of analysis jumped from just four last year to 44 this year!

Here are some of the key differences we have observed among the open-text responses a year apart:

More data analysis

We see AI being used for data analysis at three levels: to analyse learner feedback on a course, to analyse the usage of learning systems, and even to tap into company-level data to better understand the audience and their needs. While still in its early stages, this is a powerful indicator of what might be made possible by AI.

Trust in content differs

While content development is undeniably the number one use case of AI in L&D, the respondents seem to be split into two camps: one group uses AI to develop big chunks of course content, scripts and sometimes entire modules, while the other regards AI as a tool to overcome the 'blank page' syndrome and create a first draft which they extensively modify and build on. Many respondents noted that they don't trust the quality of AI outputs and that using it without extensive human involvement has proven impossible.

Co-creation for learning design

Last year, learning designers extensively reported using AI for such tasks as brainstorming learning activities, creating high-level course outlines or writing quiz questions. While these are still popular use cases, many also described using AI as a co-creator, a copilot for learning design of sorts. They would ask it to be a sounding board and thought partner for ideas and designs, which is a distinctly new common use case this year.

Use of custom tools

ChatGPT may still be king, but L&D professionals and learning designers in particular are increasingly using custom tools for specific tasks. Image, video and audio creation and editing as well as conversational bots are used much more widely in comparison to last year, with some teams creating their own GPTs as well (custom GPTs are ChatGPT's feature that allows you to fine-tune the AI for a particular task, embed a lot of the necessary prompting in the background so you don't have to repeat it, and share it for others to use).

Overview of AI use

This section will take you through each stage of the LXD process and beyond, and offer an overview of the common AI practices forming in our profession.

Generative AI in LXD:
Discovery

Discovery is usually the first step of the learning experience design process. It involves gathering insights about the employees, their needs and context, as well as getting a good understanding of the subject matter.

This phase often includes extensive conversations with stakeholders and SMEs and researching relevant content. Where possible, it should also include qualitative and quantitative user research.

This year, three themes have emerged of AI use for Discovery:

1. AI as subject matter expert (SME)

A very common use last year as well, using AI as a stand-in SME helps L&D professionals get up to speed with the topics they need to provide training on. This is especially useful when the topic is unfamiliar and time is of the essence.

Here are some examples shared by respondents:

■ **Self-onboarding:** *information gathering on the topic, including explanations of concepts and exploring different angles*

■ **Content ideation:** *soliciting a content outline and subtopics on unfamiliar topics*

■ **Filling in the gaps** *in existing content when SMEs are unavailable*

■ **Sourcing materials:** *finding resources and tools to provide to learners*

2. AI as a research assistant

Aside from playing the role of an SME, AI can also be a research assistant. It is mostly used preparation and analysis:

■ **Preparation:** *generating possible questions for user interviews or preparing for interviews with SMEs*

■ **Analysis:** *analysing the source content received from SMEs, internal and external clients, or research interviews*

3. AI for user research

While L&D uses AI for content research quite extensively, user research, i.e. trying to understand the people who will be the recipients of any learning experience, is much rarer. However, in this area AI is still used to analyse available information to understand the users' roles, goals and competencies. Some also use AI to create user personas.

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''I use AI to generate sample curriculums / topics based on specific learning requirements for technical roles–it's one of the first research tasks prior to getting SMEs involved in the process.''

Generative AI in LXD:
Learning Strategy & Design

The Learning Strategy & Design phase involves crafting a blueprint that aligns with the identified learning outcomes, and uses effective learning and engagement strategies.

In this phase, the learning designer usually takes the findings from the Discovery phase and creates a high-level creative and learning strategy for the programme, including key learning interactions and resources.

Here are the most common uses of AI among the respondents. As mentioned before, learning designers use AI both for common design tasks and for co-creation.

Common learning design tasks

- *Creating learning outcomes and a high-level course outline*

- *Generating quiz questions, question banks and feedback*

- *Rapid storyboarding*

- *Brainstorming and creating learning activities: example scenarios according to parameters, case studies, role-plays, and practice exercises both for in-person and for digital learning.*

Co-creation / AI as thought partner

- *Asking AI to review a course outline in line with adult learning theories and evidence-based practice*

- *Asking AI to point out any missing steps in the learning design process, as well as challenge the learning designer's approaches and ideas*

- *Exploring ideas and possible learning strategies for a particular audience in conversation with AI*

AI for live training

AI is now also extensively used to help facilitate live training:

- *Creating a workshop structure, framing and key messages*

- *Generating ideas for ice-breakers, team-building activities, breakout room prompts, and role-play scenarios*

- *Drafting presenter notes and facilitation guides for sessions*

- *Building slide decks*

Among the responses, we also found interesting one-off use cases that might inspire you to try them out:

- *Gamifying learning checks by creating GPTs to emulate game shows like Family Feud, Hollywood Squares or Jeopardy*

- *Digitising and analysing handwritten text on flip charts and sticky notes from learning design ideation and strategy sessions*

- *Using AI as an assistant or extra team member to participate in team ideation sessions*

- *Transforming on-demand resources into conversational learning interactions*

Generative AI in LXD:
Delivery

The Delivery phase involves creating the content, resources and any assets that support the learning experience.

This is often the most time-consuming part of the process that might involve not just learning designers, but also copywriters, graphic designers, video producers and editors, animators, voice-over artists and other creative professionals.

Unsurprisingly, this is where learning professionals are using generative AI the most:

Text-based content

- *Content writing, copy editing and proofreading for course content, scripts, resources, instructions and course introductions, takeaways and descriptions*

- *Creating first drafts and content samples*

- *Rewriting content to heed word limits, formatting, style or tone of voice (e.g. to make the existing content less 'stale' or a script more conversational)*

- *Simplifying technical, jargon-heavy text to be accessible to people with varying levels of expertise and language proficiency*

- *Summarising and synthesising long documents to extract key ideas*

- *Translation*

In addition, some respondents shared ideas that might inspire more sophisticated use of generative AI:

- *Creating a Custom GPT to customise content and create resources specific to your industry or organisation*

- *Creating a Custom GPT to ensure brand voice is present in the team's writing*

- *Localising content to suit an international audience, such as by changing to relevant metaphors and using common local expressions*

- *Prototyping: using AI to create a 'proof of concept' to bring the learning design to life when pitching internally or externally*

- *Generating sample data and scenarios to use for demos, training videos and simulations*

- *Asking AI to review copy to make your writing more objective*

- *Asking AI to review your existing learning content and propose new, alternative approaches to delivering it to end users*

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''It makes me write more freely in my native language and then translate the text into English afterwards.''

"

''While it feels like cheating, using AI has allowed my 'team of 1' to make progress on my organization's L&D course creation goals.''

Multimedia content

- *Generating images*

- *Image editing using third party software like Canva AI, Adobe Firefly and others*

- *Synthetic voice-overs for scripts and e-learning via text-to-speech (TTS) and, in some cases, voice cloning*

- *Multilingual 'talking head' videos with avatars*

- *Animation and video editing using AI-driven tools*

- *Generating transcripts and captions*

Here are some one-off uses that might inspire your own work:

- *Asking AI to suggest suitable imagery and/or a description that could be used to prompt AI to generate it*

- *Generating background music for digital content*

Generative AI in LXD:
Follow-up

The evaluation and follow-up stage involves measuring the feedback on and impact of the learning solution and identifying areas for improvement.

Unfortunately, quality learning impact data is difficult to come by and interpret, and therefore learning impact measurement has historically relied on feedback forms more than data analysis.

Last year, only a few of our respondents indicated that they used AI at this stage. This year, however, the number jumped from just four last year to 44!

L&D professionals are now commonly using AI at three levels:

Course feedback and follow-up

- *Running a sentiment analysis on feedback survey responses and suggesting improvements to training programmes*

L&D analytics

- *Tracking and analysis of user progress and usage patterns of digital learning tools*

- *Analysing KPIs, assessing L&D effectiveness and producing reports*

Company-level analysis

- *Analysing company data relevant to L&D, such as market and competitive research, demographics, or skills that are common across multiple job descriptions*

Some more rare and advanced uses of AI include:

- *Analysing data and suggesting improvements to content recommendation engines*

- *Testing out prompts to evaluate learning on Kirkpatrick's levels 2 and 3*

However, a few respondents noted that their work with analytics is limited by the quality of the available data and lack of access to confidential work files and company information.

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''While the [synthetic voice-over] results are a lower quality than a human reader, we are trading some quality for faster development and may make future investments in audio quality if necessary.''

Beyond LX Design

What else can AI do?

AI for administrative support

The scope of this paper isn't to outline all the possible uses of AI to support administrative tasks in learning, of which there are plenty. As a result, the list below is by no means complete or even prioritised. However, it will hopefully help you get a sense of how your colleagues in L&D are currently supporting their work:

Daily tasks

- *Generating meeting notes and recaps*

- *Drafting announcements and emails (especially uncomfortable ones!)*

- *Writing reports and procedures*

- *Writing job descriptions and briefs*

- *Converting text into presentations*

Technical support

- *Software troubleshooting*

- *Excel help*

Operations support

- *Task and process automation (using third party tools)*

- *Project planning (structuring processes and work streams)*

Marketing and communications

- *Building an engagement strategy, branding and content plan*

- *Writing blog posts, promotional messages about L&D events, facilitator profiles and programme blurbs*

- *Creating text and multimedia promotional materials*

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''We're delegating more than 60% of work to AI based on our complex and detailed sets of prompts containing the specificity of our marketing & communications plan.''

AI for learner support

So far, the described uses of AI for administrative tasks and in learning design workflows have mostly affected internal L&D processes. However, some of the most promising, and potentially impactful, uses of AI might be on the user-facing side.

In the past year, AI has been increasingly used to support people's skill development and performance on the job. We know that people don't develop skills merely by consuming content, no matter how well-produced it is. The industry's answer to that has been AI-driven role-play bots that enable people to practise a skill and get detailed, personalised feedback. Other versions of these bots include AI coaching and performance assistants.

Some of these solutions have been bought in from vendors, others have been custom built internally. While not many of them have been deployed to the company's entire population, many organisations have been trialling a version of these tools:

Skill development

- *Role-play practice tools for presentation, public speaking, sales skills and difficult conversations*

- *Analysis of recorded real-life conversations to target practice and feedback*

- *AI+VR role-play simulations for public speaking, customer interactions and other soft skills*

Coaching

- *Leadership and performance coaching: AI playing the role of a coach in a 1:1 setting*

- *Career coaching: advising employees on their professional development and helping them navigate the available support*

- *Tutoring: supporting people within a learning experience, e.g. by further clarifying concepts, discussing topics and helping solve problems*

Performance support

- *Knowledge assistant that helps find the necessary information among internal documents, especially for procedures and how-tos*

AI for learning personalisation

An AI use case that pre-dates generative AI, learning personalisation usually takes one of two forms: content curation or adaptive learning.

Content curation most often involves using AI-enabled LMS/LXP functionality or a third party tool to recommend relevant content or training based on people's jobs, interests or performance needs.

Adaptive learning involves serving content based on an assessment of a person's level of knowledge, letting them skip the content that's irrelevant or already learned and reinforcing the parts where they struggle. Adaptive learning is provided using third party tools or platforms.

AI for skills

Finally, some respondents are tapping into AI-powered solutions for skills intelligence and management. While usually these insights require specialised software, later in the report you will find case studies of organisations doing some of the skills work by adapting ChatGPT.

In the realm of skills, AI is used for:

- *Skill inference: to understand what skills the individuals have*

- *Skills taxonomies: to understand what skills are required to perform the necessary job roles in the organisation*

- *Personalised development pathways: suggesting learning pathways that help fill individual skill gaps and fulfil organisational needs*

- *Internal mobility: enabling upskilling and reskilling by matching people with projects and potential job roles that would support their development*

Case studies

In this section of the report, you will find case studies showcasing AI used for different aims and with different approaches. Some relied on the skills available internally in their L&D team, while others brought in external experts. Some exploited their existing tools, while others decided to build their own or do both.

It has become clear that there is no one way to use AI in L&D. It is also evident that once L&D moves beyond using generative AI for content creation and more basic learning design tasks, it needs to collaborate with the wider business. In fact, it seems that the more sophisticated the use case, the more L&D needs to bring in the skills, knowledge, data and technology from elsewhere in the business.

To find the case studies in this report, we reached out to learning leaders in our networks individually, asked for recommendations, and placed requests in newsletters and on LinkedIn, asking L&D practitioners to tell us their stories of using AI.

Please note: these are not marketing case studies with a clear end and neat impact metrics. Many of these projects are still in progress. We want to recognise that the L&D leaders who agreed to participate and tell their stories have, in many cases, done so without a certainty of success, which

makes their contributions even more valuable and representative of the experimental and iterative nature of AI deployment.

You will see some vendors mentioned. We do not benefit from this, financially or otherwise. Also, the mention of a vendor is not necessarily a recommendation. The goal of this report is to help the L&D community imagine what can be done with AI and how to do it. After careful consideration, we decided that being specific about the tools used would help make the case studies more practical and help our colleagues understand the resources involved in technology rollouts of this kind.

We hope you find the following case studies useful and illuminating.

If you would like to see your own case study in the next report, please contact Donald or Eglė. Our contact details are at the end of the report.

Enhancing staff development through AI coaching

NHS Elect

NHS Elect | Darren Leech, Director and Head of Faculty (Coaching)

Problem and solution

The National Health Service, or NHS, is the publicly funded healthcare system of the UK that employs over 1 million people. NHS Elect is a network supporting NHS and healthcare organisations by offering leadership development and coaching services. Traditionally, NHS Elect's coaching efforts have focused on senior clinical and operational leaders. Recently, interest in accessing a coach has broadened to include those in aspiring or more junior roles across the NHS.

The scalability of traditional coaching, reliant on human coaches, has been a significant barrier, not least because some NHS staff work busy shifts and would normally find it difficult to schedule a 1:1 session. NHS Elect piloted an AI-driven coach to provide scalable, text-based, non-directive coaching as a potential solution to this problem. The pilot was conducted over three months with 53 volunteer participants who were either coaches themselves or in leadership positions.

To address data privacy concerns and greenlight the pilot, a third-party AI coach (AIcoach.chat) was configured to forget any personal user data and the entire conversation immediately upon logging out, essentially making each coaching session a one-off with potential implications for engagement and effectiveness that will be explored in later pilots. Email addresses hadn't been collected either.

The AI coach was designed to support users in setting goals, understanding themselves better and committing to actions. In the coaching app, users were presented with seven typical topics and asked to choose those that best represented what

they wished to work on: explore more positive strategies for managing the challenges at work; gain greater self-awareness, self-confidence and resilience in their role in the NHS; gain greater clarity regarding their career direction; expand knowledge of resources available to support them in their role and professional development; identify their own learning needs and develop a personal development plan; improve their communication style; or increase their understanding of constructive leadership.

On average, participants selected four topics. They were also asked to rate their goal for perceived difficulty, with an average rating of 3.4 out of 4, where 4 = very difficult.

81.1% of the participants undertook a single session; 11.3% took two, 3.8% took three, 1.9% took four and 1.9% took five sessions.

Based on self-reported scores, key findings included:

- **Goal Progress:** *Participants achieved a 10% increase in progress towards achieving a goal, in most cases, after just one session. There was a statistically significant correlation between the number of times a participant used AIcoach.chat and their goal attainment progress.*

- **Self-Efficacy:** *Users reported a 5% increase in self-efficacy, from 65% to 70%, reflecting an enhanced belief in their ability to achieve their goals.*

Challenges and lessons learnt

Information governance:

In the public sector, there are (rightly) questions and concerns about information governance that AI will need to overcome to be more widely adopted. In this case, a primary concern was ensuring the AI coach adhered to strict data privacy standards. The pilot opted not to retain any personal data beyond session use, which meant each session started afresh. This approach assured compliance with NHS data regulations but limited the AI's ability to build on previous conversations.

Engagement and return rates:

Although the AI coach was effective in single sessions, sustaining user engagement over multiple sessions proved challenging. A significant portion of users engaged only once, suggesting the need for strategies to encourage repeated interactions to maximise coaching benefits.

Evaluation of long-term impact:

Measuring the long-term impact of AI coaching remains a challenge. Initial results are promising, but ongoing assessment is necessary to understand its sustained effect on professional development and workplace well-being.

Next steps

1. **Memory capabilities:** Future iterations may explore the possibility of the AI retaining session memory to enable continuity in coaching conversations. However, the immediate next iteration will only allow the app to remember participants' email addresses to nudge them to re-engage.

2. **Expanded pilot:** NHS Elect plans to increase the scale of the pilot to include a larger participant pool, focusing on understanding the impact of repeated coaching sessions and gathering more comprehensive data.

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''Clearly, there are a lot of things that the AI coach won't do and I don't think it will replace coaching per se. For some people, it might work. Other people might think 'it's not for me'. Or they might get intrigued and access a human coach to explore this further.''

Darren Leech,
Director and Head of Faculty (Coaching),
NHS Elect

Streamlining project management with AI-driven competency assessments

Superside

Superside | Aki Friedrich, Director of Learning Experience

Problem and solution

Superside is an AI-powered creative service operating remotely across 60 countries. With a mission to revolutionise creative services by offering quicker and more efficient design solutions, Superside handles a variety of projects, from high-volume creative production to custom creative development. Among its staff of 740, 250 are creatives (designers, copywriters, video editors and others) and 130 creative project managers (CPMs).

CPMs handle different kinds of projects: creative production, which focuses on efficiently executing briefs such as creating large volumes of ads or marketing collateral, and creative development, which involves original creative work and collaborating with clients to develop fresh ideas and campaigns.

CPMs play a critical role at Superside: they decide which capabilities are needed to fulfil a client brief and staff the project with the right creatives. As such, it's essential that they have the competencies to make those decisions and manage the client relationship accordingly.

Assessing CPMs' ability to manage these diverse projects was a manual and time-consuming process that relied heavily on one-to-one skill assessment interviews. This subjective approach lacked consistency and required significant effort from the evaluation team, slowing down the process of identifying skill gaps and areas for improvement.

Once the L&D team got involved in the project, they put together a solution that used their AI-powered internal platform to partly automate the skill assessments and a custom GPT to analyse the results (GPT is a custom AI agent that OpenAI users

can create to perform a particular task; GPTs are available to all paid ChatGPT users). Here is how the solution worked:

- **Assessments:** *The one-to-one skill assessment interviews were transformed into asynchronous video recordings. Assessment questions were set up on Superside's learning platform (Sana) and shared with CPMs in advance. They were then asked to record video responses, during which they explained how they managed specific projects and client interactions. Each video was then automatically transcribed and shared with the L&D and Creative Excellence teams.*

- **Analysis:** *Once the transcripts were generated, they were anonymised and processed by a custom GPT, which had been calibrated using different information: role and competency descriptions, output structure, abbreviation glossary, interview questions and expected answers, and assessment criteria. GPT analysed each transcript, rating the CPMs on predefined competencies based on their responses and giving feedback. Along with the numeric ratings, GPT provided detailed justifications, identifying quotes from the transcript to support its evaluations. Each transcript was analysed 3-5 times to capture any rating inconsistencies and to average out the results.*

- **Calibration:** *After the initial AI evaluations, the results were compared to manual evaluations performed by the Creative Excellence team. The AI's assessments were fine-tuned over several iterations to align closely with human judgments before scaling to assess more people.*

The AI-powered system cut down the assessment process from an average of 15 minutes to 5 minutes per CPM, eliminating the need to schedule over 100 interviews and enabling much faster evaluations. The AI's feedback, supported by specific examples from the transcripts, helped L&D quickly identify areas where CPMs excelled or needed improvement.

Crucially, this process isn't meant to inform promotion decisions. It's about knowing where to invest in upskilling so that people are up to the challenge of a fast-growing organisation and the highly dynamic creative market.

Superside uses ChatGPT Enterprise, which offers enhanced data protection. The custom GPT was created and calibrated by Aki himself, with input from the Creative Excellence team.

Challenges and lessons learnt

AI's positive bias:

The AI has a strong tendency to provide overly positive performance feedback and always tries to 'please' its conversation partner. We had to adjust the instructions and criteria several times to ensure the AI delivered more critical and nuanced feedback.

Iterative calibration:

Don't trust your first iteration of GPT. Take the time to learn how it responds to certain instructions and use cases. For example, while we managed to get the AI scores for creative production projects, which include measurable technical skills close to human evaluations, the AI was unable to reliably and consistently evaluate creative development projects, where subjective skills such as communication and ideation played a larger role.

Instructions:

Among the many documents you upload to the custom GPT, there might be contradictory instructions that affect the output. Ask the AI to cross-check and bring up any contradictions – we made a few changes after its feedback. AI is like a human: the better the instructions and guidance you give, the better it will complete the task.

Next steps

Completing the full journey:

1. Creating a workflow that assigns CPMs to client projects that best match their skill sets.

2. Working with the Creative Excellence team to develop courses that could help CPMs who score lower in specific areas to receive targeted development opportunities.

> ''Don't just ask AI to do something and think it's smarter than you. We don't know what it does well and need to experiment, check and iterate to find out.''
>
> **Aki Friedrich,**
> Director of Learning Experience, Superside

Workforce foresighting for the future of the manufacturing industry

Workforce Foresighting Hub

Workforce Foresighting Hub | Steve Picker, Technical Lead

Problem and solution

The Workforce Foresight Hub, an Innovate UK initiative, has been launched to address a pressing issue many industries face today: the growing skills gap caused by the adoption of disruptive technologies like floating wind technology in Renewables or Artificial Intelligence in the creative sector. As new technologies enter the mainstream, industries struggle to upskill their workforce in time to meet these new demands, leading to inefficiencies and delayed innovation.

The Workforce Foresighting Hub (WFH) set out to mitigate this issue by developing a systematic approach to predict future skills, workforce structures and, ultimately, changes in the training provision required to support the future state in 2-5 years. Central to their approach is the use of AI-driven capabilities mapping interleaved with human validation. Here is a high-level overview of the process of how the two work in tandem:

1. Identifying and validating capabilities:

■ **Data collection:** *The Hub's data cube ingests data from various sources, such as industry reports, organisations like the Institute for Apprenticeships and Technical Education, and global occupation and skills databases. Together with WFH's own curated capability data sets, this data provides the AI with a vast repository of context on what skills and capabilities are necessary for the adoption of different technologies – the database has over 30,000 of them.*

■ **Suggesting capabilities:** *When the team begins a new cycle for a specific technology (e.g., floating wind technology in Renewables), powered by sophisticated prompts, the AI searches the database for relevant capabilities needed to support the adoption of that technology or suggests new ones if they're not in the database. These capabilities cover areas such as design, implementation, logistics, support, and enterprise.*

■ **Expert validation:** *While AI provides a fast and efficient initial set of suggestions, human experts – technologists and domain specialists – review the AI-generated capabilities and decide whether to adopt, adapt, reject or add to them. This human validation prevents the inclusion of irrelevant or out-of-context capabilities. Each cycle ends up with about 150 capabilities.*

2. After the capabilities have been identified and validated, the WFH team works with employers to define how job roles will change within organisations. This involves:

■ **Role and proficiency levels:** *Employers assess the required roles (technician, engineering, or management) and proficiency levels for each role – whether employees need to be experts, practitioners, or simply be aware of specific capabilities.*

■ **Future occupational profiles:** *The AI and experts group capabilities into future occupational profiles, creating job descriptions for roles that need to change or that don't yet exist. For example, as floating wind technology becomes more prevalent, new roles like subsea HV dynamic cable systems engineer may emerge. As is the case throughout the process, AI does the heavy lifting and creates the initial profiles, and human experts validate them in a virtual workshop.*

3. Once the roles and profiles are defined, they are presented to educators already tagged with the most appropriate knowledge, skill and behaviour (KSB) tags that underpin that capability. Educators then adjust them based on industry demands and educational standards.

4. The final step is a map & gap analysis, where the AI compares the future workforce requirements with current training provisions, such as apprenticeship standards. This analysis identifies areas where existing training programs fall short in preparing workers for the future, enabling industries to take action and training providers to update their programmes before the gap widens.

The current iteration of the Hub's system uses a custom-built platform to integrate with the OpenAI API and various PaaS (platform as a service) solutions. This drives the workflow process and delivers insight via dashboards and visualisations for the different steps in the process.

Challenges and lessons learnt

Human validation:

Stick to your principles with human validation because even if AI seems like the cleverest person in the room, it will still sometimes make silly suggestions. Have AI do the heavy lifting and always follow up with validation by human experts.

The blank page problem:

AI proved really good at suggesting the first draft list of capabilities, occupational profiles or KSB tags for human experts to review. Reviewing and feeding back on the AI-generated suggestions rather than creating them from scratch vastly reduced the cognitive load for experts and streamlined the validation process.

Taking it slow:

It's easy to get carried away and keep implementing AI before you get stability in your process. Instead, implement it in stages, proving the value of each use case instead of trying to implement AI everywhere at once.

Next steps

5. **Refining AI Personas:** The project aims to develop AI personas with domain expertise that can participate in workshops, providing a deeper level of AI-driven insight into specific technological fields.

6. **Incorporating New Training Standards:** As the project evolves, the Hub intends to include data from sources such as the National Occupational Standards (NOS) and Standard Skills Classification (SSC) framework to integrate more comprehensive training provisions into the AI-driven mapping process.

''*We use AI to promote thinking and provoke ideas, not to suggest everything. We integrate AI into our human workflow, not replace it. It's the combination of the two that is getting the best results.*''

Steve Picker,
Technical Lead, Workforce Foresighting Hub

AI-driven skills intelligence that drives an enhanced employee experience

Ericsson

Ericsson | Peter Sheppard, Head of Global L&D Ecosystem
Octavian Bercea, Head of Skills and Learning Analytics

Problem and solution

Ericsson is a multinational networking and telecommunications company with over 100,000 employees worldwide. Until a few years ago, despite recruiting more than 9,000 new hires annually, there was a lack of transparency and visibility regarding the existing skills within the organisation. Additionally, Ericsson had a complex competence model, which had not been updated for years, leaving many job roles with obsolete requirements. Finally, the company struggled to identify which skills were critical for its future success and which were becoming obsolete.

Whilst the move from a competency to a skills model had been talked about for a long time, it was the advancements in AI over the past few years that enabled the automation of the skills taxonomy and skills intelligence. However, even with access to the technology, the transition has been a complex project with involvement from many different teams required to unlock its full benefits.

Within two years, Ericsson has simplified, digitalised, and partially automated its job and skills architecture. Now, it has over 1,100 new job profiles with up to 15 critical skills for every combination of job role and level. These profiles have been digitised by putting them into the human resources information system (HRIS) and making them available to all employees through a new app. The old competence model has been replaced with a simpler skills model and a dynamic skills taxonomy that is refreshed every month.

All in all, working with an AI-driven skills infrastructure provider (TechWolf) has unlocked new capabilities at Ericsson:

- **Dynamic skills taxonomy:** *sourcing skills from the market, updating them through automation and AI, and allowing Ericsson to decide which ones to bring into their own taxonomy and job roles*

- **Skills intelligence:** *gaining insights into emerging and declining skills in the market, skills that are adjacent to other skills, and combining the skills intelligence with jobs intelligence data to understand how skills and job roles at Ericsson compare*

- **Skills supply:** *understanding what skills Ericsson has in the organisation and what skills people have individually (skill inference and validation work is still experimental and ongoing)*

Making this project a success required working together with different People teams across the business: the core project team included people from rewards, analytics, talent acquisition, and talent management. Outside the People function, the project was connected to the global resource planning group. The team also worked with over 90 job role owners to transform the job architecture, established 20 skill area owners to manage the taxonomy and govern the skills linked to their areas, and enlisted a group of ambassadors to help manage the change.

The next phase of the project has been about putting the skills to work. This is the way Ericsson describes its steps towards being more of a skills-based organisation:

- **Recruitment:** *attracting, matching and selecting the right skills for the right jobs, both internally and externally, by putting skills into each stage of the recruitment process (requisition, advertising, shortlisting and selection). The result is to make the process more strategic for the company and equitable for candidates.*

- **Career development:** *giving people visibility into the skills required to design and succeed in their careers by enabling people to assess their readiness for jobs.*

- **Learning:** *building the skills for the business and personal development, including building learning journeys for critical skills, job-based skills and launching a marketplace to match people against development projects.*

Peter Sheppard describes the vision as taking the Company towards an employee experience characterised by "visible simplicity". This means that people in Ericsson see the same skills in all key processes, whether in assessment, recruitment, development, or planning, providing continuity through the different HR processes. The goal is to reduce friction in job mobility and career development for both Ericsson and its people.

Challenges and lessons learnt

Value is the starting and end point:

We started by considering the design of our job and skills architecture, and this was a mistake – we should have gone straight to the second step, which was to demonstrate value. Small-scale experiments and testing new ways of working need to be part of the proof points associated with this. For example, we demonstrated that if you bring skills into recruitment advertising, you can improve candidate quality. Once a new job and skills architecture is in place, then it is critical to go beyond the infrastructure and drive out the value by putting skills to work in the key HR processes. This is where skills ecosystems become a practical source of improvement.

Data and Analytics provide visibility to skills:

Ericsson now creates an Annual skills report that helps managers understand the state of skills in the Company. These reports, together will dashboards, help to turn skills into something more tangible and meaningful for businesses.

Platforms and Systems are essential to scaling a skills-based approach:

Ericsson has implemented an LXP and a talent marketplace as well as putting its skills and jobs into the HRIS. This helps to make skills available and visible in different people processes. Secondly, these platforms can start to make informed and useful AI-driven recommendations based on skills.

Next steps

Using the skills infrastructure for strategic workforce planning, which will require change management to shift the approach from planning for resources to planning for skills.

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> *''Wherever you sit in the organisation – talent, learning, workforce planning – you can't do this piece of work alone. You have to engage people from right across the business and HR function. This is a whole organisation activity.''*
>
> **Peter Sheppard,**
> Head of Global L&D Ecosystem, Ericsson

Preparing for the AI of the future and building cutting-edge skills

EY

EY | **Simon Brown,** Global Learning & Development Leader and Partner, Talent

Problem and solution

EY is a multinational professional services company with almost 400,000 employees in over 150 countries advising clients on Assurance, Consulting, Strategy, Transactions, and Tax. Building cutting-edge skills for people at the organisation is a strategic imperative, and AI integration into its operations is critical to EY's work with clients and leadership in this space.

With that in mind, Simon's L&D team has a twofold role:

1. **Incorporating AI in learning:** what should the learning experience look like if we use AI within the learning process?

2. **Preparing for the future:** what is the role of the learning team in building the skills for an organisation supported by AI?

AI in learning is being explored at three levels:

- *Optimisation: to produce content cheaper, faster and better, the team uses a selection of internal and third-party AI-powered tools for course authoring, scripting, editing, and synthetic video production. The learning experience design process is further supported by EYQ, an internal ecosystem of generative AI capabilities, which learning designers use to create agents that perform particular LXD tasks or run role-playing scenarios. EYQ also enables sharing prompts with the wider team.*

- *Innovation: AI has enabled L&D to do things it couldn't do before, such as to use fully AI-generated video in lieu of real shoots, fast and scalable translation, or sophisticated adaptive learning. Additionally, EY is experimenting with AI-powered coaching and has rolled out off-the-shelf coaching scenarios for handling various difficult conversations to everyone. At the same time, the team is working on more sophisticated coaching for niche use cases like presentation and message delivery, where AI could feed back across multiple attributes like tone of voice, body language, facial expressions, authenticity and others.*

- *Reinvention: this level is about putting in place the right systems to enable EY to take advantage of AI as its capabilities improve over the long term. This involves creating a common skills taxonomy across all the different areas of talent that AI could later use to support employees both in the flow of work and through personalised upskilling. The current area of exploration is focused on how skills data might flow through the existing learning platforms and be integrated with AI copilots.*

Beyond using AI in the learning team, L&D is also responsible for building AI capability in the organisation. To achieve that, it has launched a comprehensive suite of upskilling opportunities to support the global workforce:

- *AI Now, an introduction to AI course that has been completed by 80% of the workforce*

- *A curriculum across different aspects of AI, pitched at different levels across the organisation*

- *A badge system for achieving Bronze, Silver and Gold levels in applied AI, AI engineering and responsible AI*

- *AI Champions Bootcamps – 3-day deeper immersions into AI to enable people to shape AI solutions and talk in more depth about generative AI*

- *Regular webinars and podcasts by internal AI leaders on AI rollouts and lessons learned*

- *Learning that supports enterprise-wide AI tool deployment, including topics on ethical use, data constraints, and practical use in specific functional contexts*

- *A prompt-sharing site where employees can share, view and rate the prompts shared by their colleagues*

Challenges and lessons learnt

Encouraging excitement:

Running learning innovation webinars for the entire global learning team that showcase different uses, tools and ways of working with AI has helped generate excitement and overcome trepidation around AI in L&D.

Business case:

L&D needed to make a business case for investment in AI. The business cases for various types of AI-powered tools focused on content production efficiency or getting more value from previous learning investments by making content discoverable and learning personalised.

Interoperability:

To enable the future vision of AI offering timely, granular performance support and upskilling in the workflow, it's important to share that vision with your system providers and work with them to ensure that their technologies (will) have the capability, granularity and interoperability required to make it happen.

Next steps

The focus is on developing a five-year strategy that includes building the capability, agility, and technology to embrace whatever evolution of AI occurs in the future.

In the learning team, that means building or acquiring skills, experimenting with AI tools, piloting different technologies, looking at the overall technology ecosystem and the data architecture behind it, and placing some bets on what the future might look like. Outside the learning team, it's about ensuring that the organisation has the skills and knowledge to stay at the forefront of AI, in line with its strategy and strong culture of continuous learning.

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> *''AI technology is the worst it's ever going to be, so we should be basing our roadmap not on what it can do today, but on what it's going to be able to do in six, 12, 24 months and making sure that we've got the right pieces in place for how it's likely to evolve over that time.''*
>
> **Simon Brown,**
> Global Learning & Development Leader and Partner, Talent, EY

*Scaling impactful learning with AI:
The future of employee development*

Boston
Consulting Group

Boston Consulting Group | **Lidia Juszko,** Chief Learning Officer
Shiva Chattopadhyay, Global L&D Digital Strategy and Innovation Director

Problem and solution

The Global Learning Innovation team at BCG plays a pivotal role by conducting market research, creating opportunities for innovation by identifying the right use cases and building MVPs to test & validate disruptive ideas that align with Learning and Development (L&D) goals. Through various communication channels, they also create awareness and excitement about new initiatives at all levels at BCG. This team collaborates with Global and Regional teams to deliver cutting-edge solutions, including consulting and non-consulting staff and BCG X (The Tech Design and Build Division of BCG).

From the perspective of BCG's L&D Innovation team, AI holds transformative potential in three key areas: **Enhancing the Learning Experience, Improving Efficiency, and Generating Valuable Insights.** Let's explore these developments in more detail and take a closer look at what BCG is already doing.

Learning experience:

At a professional services firm like BCG, effective feedback is essential for fostering growth, maintaining high performance, and ensuring continuous development. Clear and constructive feedback enables teams to achieve excellence by recognising successes and addressing areas for improvement in a way that drives progress.

BCG has introduced a personalised AI coach designed to enhance feedback delivery and for practising critical conversations. This tool is part of BCG's broader AI suite, providing users with a risk-free environment to refine their feedback skills.

Historically, L&D teams have faced challenges in offering practical skills practice at scale. In-person or virtual role-plays were difficult to scale, lacked rich context, and could feel uncomfortable, particularly for introverts. AI technology has now enabled the creation of personalised 1:1 role-play experiences that are psychologically safe and tailored to individual needs.

BCG, in collaboration with an AI start-up, has developed AI-powered role-plays to strengthen key *Power and Human Skills*, such as feedback delivery, critical client conversations, emotional intelligence, leading with purpose, coaching, and more. Users engage in real-time conversations with an AI avatar using their own voice. The AI responds with appropriate context and emotion, simulating real-life scenarios. To personalise the experience, the tool gathers details about the user's role, geography, context and the specific problem they are addressing. BCG's L&D team worked closely with the AI start-up to adapt these role-plays to reflect the company's unique organisational context and ways of working.

The solution was initially piloted in two virtual, instructor-led programs with a couple of hundred participants, complementing traditional 1:1 role-play practice. Following excellent feedback and further refinements, the AI role-plays were successfully rolled out to thousands of users, providing a scalable and effective practice in the workflow to ensure employees can rehearse critical conversations at the moment of need.

Efficiency:

At BCG, the L&D team has gained efficiency in two key areas: leveraging AI-driven video creation and using AI tools to create micro-videos from long-form webinars. Previously, the high cost of producing and updating videos made the team reluctant to use this medium. With the adoption of AI technology, they have already realised significant cost savings. However, overuse of AI avatar-driven videos can make learning experiences feel repetitive and robotic.

To address this, BCG has adopted a more strategic approach, including:

- **Selective use of AI avatars and voices:** *Instead of relying on full video avatars for all content, the team opts to use synthetic voices for certain sections or incorporates avatars only at key points in the learning journey, such as during introductions or summaries. This approach maintains a dynamic learning experience while reducing the risk of it feeling robotic or monotonous.*

- **Creating micro-content from long-form videos:** *For long-form content, such as hour-long webinars, AI tools help the team automatically extract key highlights. These tools identify the most valuable segments of the video and generate concise, shareable snippets in both video and text formats. This enables the creation of shorter, more digestible learning modules from lengthy content, making it easier to engage learners and distribute focused insights.*

By integrating these AI-driven approaches, BCG ensures a more efficient, engaging, and scalable learning experience while maintaining the quality and relevance of the content.

Insights:

Lastly, AI is currently being experimented with to improve how BCG's L&D team gathers and utilises data insights. Tools like ChatGPT and Claude are being tested to analyse large volumes of qualitative and quantitative feedback from various training programs, processing raw data far more efficiently than manual methods. By identifying patterns and themes that might have been overlooked, AI has the potential to provide valuable insights.

For example, it can highlight which training sessions are most popular in specific regions or reveal common feedback trends across different programs.

Although still in the experimental phase, these AI-driven insights could help the L&D team tailor future content, improve program effectiveness, and better align with regional and organisational learning needs. Additionally, AI might offer the ability to analyse trends over time, enabling the team to track the long-term impact of training initiatives and create more personalised learning paths. This experiment aims to refine L&D efforts with a data-driven approach to meet the evolving needs of the organisation.

Challenges and lessons learnt

Working with startups:

Startups often introduce some of the most innovative solutions but require support when working with large enterprise clients. This support includes adding enterprise-level features, ensuring compliance with IT security standards, data tracking, responsible AI practices, legal requirements, and including clear disclaimers to mitigate risks associated with AI usage. Large organisations can greatly benefit from partnering with AI start-ups, but to ensure smooth integration, they must be prepared to guide them through complex enterprise processes.

Iterative Improvement:

The most effective innovations are rolled out through an iterative process, reducing the risk of large investments. This involves carefully selecting initial pilot groups, intentionally gathering user feedback, and working closely with the startup to continuously refine the solution. At every stage, it's essential to test and validate the solution to ensure that AI is being used to solve critical problems that wouldn't have been possible otherwise, rather than adopting it simply due to market buzz. Only after thorough testing, validation, and meaningful improvements is the solution ready to be scaled and introduced to a broader audience.

Roll-out and Change Management:

A successful AI solution roll-out requires more than a one-time email; it must be embedded into the organisation's processes. Instead of relying on a single communication, the AI tool should be

integrated into daily workflows, such as collaborative platforms like Slack or Teams, where nudges can prompt employees to use the tool. Embedding it in key moments, like annual performance discussions, ensures managers can leverage AI coaching to practise critical skills. This approach drives adoption and makes the AI tool a natural part of ongoing development efforts.

Ethical and Responsible AI practices:

When using AI tools in corporate learning, it is essential to ensure transparency, explainability, and fairness in their design and operation. AI systems must clearly communicate how decisions are made and avoid biased outcomes that could negatively impact certain groups. AI tools used for employee assessments or feedback should not invade personal privacy, and no user data from conversations with the AI tool should be tracked.

Next steps

BCG's L&D teams are now progressing from experimentation to scaling AI solutions for greater impact. In 2025, these solutions will be rolled out on a much larger scale, with AI innovations set to enhance the learner experience, improve efficiency, and provide deeper insights. This shift marks a significant step in leveraging AI to drive meaningful advancements in Learning and Development.

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''1:1 interaction with a coach or a tutor is likely the most effective way to upskill someone, and AI could make this scalable within just a few years. It's already helping us create more equitable, accessible and personalised learning experiences by supporting users who need extra help and challenging those who are more advanced.''

Shiva Chattopadhyay,
Global L&D Digital Strategy and Innovation Director, Boston Consulting Group

The Immaturity Model

From AI Adoption to Maturity in L&D

The data in this and our previous reports shows that the adoption of AI for L&D takes many different forms. On one hand, according to the quantitative data of the survey, respondents use AI for the internal efficiencies of the L&D department.

When asked about the benefits of using AI in L&D, respondents chose to focus on the speed of production of content rather than its quality, and content and efficiency dominated the top of the table of responses.

On the other hand, however, the qualitative survey responses paint a more nuanced picture. Compared with last year, respondents increasingly use terms around skills and data to describe their work.

In other words, it appears that while a core of respondents see AI as a way of improving efficiency in their current content production work, a smaller group sees it as a way of extending L&D's current role.

The case studies show a further, different approach to using AI. We selected these case studies as examples of how L&D can use AI in a range of sophisticated ways. Many of them take skills as their starting point and go on to exciting uses of AI that go well beyond improving the efficiency of the L&D department. Notably, some of the case studies started more than two years ago, before the launch of ChatGPT excited general interest in AI.

When exploring data from the first two reports in April 2024, Eglė created the Complexity Scale to explain the wide and very varied range of uses of AI, as shown in Figure 7 on the following page.
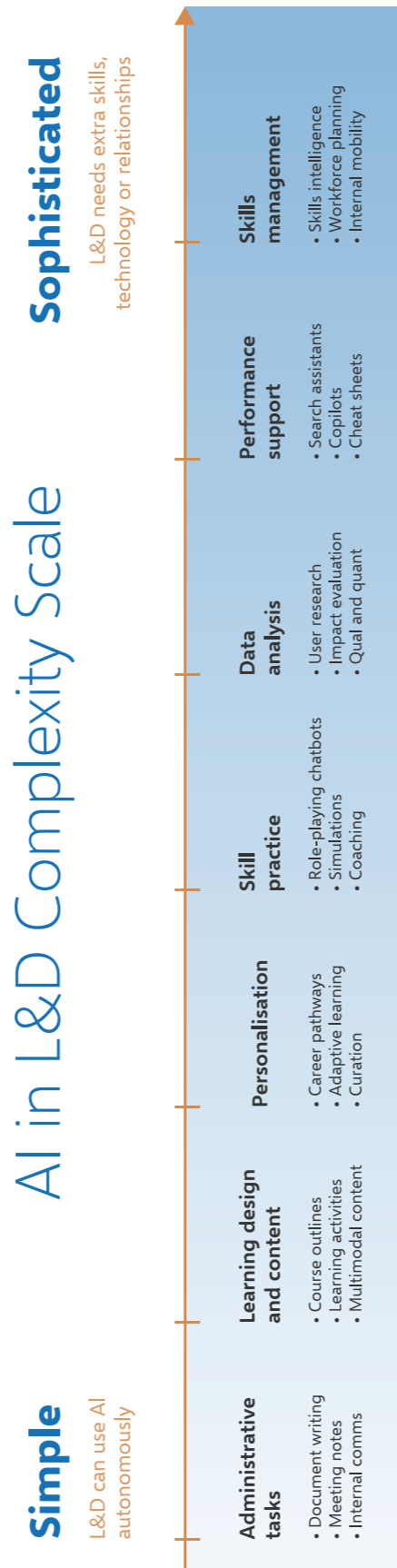
The Complexity Scale aims to answer the key question of AI adoption in L&D: why does L&D seem to use AI largely for administrative, learning design and content tasks (the 'Simple' uses on the left) rather than the more impactful and sophisticated uses on the right?

The answer is that the 'simple' uses can be implemented by an individual within L&D using their free account and effectively bypassing the bureaucracy and politics of new technology adoption. However, each AI use case towards the right increases in complexity and requires L&D to have extra skills, technology or relationships to implement it.

This Complexity Scale gave L&D practitioners a way to understand the vast range of ways of using AI in L&D and what was holding them back. It was met with an enthusiastic response, with organisations keen to pinpoint their position on it.

Examining the data and case studies in this report, however, we believe the presentation of the scale needs refining. The shaded background suggests the scale is smoothly graduated: that after starting with a simple use of AI, one will inevitably move to more sophisticated uses. This was not the intention of the original design of the scale, and we believe it to be misleading. Indeed, the evidence of the survey and the case studies suggests there is no smooth and guaranteed transition.

AI in L&D Complexity Scale

Simple — L&D can use AI autonomously

Sophisticated — L&D needs extra skills, technology or relationships

Administrative tasks	Learning design and content	Personalisation	Skill practice	Data analysis	Performance support	Skills management
• Document writing • Meeting notes • Internal comms	• Course outlines • Learning activities • Multimodal content	• Career pathways • Adaptive learning • Curation	• Role-playing chatbots • Simulations • Coaching	• User research • Impact evaluation • Qual and quant	• Search assistants • Copilots • Cheat sheets	• Skills intelligence • Workforce planning • Internal mobility

Disclaimer: Neither comprehensive nor unchanging

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It seems there are at least three distinct ways in which L&D uses AI:

- **Internal efficiency** – *doing the current work of L&D faster and/or cheaper*
- **Point solutions** – *localised solutions to individual learning or performance problems*
- **Business integration** – *working with the entire business to support performance*

Described this way, these groups could appear to fit into a classical maturity model, as shown in Figure 8:

Sophistication

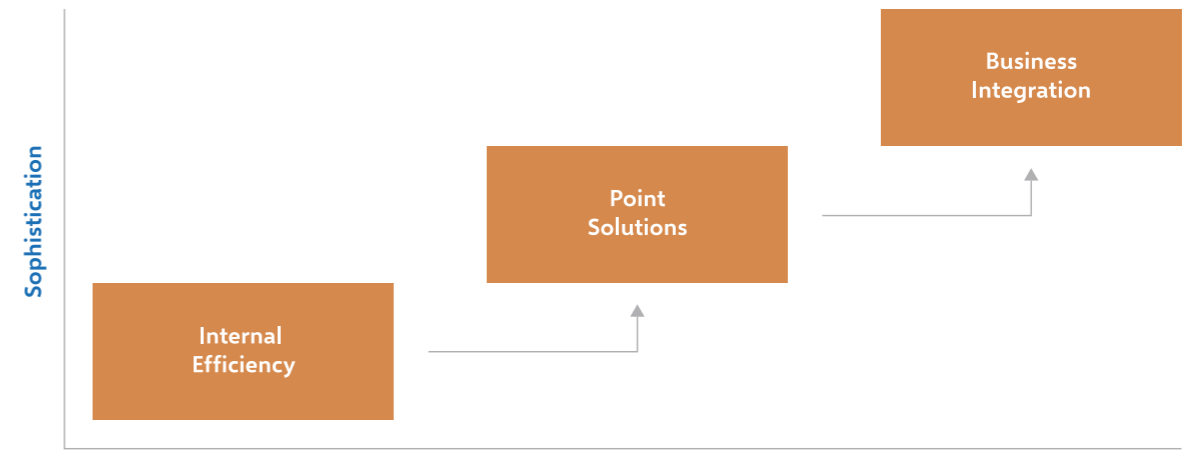Internal Efficiency → Point Solutions → Business Integration

Fig 8: A simple classical maturity model

Generally, the message behind such models is that over time, and with enough effort, you can rise from beginner to mastery. We cannot find evidence to support this across the Complexity Scale.

To be clear: maturity models work when mastering a particular domain. An expert car rally driver will begin by passing their regular driving test and progress through various levels of complexity before competing at the highest level. The same applies to learning how to use AI to, for example, create learning content. People will begin at a basic level and progress to sophisticated tools and output. It is not automatic. It requires effort. But with enough applied effort, progress happens.

AI as a whole, however, is not a single domain, like car driving or content creation. It is a fundamental empowering technology, like electricity. When we talk of the adoption of AI in L&D, we are really talking about a series of different adoptions – these include AI's use in content production, in creating skills taxonomies, in analysing behaviour patterns, and more. What they have in common is the use of powerful software on large data sets with massive processing power.

Like electricity, then, AI can be used for many things, and expertise in one area does not necessarily lead to expertise in another. An arc welder and a radiologist both use electric equipment, but neither is qualified to do the other's job.

This leads us to propose that the Complexity Scale is best considered not as a smoothly graduated spectrum but rather as a set of different domains of use. The domains (from Administrative tasks to Skills management) can be grouped into clusters, as shown in Figure 9 on the following page. We have identified three such clusters.
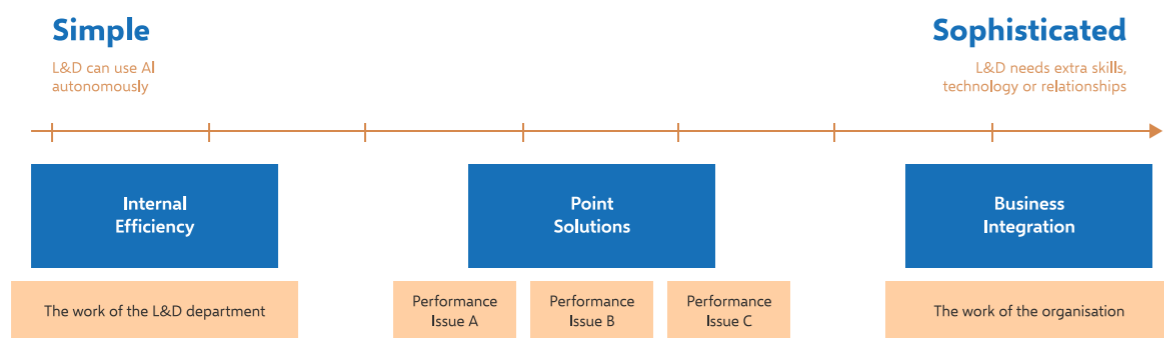
Fig 9: The AI in L&D Complexity Scale with Clusters

There are no arrows on this, no suggestion that there is an automatic progression from simple to sophisticated. Ericsson started its journey to skills-based L&D before ChatGPT was launched. The NHS did not begin with generative AI for content development and then adopt AI for coaching.

So, if using AI well in one area does not make you a sophisticated area elsewhere, how is it possible to become a more sophisticated user? The answer is that progress is not determined solely by the L&D department but by what it does in the context of the organisation.

To explore this further, consider a model introduced by Donald in 2012 – the L&D Change Matrix. This model suggests that working fully in step with the business ('Learning Leadership') is the result of a combination of two factors: the readiness for change of both the L&D department and the organisation.
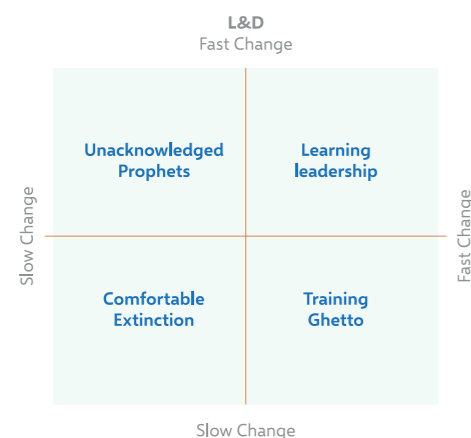

Fig 10: The L&D Change Matrix

Too often, the L&D department finds itself confined to the bottom right-hand quadrant of this grid due to a reluctance to change some key elements of its operating model and mindset.

On the other hand, here are some of the characteristics of L&D departments that are ready and able to change:

- *Leadership ready to challenge norms inside and outside the department*

- *Leadership comfortable making decisions with imperfect information*

- *An operating environment that ties L&D into the business*

- *Focus on business outcomes (e.g. via performance consulting)*

- *Seeing content production as a means to an end, not an end in itself*

These characteristics (among others) are the hallmark of a modern L&D department, one that is ready and willing to change in order to support learning and performance in the organisation. Part of this change includes learning to use AI in a sophisticated way.

We call these departments 'Open' because they are open to new approaches and to working closely with the business. Without this openness and ability to execute, it is unlikely that any department will move beyond the 'Efficiency' cluster of AI usage on the Complexity Scale.

However, it is not enough to be an 'Open' L&D department to use AI in a sophisticated way. For that to happen, the organisation itself must also be ready to change; otherwise, the L&D department will be in the frustrating position of being an 'Unacknowledged Prophet' (top left quadrant of L&D Change Matrix) – it has good ideas but a conservative organisation doesn't allow them to be used.

What determines whether the organisation is ready and able to change, particularly whether it is ready to adopt new technology that may alter how it works?
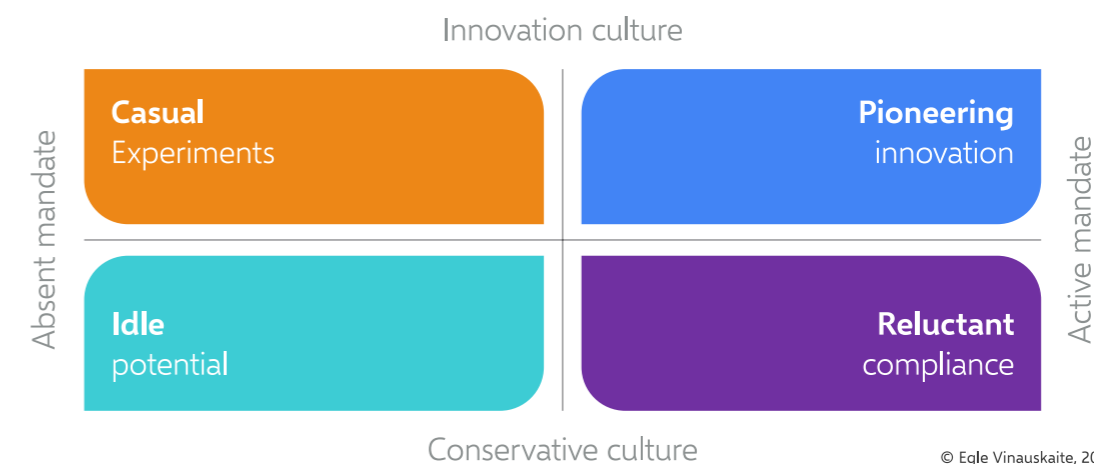

Fig 11: The AI Adoption Matrix

Eglé's 2024 AI Adoption Matrix (Figure 11) suggests that for adoption to succeed, an organisation needs both a culture that supports innovation and a mandate from the top to adopt AI. This is evident from the large organisations in our case studies that are adopting sophisticated uses of AI. Ericsson has been on a journey to being a skills-based organisation for several years and has not reached the end. This level of commitment can only be achieved with a mandate for change from the top and a culture ready to support that mandate.

Ericsson is undoubtedly at the sophisticated end of our spectrum, carrying out work in the Business integration cluster. Not all organisations will reach this level of company-wide commitment to change.

But if it is impossible to do everything, it is always possible to do something. This is where L&D departments can adopt AI solutions that do not spread across the organisation but deliver value in one part of it. We call them Point solutions.

Point solutions may not revolutionise how L&D works with the business, but they can offer marked improvements to how L&D supports employees' learning and performance, helping them navigate the content or development opportunities in the organisation, self-direct their learning, and practise key skills.

This brings us to our Immaturity Model (Figure 12 overleaf), which shows the three clusters: *Internal efficiency, Point solutions, and Business integration.*

The Immaturity Model
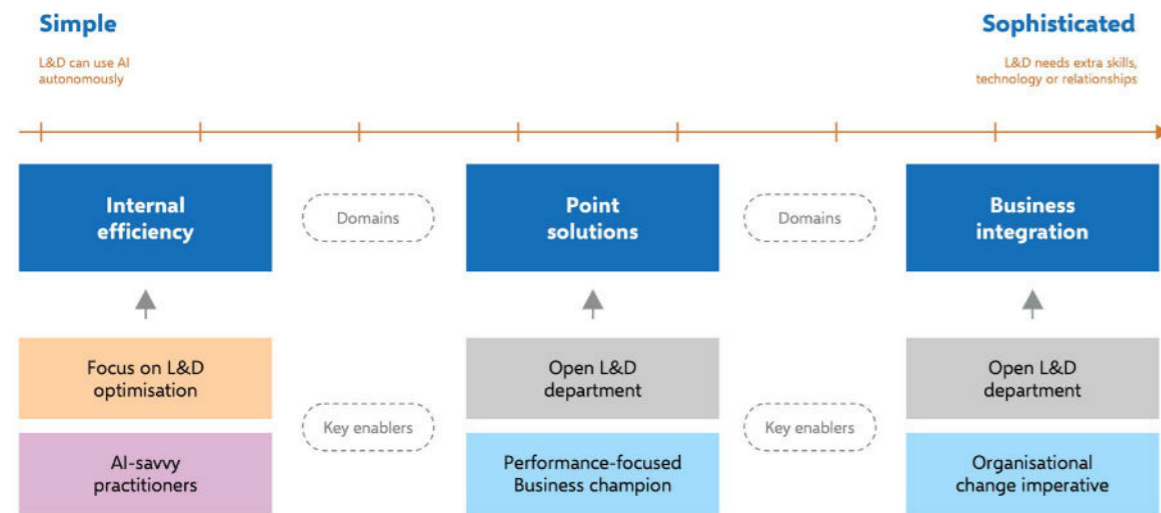
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Figure 12: The Immaturity Model

There are no arrows between the blue boxes. This is to establish that there is no automatic progression between different types of AI use. L&D can, of course, move to any of these clusters of use cases if it has the key enablers.

For example, L&D can succeed in the Internal efficiency cluster purely through its own endeavours, without involving people outside of L&D. If it sets out to optimise L&D processes and has AI-savvy practitioners in the team, it can gain significant efficiencies both in learning design and daily work tasks.

However, to make the jump from Internal efficiency to Point solutions and beyond, it needs a different set of enablers: an 'Open' L&D department and different levels of involvement from the business. In many ways, meaningful AI adoption in L&D requires a two-way relationship: L&D needs to challenge the norms and tie in with the business, and the business needs to have the infrastructure, strategy and culture ready for AI adoption - in L&D and other functions.

If a full Business integration is not possible, L&D can still operate in the Point solutions cluster. It can take the initiative and improve how it supports employees by using AI capabilities that don't require a wholesale strategic or cultural organisational change. Of course, L&D will still need to work with operational leaders or managers on solving a real performance problem.

It is the intent behind the AI use and not a particular tool that determines which domain L&D operates in. For example, AI-powered learning design or content personalisation tools can fall under either Point solutions or Internal efficiency depending on whether they are used to solve a wider business problem or not. Even AI-powered skills taxonomies, while advanced in their use of AI, can simply be tools for efficiency if they are not integrated into the employee experience and actively used across the business.

It is important to note that the enablers we list here are not comprehensive – we're talking about complex change after all. Nevertheless, the ones we chose to highlight seem to be shared by the L&D organisations leading the pack with AI adoption.

We call this the Immaturity Model to stress two things. First, it is not a classical maturity model with gradual and inevitable progression. Second, from what we have observed, there is a real danger of L&D focusing only on content and becoming trapped in an immature, unsophisticated use of AI, using it only to boost the efficiency of the training department.

The route out of this is to adopt the characteristics of an 'Open' L&D department, which will have the vision and ability to support people's learning and performance with AI-powered Point solutions. Finally, if the organisation throws its support behind AI as well, L&D might find itself in a position to reimagine its role and ways of working with sophisticated uses of AI that help bring the learning strategy and business strategy ever closer together.

Does this matter?

Does it matter how L&D practitioners use AI?

It is comparatively easy to use generative AI tools to create learning content. It makes work easier and more productive and cuts significant costs, so why not simply focus there?

As an individual, this may make work more rewarding and valuable. For L&D departments, however, the answer is different. Any department that focuses most of its effort on using AI purely internally, and in particular to produce more content faster, will likely face a difficult conversation within the next budget cycle. In the words of one of our case study partners, "If you can do things fast and cheap, why should we give you more money"?

This is the danger of allowing the department to be trapped in the Training Ghetto – as generative AI makes the value of content plummet, so will the perceived value of L&D if it ties its identity to content.

Conclusion

In this report, we have tried to answer a difficult question: Why is L&D using a powerful new technology largely to improve its internal processes rather than to increase its business impact?

Our answer is the Immaturity Model, which suggests that several factors keep L&D tied to its traditional role as the provider of courses for the organisation. To avoid this and to use AI in a more sophisticated way, the L&D department must be 'Open' – ready and able to innovate to support improved organisational performance. In addition, it needs to work in a place with both a mandate for innovation and a culture that supports it. Where these extend across the organisation, we see sophisticated implementations that integrate learning into the workings of the business. Where they are present locally, an Open L&D department can deploy local solutions to good effect, as some of our case studies show.

Our survey data suggests that many L&D departments are, however, largely using AI to create content and that when doing so, they are more concerned with speed than quality.

We believe there is a tacit assumption that AI is a single technology to be adopted with an associated maturity model. This suggests that using AI to create more content is the first step on a journey that ends inexorably with sophisticated implementations.

A maturity model like this is beguiling. It suggests that it is enough to start something and to pursue it with intent to reach one's destination.

AI, however, is not a single technology but an umbrella term for a range of technologies, each with very different routes to successful adoption. Success in climbing one mountain of adoption (e.g., creating content) will be of little use in climbing the next (e.g., inferring skills). The Immaturity Model says that success is not purely a matter of striving with intent; it depends on both the L&D department and its parent organisation.

Since we started this research in the summer of 2023, we have written three reports based on surveys, countless interviews, and conversations with practitioners. At the start, we may have shared the common, unconscious assumption that there was some AI adoption maturity model to be found. However, unable to find any evidence to support such a model, we felt compelled to ask why.

We have presented the Immaturity Model dispassionately, but in writing this report, as we dwelt on the data and the case studies, we could not help but think that AI presents L&D with a once-in-a-generation opportunity to have the impact and reach that it has always wanted. When a similar opportunity was presented at the end of the 1990s, training (as it was then) could have broadened its scope using the power of the new World Wide Web. Instead, the response was to create click-next elearning. If we similarly fail to seize this opportunity, then the Model will be not a roadmap for growth but a description of how, faced with opportunity, L&D chose once more to remain with less influence, having less impact, in immaturity.

> ''AI presents L&D with a once-in-a-generation opportunity to have the impact and reach that it has always wanted''

About the authors

Donald H Taylor

Donald has chaired the Learning Technologies Conference in London since 2000 and writes and speaks world-wide about Learning and Development. His annual L&D Global Sentiment Survey, started in 2014, provides a unique perspective on L&D trends from some 4,000 people in over 100 countries. From 2010 to 2021, he chaired the Learning and Performance Institute.

He chairs the Workforce Development board for VC firm Emerge Education, and advises several EdTech start-ups.

The author of Learning Technologies in the Workplace, Donald is a graduate of Oxford University and the recipient of an honorary doctorate from London's Middlesex University.

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In her capacity as an advisor and researcher, she focuses on integrating AI into L&D operations and equipping workforces with the necessary skills for AI adoption across their organisations. Grounded in both research and practical application, Eglė understands the ground zero of how AI is ushering in entirely new ways of doing things in the world of L&D, learning and edtech.
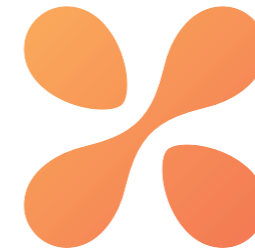
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Our comprehensive reports and surveys serve as valuable resources, offering a clear picture of current trends and future directions. In case you missed any of our previous findings, we've gathered the key reports from the past two years for you to explore opposite.

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From Talk to Action

Published: April 2024

This report explores how organizations are now moving beyond theoretical discussions of AI in L&D and taking tangible steps to implement these technologies in their strategies.

READ NOW

The Global Sentiment Survey 2024

Published: February 2024

In this survey, L&D professionals shared their views on the key trends shaping the industry, with AI and digital learning solutions continuing to be major themes.

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Focus on AI in L&D:
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Published: November 2023

This report takes an in-depth look at how AI was beginning to transform L&D by the end of 2023, covering advancements in personalized learning, automation, and data-driven strategies.
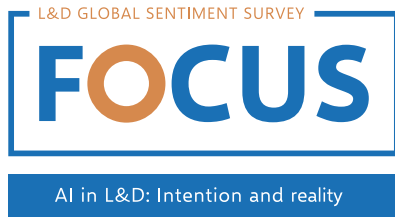
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