

UNDERSTANDING

The Intersection of AI and Human Capability in L&D



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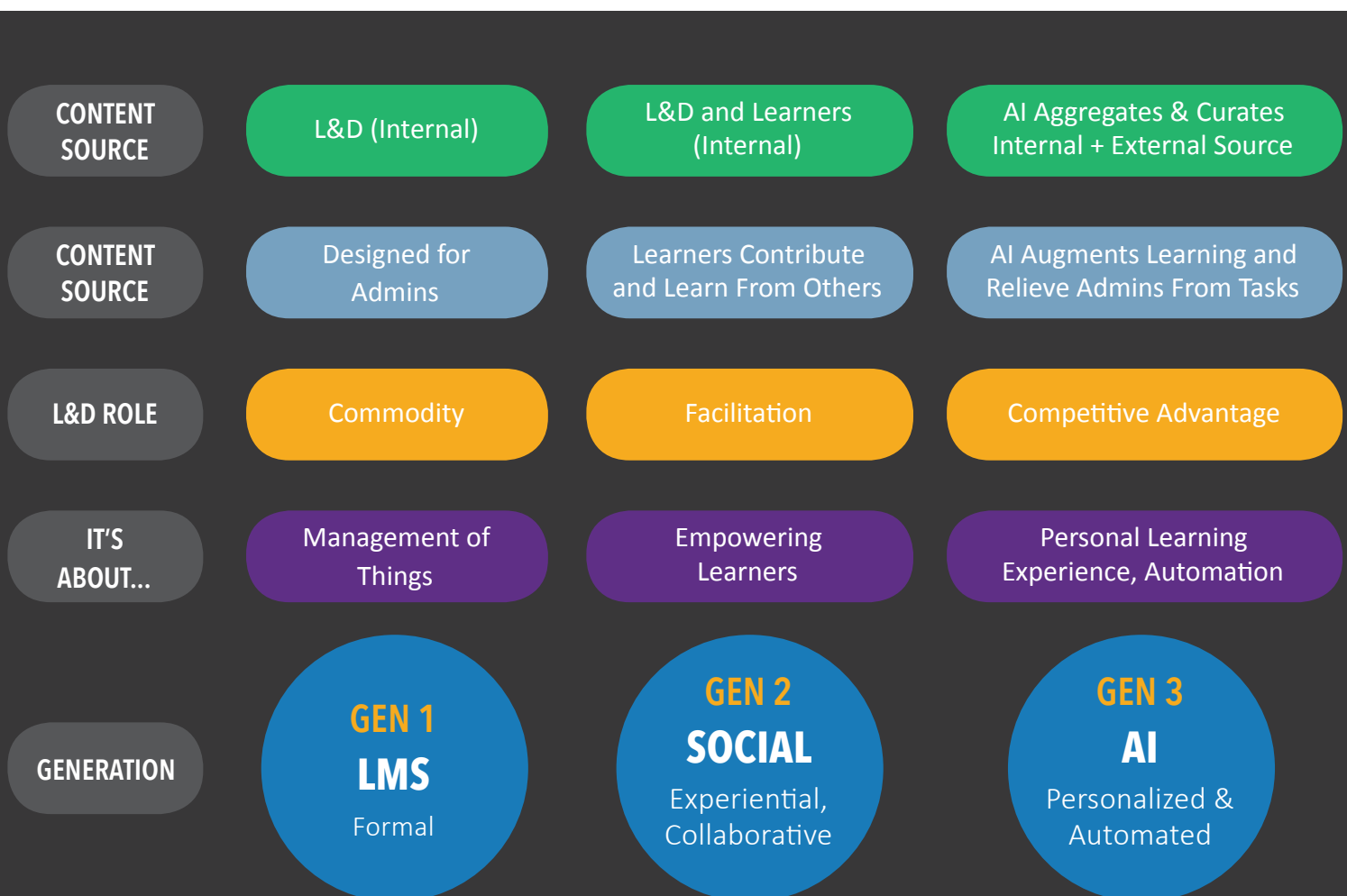
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Introduction

More often than not, articles and reports about artificial intelligence center on how machines will replace people and take all our jobs. The reality is not so sinister, but technology will continue to change the skills that organizations require to be effective and successful. It's critical to understand where things intersect to future-proof your organization.

The world is more chaotic and complex than ever but learning technology has the potential to mitigate this complexity by augmenting our intelligence and equipping people with the skills they need to adapt and evolve. We should emphasize the importance of understanding the relationship between artificial intelligence and human beings. The best results are achieved by people and machines working in tandem.

Evolution of Enterprise Learning



Source: Docebo

Understanding the Intersection of AI and Human Capability in L&D

It is no secret that Learning & Development is evolving, but the evolution is so rapid that while some organizations are at Gen 3, many others are still at Gen 1, with a wide spectrum in between. Without understanding what this shift entails, it can be difficult to evolve.

Automation of Processes

69%

Time and Attendance

62%

Payroll Administration

59%

Talent Acquisition and Applicant Tracking

55%

Employee Data Administration

45%

Compensation and Benefits Administration

44%

Performance Management

34%

Management Reports

31%

Learning Content Delivery

24%

HR and Talent Analytics

22%

Manager and Employee Inquiries

18%

Learning Content Development

17%

Talent Mobility

16%

Career Management

12%

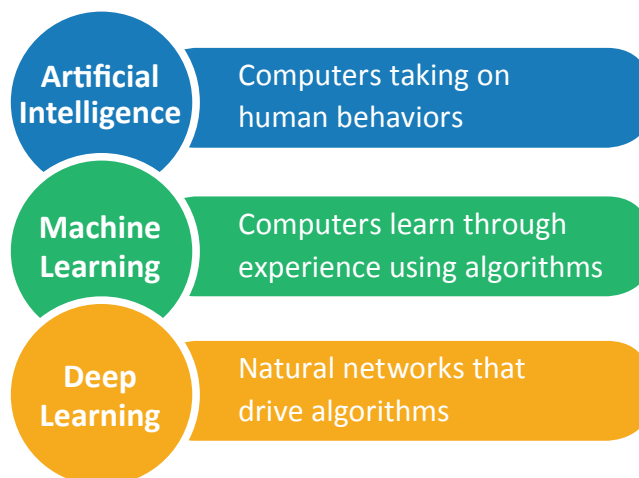
Organizational Development and Effectiveness

Source: Brandon Hall Group HCM Technology Study

Automation is a big part of the shift as organizations begin to embrace the automation of many human capital-related processes. Nearly one-third employ some sort of automation in the delivery of learning content and about 18% use it to help with content development. As automation increases, so do opportunities for artificial intelligence and machine learning.

It is also important to understand what AI is and what it isn't. Most of what we encounter today is really machine learning, where software uses algorithms to learn and recognize patterns. These algorithms are derived from deep learning, where software is designed like the neural network of the brain to absorb and interpret data.

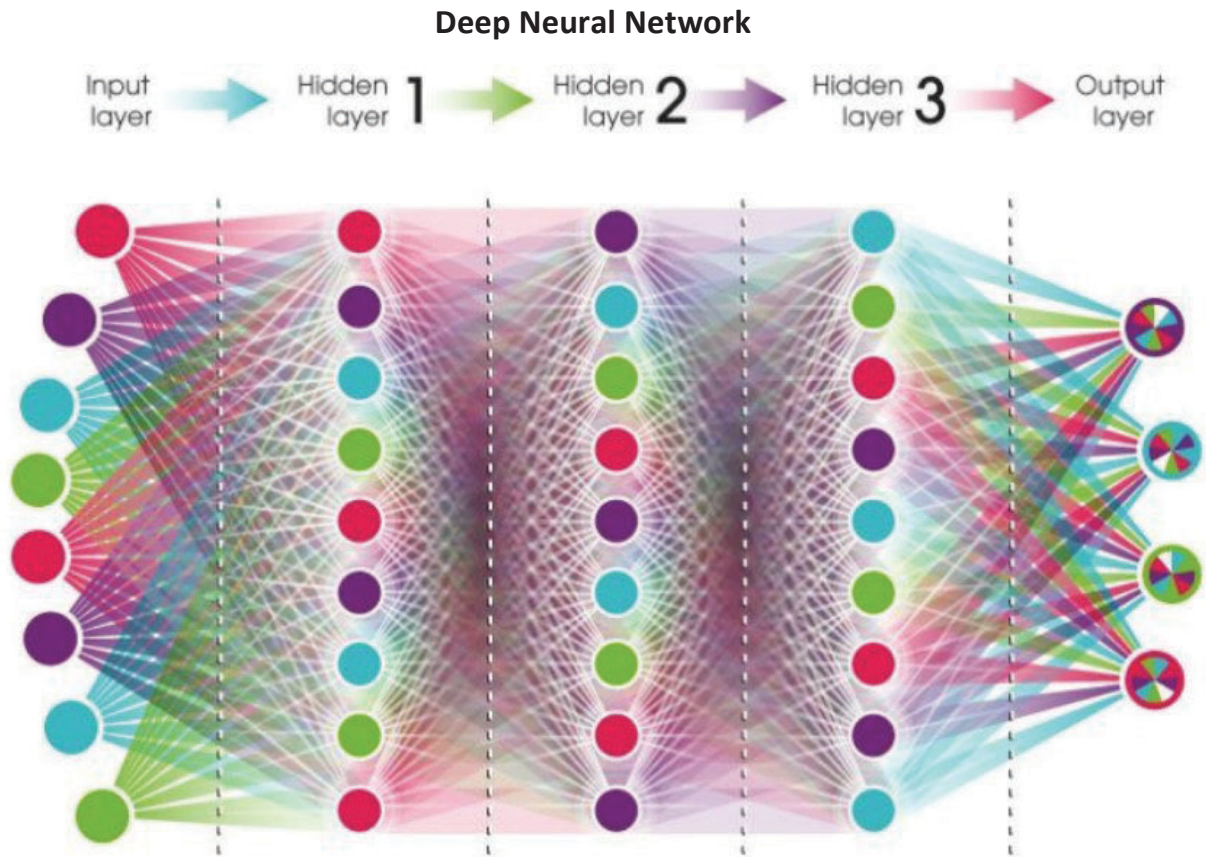
Artificial Intelligence, Machine Learning and Deep Learning



Source: Brandon Hall Group

Deep Learning and Artificial Neural Networks

Deep learning represents the jump from telling computers what to do to providing examples of what to do and letting them figure out how to apply it to other situations.



Source: Michael Nielsen, Yoshua Bengio, Ian Goodfellow and Aaron Courville, neuralnetworksanddeeplearning.com 2016



Augmented Intelligence

Machine Learning



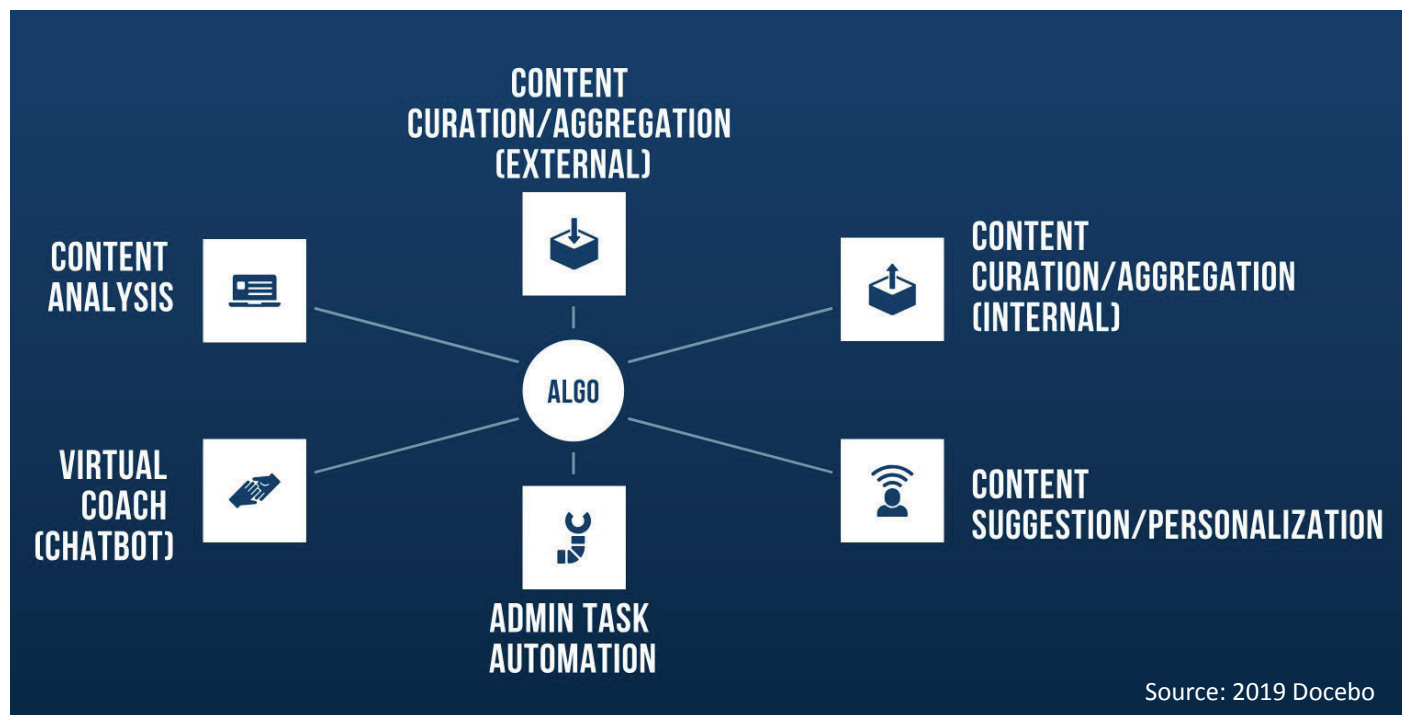
Artificial Intelligence



As an example of how we interact with these different levels of machine intelligence, think about trying to get from point A to B. You could employ Augmented Intelligence and use a ride-sharing app. Or you could use a deeper layer of intelligence and use a navigation app to guide you as you drive, taking in data about construction and accidents to identify the shortest route. Finally, you could hop in your self-driving car and put everything into the hands of the software — which is what AI really is — when we believe we have given the software everything it needs to know, with the ability to learn and adapt in real-time, and actually execute the previously human function.

AI Pillars in E-Learning

Machine learning and artificial intelligence have plenty of potential for learning and development, thanks to the vast amounts of data generated and its connection to people and how they interact with content and technology. One area where this intersection is apparent is natural-language processing. This is the ability of machines to understand and interpret human language the way we write and speak it. eLearning was developed to speed up learning while maintaining (or increasing) quality. Artificial intelligence can take this to the next level.



AI can provide multiple advantages to L&D, much the way process automation has helped the organization, but to an even higher degree.

What Kind of Results Can We Expect from AI in L&D?



There are Already a Few Components of AI Contributing to Personalized Learning

AUTO-TAGGING

AI listens to content assets, understanding various keywords (in the background) to produce tags that assist with categorization and search, without doing so manually.

DEEPER GLOBAL SEARCH

Takes content discovery to a new level by deeply analyzing learning content and how it's used in the organization to improve sharing of both traditional learning and user-contributed assets.

INVITE-TO-WATCH

AI pre-generates a list of people within the organization who showed interest in contents similar to what is being uploaded ensures contributions are served to people who value it most.

AI Will Evolve to:

AUTOMATE ADMIN TASKS

Including course enrollment triggered by events or criteria. (For example: there is a change in a regulation related to food handling. All food handlers are immediately enrolled into that course, take a test and become certified, so they can provide evidence of compliance when an audit takes place, automatically).

CONTENT CURATION AND GENERATION FROM EXTERNAL SOURCES

For example: "Here are 10 free YouTube videos that will help you learn the skill at hand," in addition to that learner's prescribed courses.

INTERNAL SUBJECT MATTER EXPERTS TRAIN A VIRTUAL COACH (NOT A CHATBOT)

Gathering more knowledge to train learners, providing immediate answers to questions.

The more data it consumes, the more effective it becomes over time.

The Reality of AI in Enterprise Learning

- AI systems are designed to augment the learning-platform experience for administrators and end users.
- **For admins:** The automation of various menial tasks, while assisting in producing better experience.
- **For learners:** Data-driven insights deliver more personalized and immersive experiences that produce better learning outcomes.



Upskilling Learning

AI is not getting rid of jobs. It is changing jobs.

These changes require the L&D function to change, as well. Far from AI taking jobs away, it is creating new needs and opportunities that companies must be ready to face. This means a new focus on the types of tools used to create and deliver learning, as well as what it takes to lead learning into the future.

LEARNING TOOLS

- Video
- Curation
- Assessment
- Analytics
- Games
- Microlearning



LEARNING DELIVERY

- UX
- Blend
- Content management
- Community
- Mentoring
- Moderation



LEARNING LEADERSHIP

- Engagement
- Social Marketing
- Agile
- Communications



With AI, the Learner Experience is Driven by a Deeper Understanding of Behavior

Not only does this make the lives of L&D admins easier, it makes them better at their jobs.

- AI engine collects insights related to their roles, content consumed, etc.
- Insights lead to predictive capacities that deliver better learning outcomes
- Admins (humans) use those insights to produce adaptive, intuitive and responsive learner journeys

AI Without Data is Like a Car on “Empty”

AI needs regular data injection to be most effective. Therefore, it requires human intervention to produce optimal results.



AI NEEDS TO BE EXPOSED TO AS MANY VARIABLES AS POSSIBLE



MORE DATA = MORE INTELLIGENCE



TO CREATE TASKS TO COMPLETE BASED ON GOALS OF DATA ITS FED

Source: 2019 Docebo

Train the AI Trainer

No, we're not talking about replacing human trainers, but...

- Improve the effectiveness of human-derived learning activities by understanding how humans interact with AI.
- These “outcomes” are not fixed and they will continually evolve.
- This is where we can start to understand the intersect between AI and the people who benefit from it.



Case in Point

As an example of how Artificial Intelligence can help an organization, a large financial services company is using AI to help make employees more productive and keep their customers happy. They did this by having AI:

- Take over tedious admin tasks to save time and money
- Use natural-language processing to allow customers to engage in an easier way, improving results
- Augment the workload, allowing for more time for in-depth customer conversations.

AI Gives L&D Admins More Time to Connect with Learners by Producing Better Experiences



**CONTENT IS MORE
PERSONALIZED TO BOOST
ENGAGEMENT**

(and overall learning
outcomes)



**ALLOCATE RESOURCES TO
TASKS OF VALUE**



**AUTOMATE CONTENT
SCHEDULING AND
DELIVERY PROCESSES**



BOOST LEARNING ROI

Less training time
+
greater personalization
=
better profit margins

Source: 2019 Docebo

Deep Learning Vastly Improves Classification

Classification is the action of training to recognize data and classify it for multiple application. And it's especially useful in learning.



Classify And Organize Content

Significantly reduce content-development cost



Accurate Classification Reduces Resources Needed to Repurpose Content

Without automation this can be a tedious and time-consuming task



Potential to Improve Classification and Instructional Design

Identifying related concepts across subjects is powerful and reduces resources needed to repurpose content and allows AI to produce content in subjects not initially developed (via content pills)

AI Opens Up a New Way of Looking at Learning

Applying adaptive learning environments

- People learn in different ways and at difference paces.
- Adaptive environments allow for a completely individualized pace.
- Environments that accommodate different learning styles and can run in parallel with each other.
- AI presents valuable solutions for learning in industries with high rates of dynamism.

Takeaways

- There is a new and widening skills gap.
- It's not just technical skills (robot technician/algorithm programmer).
- Human skills will be critical for collaboration and human interaction.
- AI is only as intelligent as we make it. Humans must train the software.
- AI can help shift how we deliver learning, making it more personal and adaptive.

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About Docebo



Docebo is changing the way people learn through artificial intelligence. While traditional enterprise learning technologies have dictated the way people learn with formal courses pushed from the top down, Docebo's learning platform facilitates automated and personalized learning experiences at scale in the flow of work to drive growth, organizational performance and revenue. Docebo is designed to power a cohesive L&D strategy, and has been embraced by more than 1,500 companies around the world for its ability to satisfy multiple use cases for both internal and external enterprise learning. With offices in Europe, Asia and North America, Docebo's software solution brings artificial intelligence to the learning market for an unparalleled learner experience.

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START A FREE 14-DAY TRIAL TODAY!

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Brandon Hall Group is an HCM research and advisory services firm that provides insights around key performance areas, including Learning and Development, Talent Management, Leadership Development, Talent Acquisition, and HR/Workforce Management.

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PLAN



ATTRACT



DEVELOP



PERFORM



RETAIN



OPTIMIZE

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- Time & Labor Management

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