GENAI ENABLED LEARNING ECOSYSTEMS(GELES)

by

Nitu Pathak

DISSERTATION

Presented to the Swiss School of Business and Management Geneva

In Partial Fulfillment

Of the Requirements

For the Degree

DOCTOR OF BUSINESS ADMINISTRATION

SWISS SCHOOL OF BUSINESS AND MANAGEMENT GENEVA

September, 2025

GENAI ENABLED LEARNING ECOSYSTEMS(GELES)

by

Nitu Pathak

APPROVED BY

A. Buljubasic

Chair

RECEIVED/APPROVED BY:

Renee Goldstein Osmic

SSBM Representative

DEDICATION

I am deeply grateful to my mentor and professor, Dr. Sasa Petar, whose unwavering guidance, insightful wisdom, and steadfast support have been instrumental throughout my DBA journey. Your encouragement and expert counsel have illuminated the path during moments of challenge and uncertainty, inspiring me to persevere and excel in my research.

To my husband, Jayesh Bhansali, I dedicate my sincerest thanks for your unconditional love, patience, and encouragement. Your faith in me, especially during times when personal and professional hurdles seemed overwhelming, has been my source of strength and motivation. This achievement is as much yours as it is mine, for your support has been the foundation upon which I built my dreams.

This work stands as a testament to the invaluable contributions of both of you to my personal and academic growth.

ACKNOWLEDGEMENTS

I wish to extend my deepest gratitude to all the Learning and Development professionals who generously shared their time, insights, and experiences throughout this research. Your patience, openness, and thoughtful responses to the survey and interview questions have been invaluable to the depth and quality of this study.

Your collective expertise and willingness to engage have significantly enriched my understanding of how Generative AI is transforming workplace learning. Without your contributions, this research would not have been possible. I sincerely appreciate your commitment and support in advancing knowledge in this important field.

I would also like to mention my team members from my workplace who have been my continued support and cheerleaders and kept me energized through the years of research and pulling me up in moments when things looked hard. Thanks to all the joy and cheer each one bought along in this journey.

ABSTRACT

GENAI ENABLED LEARNING ECOSYSTEMS(GELES)

BY

NITU PATHAK
2025

Dissertation Chair: **PROF. DR. SAŠA PETAR, Ph. D**

The accelerated emergence of Generative Artificial Intelligence (GenAI) heralds a transformative era for organizational learning and development (L&D) functions. Traditional workplace learning methods, often characterized by static, one-size-fits-all approaches, face growing challenges in meeting rapidly evolving workforce skill demands, engagement deficits, and scalability constraints. This doctoral research investigates how organizations can strategically leverage GenAI to transform employee learning into a personalized, scalable, and effective function aligned with the future of work. Grounded in established theoretical frameworks including the Technology Acceptance Model (TAM), Theory of Reasoned Action (TRA), Sociocultural Learning Theory, and Human Society Theory, this study provides a multidisciplinary lens to understand GenAI's integration into L&D ecosystems.

Through a mixed-methods research design, comprising quantitative surveys of over 100 senior L&D professionals and qualitative interviews with Chief Learning Officers (CLOs), complemented by a systematic review of current industry whitepapers and reports, the study reveals a landscape of growing experimentation with GenAI tools. Predominantly

employed in content creation activities, advanced applications such as virtual coaching, learning analytics, and personalized learning pathways are emerging but remain underutilized in many organizations. Key barriers impeding widespread adoption include skill gaps in GenAI literacy, ethical and privacy concerns, leadership inertia, unclear strategic direction, and resource constraints. These barriers reflect the complex interplay of technical, social, and organizational factors shaping technology acceptance and sustained usage.

To address these challenges and harness GenAI's enabling capabilities, this research introduces the GenAI-Enabled Learning Ecosystem (GELES) framework—a comprehensive, end-to-end model integrating strategy, people, technology, governance, and measurement within the ADDIE instructional design paradigm. The framework operationalizes GenAI as a set of reusable services embedded across analysis, design, development, implementation, and evaluation phases, emphasizing human-in-the-loop checkpoints, ethical governance, continuous capability building, and strategic alignment with organizational goals. Emerging L&D roles—including AI Learning Strategists, Content Curators, Prompt Engineers, and Data Analysts—are delineated, highlighting a necessary transition from traditional content producers to strategic orchestrators and AI-augmented facilitators.

Keywords: Generative Artificial Intelligence, organizational learning, Learning and Development, technology adoption, workforce transformation, AI ethics, blended learning, GenAI-enabled learning ecosystem

TABLE OF CONTENTS

List of Tables

LIST OF FIGURES

Chapter I:

INTRODUCTION

"Artificial intelligence is not a substitute for human intelligence; it is a tool to amplify human creativity and ingenuity." – Fei-Fei Li

1.1 Background and Context

The nature of work is undergoing a profound transformation. Driven by rapid advancements in technology, globalization, hybrid work models, and evolving employee expectations, organizations are compelled to continuously rethink how they manage and develop talent. Learning and development (L&D), traditionally rooted in static classroom-based models and linear curricula, is being called upon to become more dynamic, responsive, and personalized. As the Fourth Industrial Revolution accelerates, the demand for continuous upskilling and reskilling is no longer a strategic option, it is a necessity & being disrupted by introduction of Artificial Intelligence (AI) & GenAI.

Artificial Intelligence (AI) refers to the capability of machines to simulate human cognitive functions such as learning, reasoning, and problem-solving (Russell & Norvig, 2021). It encompasses a variety of subfields including machine learning (ML), natural language processing (NLP), computer vision, and robotics. AI systems analyze large volumes of data, identify patterns, and make decisions with minimal human intervention, thereby augmenting or automating complex processes across industries.

A more recent and transformative development within AI is **Generative AI (GenAI)** a class of algorithms designed to generate new content by learning from existing data. Unlike traditional AI, which often focuses on classification and prediction, GenAI can produce

original text, images, code, audio, and video (Bommasani et al., 2022). This capability is driven by foundation models such as OpenAI's GPT, Google's Gemini, and Meta's LLaMA, which are trained on massive datasets to generate contextually coherent and high-quality outputs.

At its core, generative AI employs **large language models (LLMs)** trained on vast datasets to understand patterns, relationships, and structures within data, enabling them to generate contextually relevant and coherent responses. Technology's defining characteristic lies in its ability to produce **highly realistic and complex content that can imitate human creativity**, making it a valuable tool across numerous domains. This capability extends beyond mere content generation to encompass the capacity for **real-time adaptation and control across diverse applications**, positioning GenAI as a transformative force in how organizations operate and individuals' work.

The emergence of GenAI has significantly expanded the potential of AI in workplace applications. These technologies enable not only automation but also the augmentation of creativity, knowledge generation, and decision-making. As a result, GenAI is now recognized as a powerful catalyst for transforming knowledge work and redefining how organizations operate (Dwivedi, 2023).

1.2 The Unprecedented Global Adoption of Generative AI

The emergence of generative AI has witnessed an adoption trajectory **unlike any previous technology in human history**. When OpenAI released ChatGPT in November 2022, it achieved a remarkable milestone by **reaching 100 million monthly active users** (Jiayang Wu, 2023) **within just two months**, making it the **fastest-growing consumer application in history**. This unprecedented adoption rate surpassed even the most successful social media platforms, including Instagram and TikTok, in terms of user acquisition speed. Their

integration into workplace systems has shifted from experimental pilots to mainstream use, particularly in knowledge-intensive and service-oriented functions. According to a 2023 McKinsey report, nearly 25% of C-suite executives reported regular use of GenAI in their workflows, with the adoption rate continuing to rise across industries such as finance, healthcare, retail, and technology (McKinsey & Company, 2023).

Workplaces are leveraging AI to streamline operations, enhance decision-making, and enable hyper-personalized services. GenAI, in particular, is being utilized for tasks such as drafting emails and reports, summarizing documents, generating marketing content, creating software code, and supporting real-time decision-making. These tools are reshaping how individuals interact with information, collaborate, and innovate, fostering a more dynamic and responsive work culture (Gartner, 2023).

Statistical analysis reveals the **global reach and accessibility of generative AI**, with participation from **80 unique countries in ChatGPT-related research**, led by the United States (719 research mentions), China (181), and India (157). Technology's adoption spans diverse industries, with significant implementations in **healthcare (38.6%), computer science/IT (18.6%), and education/research (17.3%)**, illustrating its versatility and broad applicability across professional domains.

Salesforce's most recent survey on generative AI (Statlibrary,2025) use among the general population within the U.S., UK, Australia and India found the public is split between users and non-users.

These early adopters are also looking to expand generative AI use cases from fun and games to workplace and enterprise applications:

- 75% of generative AI users are looking to automate tasks at work and use generative AI for work communications.

- 38% of generative AI users use generative AI for fun/messing around, and 34% for learning about topics that interest them.

Figure: 1.2 *Rate of adoption of generative AI by industry (NTT Data,2025)*

1.3 Reshaping the Future of Work and Workforce Dynamic

Generative AI is fundamentally **transforming the nature of work** across industries, creating both opportunities and challenges for workers and organizations. Technology's impact on employment patterns suggests a **complex restructuring rather than simple job displacement**. Studies indicate that the **overwhelming effect of generative AI will be to augment occupations rather than automate them.** The shift is also philosophical—AI is no longer viewed solely as a tool for automation but as a partner in augmenting human cognition and creativity. This transformation has implications not only for productivity but also for how organizations design roles, structure teams, and develop skills across the workforce.

Online labor market analysis provides concrete evidence of generative AI's immediate impact on work patterns. Research shows (Gartner,2023) a significant decrease in transaction volume for gigs and freelancers directly exposed to ChatGPT, particularly marked in units with relatively higher past transaction volume or lower quality standards.

From intelligent automation of back-office operations to hyper-personalized customer engagement strategies, AI is embedded in tools that many employees now use daily—such as virtual assistants, recommendation engines, intelligent chatbots, predictive analytics platforms, and collaborative tools. GenAI, in particular, is reshaping knowledge work. It enables employees to draft content, generate reports, summarize long documents, analyze qualitative data, and simulate different business scenarios in seconds.

This widespread integration is democratizing access to information and expertise, enabling every employee to be more productive, creative, and strategic. For example:

- **Marketing teams** are using GenAI to draft campaign copy and generate ideas for social media posts.

- **Sales teams** are leveraging AI-driven insights to prioritize leads and personalize outreach.
- **Finance teams** are using AI models to automate forecasting and risk analysis.
- **IT and product development** teams are using code-generating tools to accelerate software development.

As AI continues to evolve, its role is shifting from task automation to **capability augmentation**, where the focus is on enhancing the decision-making, learning, and creativity of human workers.

1.4 Implications for Human Resources and Learning & Development (L&D)

Among the functions most significantly impacted—and arguably elevated—by GenAI are **Human Resources (HR)** and **Learning & Development (L&D)**. These functions are experiencing a paradigm shift as they transition from being transactional support units to strategic enablers of talent and business growth. **Generative AI offers new opportunities to enhance recruitment, performance management, training, and employee development** by enabling finer analyses and more informed decision-making.

HR Transformation through AI and GenAI

AI is increasingly integrated across the employee lifecycle, from recruitment and onboarding to performance management and retention. AI-powered recruitment platforms automate candidate screening, conduct preliminary interviews using conversational agents, and match candidates to roles using predictive analytics (Kaplan et al., 2022). Similarly, workforce planning is enhanced through predictive models that identify talent gaps, succession risks, and attrition trends.AI technologies are helping HR teams become more data-driven and future-focused.

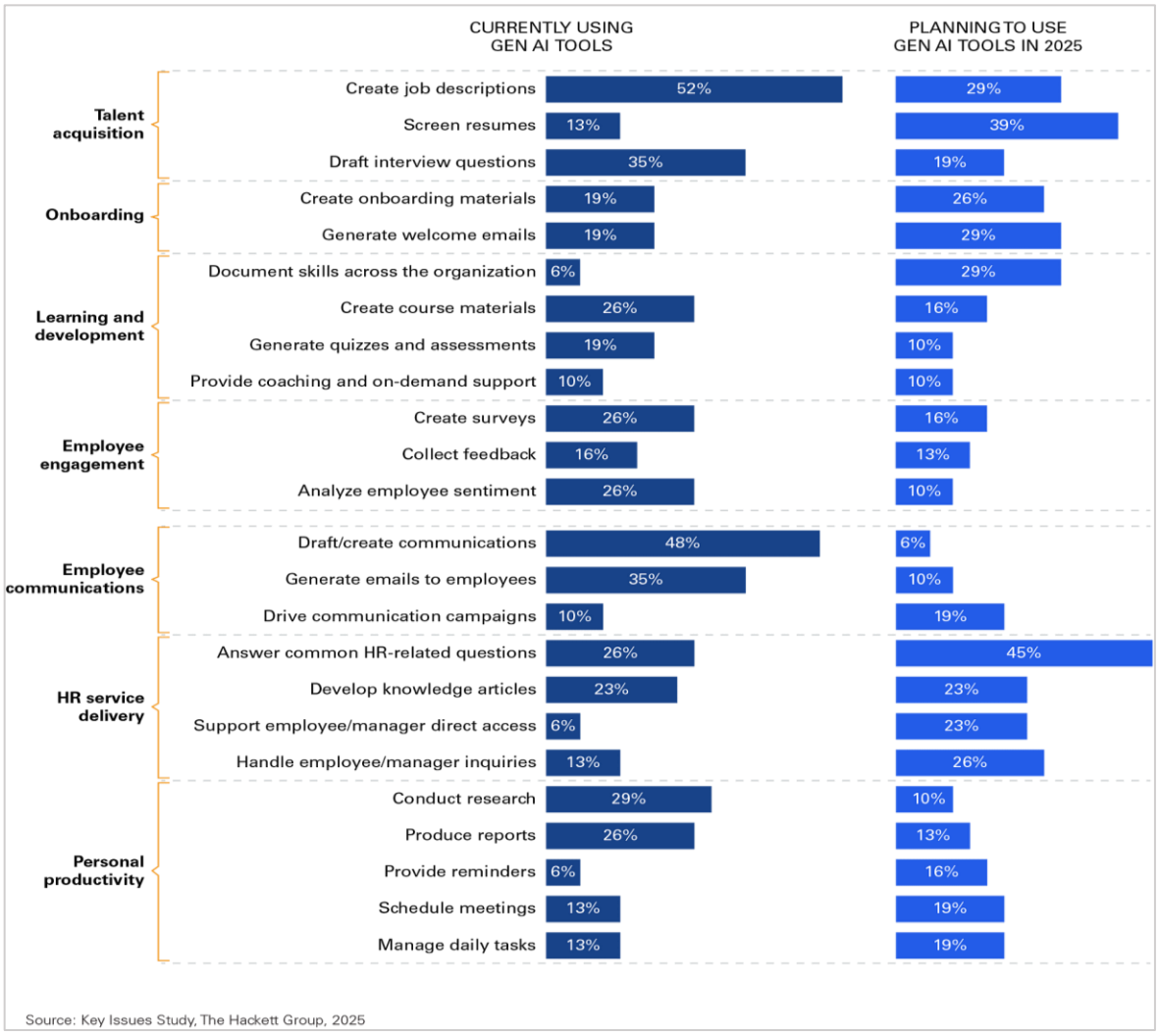
Traditional HRM methods, such as structured interviews, psychometric tests, and annual appraisals, are increasingly showing limitations in terms of **efficiency and accuracy**. Generative AI addresses these shortcomings by providing **more personalized and objective solutions**, paving the way for a **more efficient and adaptive HR framework**. The technology enables HR professionals to move beyond routine administrative tasks toward strategic initiatives such as **talent management and culture development.**

Key augmentation for HR functions that are being experimented upon:

- **Talent acquisition**: AI-powered recruitment platforms can screen resumes, match candidates to job descriptions, and even conduct initial interviews using conversational bots, significantly reducing time-to-hire.
- **Workforce planning**: Predictive analytics help HR leaders anticipate skill shortages, succession risks, and attrition trends.
- **Employee engagement and experience:** The impact on **employee experience and engagement** is particularly noteworthy. Studies reveal that **AI-assisted HR systems can deliver exceptional employee experience (EX)**, serving as an antecedent to employee engagement. **AI-enhanced employee data processing and analysis** enables organizations to better understand workforce dynamics, predict talent needs, and create more targeted development programs. GenAI can power personalized chatbots for employee queries, design individualized onboarding journeys, and summarize employee feedback from surveys or open-ended comments.
- **Performance management:** AI tools can provide continuous feedback, suggest personalized development plans, and reduce biases in performance evaluations.

Moreover, GenAI-driven chatbots are enhancing employee experience by providing real-time support for HR queries, policy information, and benefits management. These systems not only reduce administrative burdens but also offer more consistent and accessible services. In performance management, AI tools analyze data from multiple sources to support continuous feedback, goal tracking, and unbiased evaluations (Huang & Rust, 2021). By automating administrative tasks and providing strategic insights, AI is enabling HR professionals to focus on more high-impact activities such as culture-building, leadership development, and strategic workforce planning.

Figure 1.4 Current and planned use of AI in HR processes/task



Source: Key Issues study, The Hackett Group, 2025

1.5 L&D Reimagined with GenAI

Learning and Development is undergoing a paradigm shift as AI enables more dynamic and learner-centric approaches. GenAI allows for the rapid creation of learning content, such as training modules, microlearning assets, and assessments, thereby reducing instructional design time and cost (Sharma et al., 2023). It also facilitates the delivery of

personalized learning journeys, adapting content to an individual's role, skill level, learning preferences, and career goals.

The concept of **"generative organizations"** (Warg, Schott, Frosch, (2024) is emerging as a new paradigm where GenAI can be used to transform organizations to generative organizations for improving organizational learning and development. This transformation involves not merely integrating AI tools into existing processes but fundamentally reimagining how organizations continuously scale up their capacity to (co-)create value to learn, to adapt, and thus to develop.

Just-in-time learning is supported by AI-powered copilots and virtual coaches embedded within enterprise platforms, offering employees immediate access to guidance and resources. Furthermore, AI enables skill mapping and gap analysis by comparing individual competencies with role expectations and future skill demands (World Economic Forum, 2023).

Key areas where GenAI is transforming L&D include:

- **Personalized learning:** GenAI can tailor learning paths based on an individual's role, prior knowledge, performance data, and career aspirations, enhancing relevance and engagement.
- **Content generation:** Instructional designers and trainers can now rapidly create learning materials, job aids, assessments, and microlearning content using GenAI tools, significantly reducing development time.
- **Real-time learning support:** AI-driven copilots or chatbots embedded within systems provide just-in-time learning by answering questions, suggesting resources, or walking employees through tasks.
- **Skill gap analysis:** AI can analyze employee data and job role requirements to identify skill gaps and recommend targeted interventions.

- **Coaching and feedback:** GenAI can simulate coaching conversations, role-plays, and reflection prompts, enabling scalable and consistent leadership development.

AI and GenAI are not merely reshaping individual tasks—they are transforming how organizations conceptualize work, skills, and human potential. Their integration into HR and Learning & Development (L&D) functions presents a unique opportunity to enhance employee experience, build agile workforces, and align learning strategies more closely with business outcomes. The ability to deliver personalized, on-demand, and scalable learning is unprecedented, and GenAI stands as a key enabler of this shift.

However, despite these immense possibilities, most L&D teams have yet to unlock the full potential of Generative AI. In many organizations, GenAI adoption remains at the stage of isolated experimentation—limited to content drafting or prototype pilots—rather than being integrated into a comprehensive learning strategy or digital ecosystem. There is often a lack of a clear roadmap, governance model, or cross-functional alignment to embed GenAI meaningfully into talent development efforts. As a result, the promise of GenAI to deliver personalized, adaptive, and business-aligned learning experiences at scale remains under-realized. For L&D to truly evolve into a strategic business driver in the age of AI, it must move beyond one-off use cases toward a deliberate, end-to-end transformation plan that combines technology, people capability, ethical considerations, and organizational change management.

1.6. Objective of the study

This thesis investigates how organizations can leverage Generative AI to transform employee learning in ways that are scalable, effective, and aligned with the future of work.

It would suggest a model to enable GenAI powered Talent Development ecosystems for knowledge workers.

1.7 Problem Statement

Despite the increased investment in learning technologies and platforms, many organizations continue to face challenges in delivering impactful learning experiences. Learners often find themselves overwhelmed with irrelevant content, poorly designed modules, and limited opportunities for real-time feedback or contextual application. L&D teams, in turn, grapple with resource constraints, long development timelines, and a lack of agility to meet emerging business needs.

While GenAI holds tremendous potential to address these gaps, its application in corporate learning remains underexplored and uneven. Key questions persist around efficacy, ethics, adoption strategies, and readiness. How can organizations meaningfully embed GenAI into their learning ecosystems? What are the enabling conditions and barriers? What changes are needed in L&D roles, processes, and mindsets?

This thesis seeks to address these questions through a systematic exploration of how GenAI can transform employee learning—not just in theory, but in actionable, real-world terms.

1.8 Research Objectives and Questions

The central objective of this research is to explore how Generative AI can transform employee learning by enhancing personalization, relevance, and effectiveness, while also improving the scalability and efficiency of L&D efforts.

Primary Research Question:

How can organizations leverage Generative AI to transform employee learning in a sustainable and strategic way?

Sub-Questions:

1. What are the current limitations of traditional employee learning methods?
2. What unique capabilities does Generative AI bring to the learning landscape?
3. What are the key enablers and barriers to adopting GenAI in employee learning?
4. What ethical and practical considerations must be addressed?

1.9 Significance of the Study

This research is significant for multiple stakeholders. For **L&D professionals**, it provides a forward-looking roadmap for integrating GenAI into their practices. For **business leaders**, it highlights the strategic value of AI-enabled learning in engagement, agility, and retention. For **policymakers and technologists**, it raises important ethical and design considerations that must be accounted for to ensure responsible AI use in learning contexts. Moreover, this study contributes to academic discourse by bridging the gap between theory and practice. While GenAI is a hot topic in the technology space, its application in the workplace learning domain remains nascent. This research offers a conceptual framework, practical case insights, and actionable recommendations to guide adoption and innovation.

1.10 Scope and Delimitations

This study focuses primarily on the application of Generative AI in organizational or corporate learning environments, rather than in formal educational institutions. It emphasizes adult learners within professional contexts, exploring use cases in upskilling, onboarding, leadership development, and continuous learning.

The research does not delve into the technical mechanics of GenAI models (e.g., training data, architecture), nor does it evaluate AI solutions for purely administrative HR tasks

(like payroll or recruitment). While related, the scope is intentionally centered on how AI enhances learning design, delivery, and learner engagement.

1.11 Assumptions and Limitations

Several assumptions underpin this research:

- Organizations included in case studies or interviews have a baseline understanding of digital learning tools.
- GenAI will continue to evolve rapidly over the research period, potentially affecting the relevance of findings.
- The effectiveness of GenAI in learning depends not only on technology but also on organizational culture and change management.

Limitations include potential sample bias (e.g., early adopters may skew findings), constraints in generalizing across industries, and limited longitudinal data due to the emerging nature of GenAI in L&D.

CHAPTER II:

REVIEW OF LITERATURE

2.1 Introduction

This chapter reviews the existing body of knowledge related to employee learning, digital transformation in learning and development (L&D), and the role of Artificial Intelligence (AI)with a particular focus on **Generative AI (GenAI)**. It synthesizes literature across three domains:

1. Theoretical foundations of adult and workplace learning,
2. Evolution of digital learning technologies & its adoption
3. Emerging applications of AI in learning. It concludes with a summary of key gaps that this research seeks to address

2.2 Theoretical Foundations of Employee Learning

2.2.1 Adult Learning and Andragogy

The concept of **andragogy**, popularized by Malcolm Knowles (1984), serves as a foundational theory in adult learning. It emphasizes self-directed learning, prior experience, readiness to learn, and problem-centered instruction, all of which align closely with workplace learning needs.

Other relevant theories include:

- **Kolb's Experiential Learning Theory (1984)**: Focuses on learning through experience and reflection.
- **Mezirow's Transformative Learning Theory (1991)**: Highlights the importance of critical reflection and shifts in perspective.

- **Situated Learning (Lave & Wenger, 1991)**: Emphasizes social context and communities of practice underscoring how context and social identity shape knowledge acquisition

These theories suggest that effective learning for adults must be **autonomous, contextualized, and reflective**, pointing to the need for more personalized and dynamic learning environments.

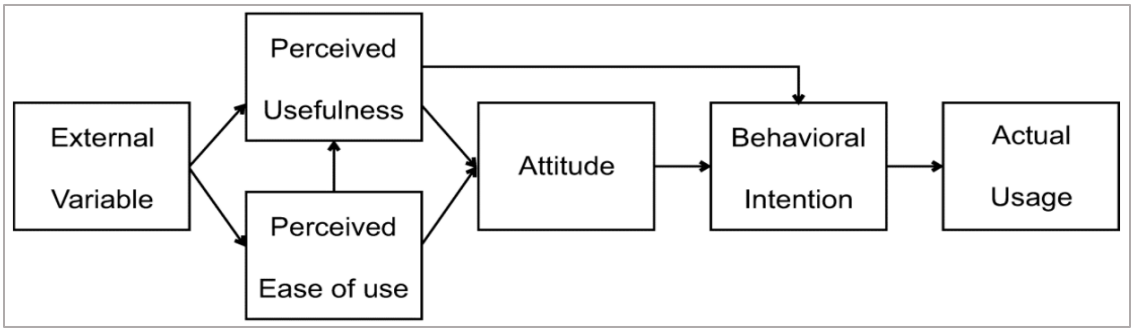
2.3 Evolution of Digital learning technologies & Its adoption

Workplace learning is a complex, multifaceted phenomenon influenced by individual, social, and organizational factors. The literature identifies several theoretical frameworks to understand how learning occurs in workplace contexts, especially as digital technologies and now generative AI reshape learning ecosystems. The integration of Generative AI (GenAI) into workplace learning sits at the intersection of learning sciences, technology adoption, and organizational change. As such, the theoretical grounding for this study incorporates a blend of cognitive, sociocultural, and innovation theories that help explain how individuals and organizations respond to emerging technologies. There are 2 key frameworks that we will dive deeper into – **TAM & Socio-culture learning theory**

2.3.1 A foundational framework is the **Technology Acceptance Model (TAM)**, developed by Davis (1989), which identifies two primary factors—**perceived usefulness (PU)** and **perceived ease of use (PEOU)**—as key determinants of an individual's intention to use a new technology. In the context of workplace learning, perceived usefulness refers to the extent to which an employee believes GenAI tools will improve their learning outcomes, such as helping them learn faster, solve problems more effectively, or generate better content. Perceived ease of use refers to the degree to which the user believes interacting

with the GenAI system will be free of effort. When learners find AI tools intuitive and beneficial, their adoption rate tends to increase. TAM is especially relevant for GenAI because these tools often operate with advanced natural language interfaces, which reduce cognitive barriers and promote early experimentation. Extended versions of TAM, such as TAM2 and the Unified Theory of Acceptance and Use of Technology (UTAUT), further incorporate social influence and facilitating conditions, reinforcing the role of organizational culture in shaping acceptance.

Figure 2.3.1 Technology Adoption Model



Source: https://en.wikipedia.org/wiki/Technology_acceptance_model

2.3.2 Complementing TAM, **Sociocultural Learning Theory** (Vygotsky, 1978) underscores the importance of social context, interaction, and tools in the learning process. Learning is seen not as an isolated cognitive activity, but as a social phenomenon mediated by cultural tools—including language, symbols, and now, AI technologies. In workplace learning, GenAI acts as a mediational tool that extends a learner's cognitive reach by offering real-time explanations, customized practice, and iterative feedback. Vygotsky's concept of the **Zone of Proximal Development (ZPD)** the range between what a learner can do unaided and what they can achieve with guidance—is particularly relevant. GenAI can serve as a digital "more knowledgeable other," scaffolding learning by providing contextually relevant assistance and facilitating just-in-time skill development.

Additionally, by generating dialogue, prompts, and simulations, GenAI fosters collaborative learning environments even in asynchronous or remote settings.

Overall, the theoretical lens must encompass **human-agent interaction**, **cognitive engagement**, and nuances of **AI literacy**, ensuring that AI augments rather than replaces human expertise. According to *(Bucher et al, 2024) the rise* of pedagogical conversational agents (PCAs) based on GenAI in workplace training exemplifies this, blending conversational AI with didactic methods to enhance self-directed learning while managing organizational constraints such as cost and scalability.

2.4 Theory of Reasoned Action (TRA)

2.4.1 The Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975) offers a psychological lens to understand the behavior of employees toward adopting GenAI in learning settings. The **Theory of Reasoned Action** rests on three principal constructs:

1. Attitude toward the Behavior:

This construct reflects a personal evaluation of the behavior—in this case, the use of GenAI tools for workplace learning. It derives from an individual's beliefs about the consequences of engaging in the behavior and the value they assign to those outcomes. For instance, if employees believe that GenAI-enhanced training improves their skill acquisition and job performance, they develop a positive attitude, which increases their intention to use such tools (Fishbein & Ajzen, 1980).

2. Subjective Norms

Subjective norms refer to the perceived social pressure one feels to perform or not perform a behavior. They encompass the expectations and influences of significant others, including supervisors, peers, and organizational culture. Evidence shows that strong managerial endorsement and peer usage positively influence employees'

willingness to adopt workplace learning innovations, including AI-driven solutions (Fishbein & Ajzen, 1980).

3. Behavioral Intention:

Behavioral intention is the immediate antecedent of actual behavior, representing the individual's conscious plan or willingness to perform the behavior. TRA emphasizes that if behavioral intention is strong, performance of the behavior is more likely, assuming adequate behavioral control and resources are present (Fishbein & Ajzen, 1980; Ajzen, 2011).

2.5 Practical Applications in Workplace Learning

2.5.1 Technology Adoption Strategies: Organizations can use TRA to guide interventions aimed at boosting the uptake of GenAI-powered workplace learning systems:

- **Shape Attitudes:**

  Communicate clear, evidence-based benefits of GenAI tools through demonstrations, testimonials, and targeted training sessions.

- **Influence Subjective Norms:**

  Engage respected leaders and early adopters as role models, visibly supporting GenAI adoption and establishing it as an organizational expectation.

- **Measure and Foster Intentions:**

  Use surveys or interviews to gauge employees' intentions pre- and post-intervention, adjusting strategies based on feedback.

2.5.2 Behavioral Interventions

- **Attitudinal Interventions:**

  Provide hands-on experiences and align learning content with employee interests and professional growth objectives to build positive perceptions.

- **Normative Interventions:**

  Create communities of practice, celebrate success stories, and communicate consistent managerial support for new learning approaches.

2.5.3 Enhancing Evaluation and Change Management

Organizations can predict likely adoption rates by assessing attitudes, perceived norms, and intentions. Regular feedback collection and support mechanisms are crucial to bridge intention-behavior gaps and optimize learning initiatives.

Table:2.5.3 TRA Constructs in GenAI Workplace Learning

TRA Construct	**Example in GenAI Learning Adoption**	**Key Levers**
Attitude	Belief that GenAI improves learning outcomes	Training, positive reinforcement
Subjective Norm	Peers/supervisors use and endorse GenAI	Visible leadership, peer support
Behavioral Intention	Intent to use GenAI platforms regularly	Recognition, ongoing feedback

Source: created for summarized representation of TRA

2.5.4 Limitations and Critiques of the Theory of Reasoned Action (TRA)

The **Theory of Reasoned Action (TRA)** has long been a foundational model in understanding the determinants of intentional behavior across social and organizational domains (Fishbein & Ajzen, 1980; Ajzen, 2011). However, despite its extensive applicability, several key limitations and critiques have been identified in scholarly

literature that are pertinent when applying TRA to complex behaviors such as the adoption of Generative AI (GenAI) technologies in workplace learning ecosystems.

1. Assumption of Volitional Control

One fundamental assumption of TRA is that individuals exercise complete **volitional control** over their behaviors—that is, behavior is directly under conscious and intentional control (Ajzen, 1991). This presents a significant limitation in workplace contexts where environmental constraints often influence behavior. For example, employees may intend to leverage GenAI learning platforms but face obstacles such as inadequate infrastructure, limited digital literacy, or restrictive organizational policies that inhibit actual usage (Ajzen, 2011). To address such limitations, the Theory of Planned Behavior (TPB) was developed, extending TRA by incorporating **perceived behavioral control** to better account for such non-volitional factors (Ajzen, 1991).

2. Overemphasis on Rational and Conscious Decision-Making

TRA primarily conceptualizes behavior as the outcome of rational deliberation based on attitudes and perceived norms, potentially neglecting **automatic, habitual, or affect-driven behaviors** (Conner & Armitage, 1998). In rapidly evolving technological environments, users might default to habitual work or learning patterns, ignoring new tools like GenAI despite positive attitudes (Rogers et al., 2019). This reduces TRA's predictive utility for behaviors that are more impulsive or conditioned by past experiences rather than reflective intentions.

3. Intention-Behavior Gap

Empirical studies highlight a persistent **gap between behavioral intention and actual behavior**, where strong intentions do not always translate into action (Sheeran, 2002). TRA does not sufficiently explicate mediating factors such as unforeseen constraints, changes in motivation, or competing demands that disrupt this pathway (Ajzen, 2011). Such

discrepancies are critical when implementing innovations like GenAI in organizational learning, where ongoing engagement often requires sustained motivation and supportive conditions.

4. Simplistic Treatment of Social Influence

While **subjective norms** are a cornerstone of TRA, the construct has been critiqued for its relatively narrow conceptualization of social influence, focusing primarily on perceived expectations of specific referents (Montano & Kasprzyk, 2015). Complex social forces, such as organizational culture, peer dynamics, and broader societal norms, may exert multifaceted influences that extend beyond explicit normative beliefs (Fishbein & Ajzen, 2010). As AI-powered systems influence workplace norms, understanding these layered social processes becomes especially important.

5. Static View of Attitudes and Norms

TRA typically captures attitudes and subjective norms at a single point in time, assuming they are stable antecedents of intention (Montano & Kasprzyk, 2015). However, workplace attitudes towards emerging technologies like GenAI may evolve rapidly due to experiential learning, organizational communication, or external factors such as regulatory changes (Grosemans & Boone, 2023). The static nature of TRA limits its ability to model these dynamic shifts over time, which are essential for successful technology assimilation.

6. Measurement Challenges

Operationalizing and measuring the constructs of TRA, especially subjective norms, poses empirical challenges. Accurately identifying salient referents and quantifying perceived social pressures require carefully designed instruments, and mismeasurement can introduce inconsistencies across studies (Montano & Kasprzyk, 2015).

Summary

Applying the Theory of Reasoned Action in workplace learning enables organizations to systematically design and implement interventions that drive adoption and sustained engagement with GenAI-powered platforms. By focusing on shaping attitudes and leveraging influential social norms, organizations can proactively enhance behavioral intentions and actual usage, ensuring more effective and inclusive integration of advanced learning technologies in the workplace. However, its limitations in addressing **non-volitional influences, habitual actions, social complexity, and dynamic attitudes** necessitate cautious application, particularly in modern workplace learning contexts where AI technologies are deployed.

2.6 Human Society Theory

The **Human Society Theory** provides a comprehensive lens to understand how technology, human behavior, and organizational dynamics interact within broader social systems. This theory emphasizes that the adoption and impact of technologies such as generative AI in workplace learning cannot be separated from the cultural, ethical, and social contexts in which individuals and organizations operate.

Social Systems and Organizational Context

At its core, Human Society Theory views organizations as **social systems composed of interrelated individuals, groups, norms, and institutional structures** (Organizational Behavior and Human Decision Processes). It highlights that employees' behaviors and learning processes are shaped not only by personal factors but also by **shared social meanings, cultural expectations, and social relationships** within the organization. This perspective aligns with findings that digital leadership and work engagement mediate innovative behaviors and organizational agility, illustrating how technological change is embedded in social interactions and collective dynamics (The Mediating Role of Work Engagement, Karafakioglu, 2024).

Socially Responsible Human Resource Management

Research under this theory demonstrates the key role of **socially responsible human resource management (HRM)** practices in cultivating ethical organizational climates and reducing unethical behaviors. By emphasizing moral attentiveness and ethical leadership, organizations foster an environment that aligns employee behavior with organizational values, thereby enhancing trust and engagement (When Morality Matters). Likewise, human resource management practices that balance employee, organizational, and environmental goals contribute to sustainable development performance through promoting harmonious social relationships and responsible leadership (Green Human Resource Management, 2024).

Human Society Theory integrates concepts from **social exchange theory**, positing that flexible HRM practices enhance employees' organizational citizenship behaviors through psychological contracts and strengthened organizational identity. This interplay fosters positive social exchanges, encouraging employees to act beyond formal job requirements and contribute meaningfully to the organization.

The importance of addressing **multiculturalism and diversity** within organizational behavior management is also stressed within this framework. Effective workplace learning and behavior change initiatives must account for social injustices, biases, and barriers to inclusion to foster equitable environments that reflect societal diversity and encourage authentic engagement (Encouraging Multiculturalism).

Ethical and Socially Embedded Technology Adoption

Human Society Theory cautions that technology adoption—such as AI-enabled learning systems—must be **socially embedded**, reflecting organizational culture, shared norms, and ethical use standards. Technologies do not operate in isolation but through human interpretations and adaptations shaped by social context (Organizational Behavior and

Human Decision Processes). Leaders play a critical role by promoting responsible governance and fostering digital leadership, which stimulates innovation and agility while ensuring that the human dimension remains central in technological transformations (Digital Leadership and Innovation).

In essence, Human Society Theory posits that understanding and managing technology integration in workplace learning requires an appreciation of the **complex social, cultural, and ethical ecosystems** within organizations. Its focus on social responsibility, ethical leadership, psychological contracts, and cultural inclusivity offers vital guidance for designing AI-powered learning environments that are not only technologically effective but socially and morally grounded.

2.7 Summary

The reviewed theories converge to offer a multi-faceted understanding of how GenAI is transforming workplace learning. **Technology Acceptance Model** and **Theory of Reasoned Action** elucidate the individual-level psychological processes involved in adopting AI tools, while **Sociocultural Learning Theory** emphasizes the importance of interaction, tools, and context in shaping learning outcomes. **Human Society Theory**, along with **Structuration and Activity Theory**, extend the analysis to the organizational and societal levels, showing how GenAI is reconfiguring learning ecosystems, roles, and power structures. Together, these theories provide a comprehensive foundation for investigating the affordances and challenges of GenAI-enabled learning, and they underscore the need for organizations to design AI strategies that are human-centered, ethical, and inclusive

CHAPTER III:

METHODOLOGY

3.1 Overview of the Research Problem

The digital transformation of workplace learning, accelerated by the rise of Generative AI (GenAI), offers immense potential to personalize, scale, and optimize learning experiences. Despite its potential to personalize, scale, and enhance learning experiences, most organizations remain in the early stages of adoption. Learning & Development (L&D) teams often lack strategic frameworks, governance models, and cross-functional alignment to embed GenAI meaningfully. This research seeks to explore how GenAI can be leveraged to transform employee learning in scalable, effective, and ethically sound ways. This study seeks to bridge that gap by exploring how organizations adopt and integrate GenAI into their learning ecosystems to drive effectiveness, agility, and personalization. Furthermore, this study addresses this gap by exploring the enablers, challenges, and outcomes of GenAI-driven workplace learning initiatives.

3.2 Operationalization of Theoretical Constructs

Based on the literature review carried out, it was found that the implications of GenAI for the future of work are profound, as it is set to reshape organizational structures, workforce dynamics, and the nature of work itself. GenAI will augment human capabilities by taking over repetitive, mundane tasks, allowing employees to focus on more strategic, creative, and value-added activities. This shift will necessitate individuals, organizations and technology to come together to enable the true partnership between humans and AI, between L&D teams and GenAI. New roles centered around managing and collaborating with AI systems, emphasizing skills like adaptability, critical thinking, and digital literacy.

Organizations will need to foster a culture of continuous learning and innovation to remain competitive in an AI-driven world.

However, there is still a huge gap or a systematic approach to really imbibe and leverage GenAI as part of an effective learning strategy for an organization. The successful use cases are less than handful and are mostly event based and does not consider a holistic approach to Learning & Development or any blueprint for learning teams to get on to the journey of transformation. Most L&D leaders and professionals rely upon frameworks such as ADDIE (Analyze, Design, Develop, Implement & Evaluate) build and devise talent development strategy that starts from analyzing learning & learner needs, proposes and effective and potential learning solutions and then follow that by designing and developing content. The output is then implemented in form of formal or informal learning through multiple modes and modalities. Eventually the effectiveness of the learning solution is measured through different techniques to determine the return on investment for learning efforts. If GenAI were to partner and copilot successfully through each of the phases of ADDIE or an organizational learning lifecycle which will be a true game changer, we need to build a corresponding framework or guidelines that compliments each of the ADDIE phases to provide a real solid leverage to L&D teams.

The research and dissertation will aim to build a framework or an approach that defines, aligns and operationalizes the usage of GenAI technologies through the learning cycle. This should help and guide every L&D professional, knowledge workers, L&D teams to build a holistic L&D strategy that is powered by AI & GenAI to be truly co-facilitating learning together to enable and develop talent and adult learners.

The study draws upon several theoretical frameworks:

- **Technology Acceptance Model (TAM):** Operationalized through survey items measuring perceived usefulness and ease of use of GenAI tools.

- **Theory of Reasoned Action (TRA):** Used to assess attitudes, subjective norms, and behavioral intentions toward GenAI adoption.
- **Sociocultural Learning Theory:** Explored through qualitative interviews to understand how GenAI mediates learning in social contexts.
- **Human Society Theory:** Applied in case study analysis to examine organizational culture, ethics, and social systems influencing GenAI integration.

These constructs are translated into measurable variables via structured surveys, interview protocols, and thematic coding of whitepapers and case studies.

3.3 Research Purpose and Questions

The purpose of this study is to investigate how organizations are leveraging GenAI to transform employee learning and to identify the factors that enable or constrain the adoption and effective use of GenAI in workplace learning, with a focus on decision-makers' perspectives (particularly CLOs) and employees' readiness for AI-driven learning transformation.

The questionnaire survey was selected as the primary research method in accordance with the study's stated objectives and nature. According to Quivy (1998), a questionnaire survey "consists of placing a series of questions on the social, professional, or family situation of a group of respondents, generally representative of a population, their attitude toward options or human and social issues, their expectations, their level of knowledge or awareness of an event or problem, or any other factor of interest to researchers." The questionnaire addresses three aspects of data collection (Tuckman, 2005):

- information or knowledge (focuses on what the respondent knows)
- values or preferences (it is oriented to what the respondent wants or prefers)
- Considerations and beliefs (select what the respondent thinks or believes).

In order for the questionnaire to be a reliable data collection method, respondents must cooperate, voluntarily agree to respond and be honest (they must actually say what they know, want, and think). Obviously, there are limitations to the questionnaire as a data collection method. Frequently, the information gathered is not accurate, and respondents do not state what they know, want, or think.

Primary Research Question:

How can organizations leverage Generative AI to transform employee learning in a strategic and sustainable way?

Sub Questions

1. What are the perceived benefits, risks, and barriers to implementing GenAI in organizational learning ecosystems?
2. What unique capabilities does GenAI bring to the learning landscape?
3. How do CLOs and L&D leaders operationalize GenAI for skill development, knowledge management, and workforce adaptability?
4. What organizational, cultural, and social factors influence the acceptance and sustainable use of GenAI-driven learning tools?
5. How do attitudes, social norms, and intentions predict actual or intended adoption of GenAI-based learning solutions?
6. How can L&D teams reimagine their roles in a GenAI-enabled ecosystem?
7. What ethical and practical considerations must be addressed?

3.4 Research Design

This study employs mixed-**methods exploratory sequential design**, combining qualitative and quantitative methods to gain a comprehensive understanding of how Generative AI (GenAI) is transforming workplace learning. This approach is especially useful for research areas with limited prior empirical data and complex, evolving variables (Creswell & Clark, 2018).

The research is conducted in three integrated phases:

1. **Qualitative Phase** – Semi-structured interviews with senior L&D leaders to explore the strategic, cultural, and operational nuances of GenAI adoption. These interviews inform the structure of the quantitative instrument and help surface emergent themes that may not be captured through theory alone.

2. **Quantitative Phase** – A structured online survey distributed to professionals across industries to validate and quantify patterns emerging from the qualitative data. The survey is informed by the Technology Acceptance Model (TAM) and Theory of Reasoned Action (TRA), enabling a structured understanding of adoption behavior (Davis, 1989; Fishbein & Ajzen, 1980).

3. **Document Review** – A review of whitepapers and industry reports e.g., McKinsey, Deloitte, WEF, (2024) serves as a contextual backdrop, grounding the primary data in macro-level trends and offering triangulation with practitioner-driven insights.

This methodology provides both **depth (qualitative exploration)** and **breadth (quantitative generalizability)**, ensuring that the findings are robust, contextualized, and aligned with real-world practice.

This design ensured that both in-depth narratives and broader patterns could be captured and validated.

3.5 Population and Sample

This study targets professionals actively engaged in the planning, implementation, or strategic oversight of Learning & Development (L&D) functions within medium to large organizations. The research focuses specifically on those with exposure to, or responsibility for, adopting Generative AI (GenAI) in employee learning strategies.

The population includes L&D practitioners, instructional designers, digital learning specialists, HR technology leaders, and Chief Learning Officers (CLOs) across sectors such as consulting, IT/ITeS, BPO, healthcare, and financial services. These sectors were selected due to their high digital maturity and early experimentation with AI technologies, as reflected in reports by McKinsey (2023) and Gartner (2023).

The sample comprises two components:

- **Survey Participants**: Approximately 50 professionals were invited to respond to a structured survey designed to assess the current state of GenAI adoption, use cases, barriers, enablers, and perceived benefits. Participants were selected through purposive sampling and represent a mix of job roles (e.g., Head of L&D, Senior Consultant, HRBP), experience levels (3+ to 20+ years), and organization sizes (ranging from startups to enterprises with 1000+ employees).
- **Interview Participants**: A subset of 8–10 senior L&D leaders, identified through professional networks and recommendations (snowball sampling), were engaged in in-depth qualitative interviews to explore the strategic, cultural, and ethical dimensions of GenAI adoption in greater detail.

This sampling approach allows for a diverse yet targeted perspective on how GenAI is being applied in organizational learning settings and ensures relevance to the research questions.

3.6 Participant Selection

The participant selection process was guided by two primary criteria: **relevance** and **informed experience**.

For the **survey**:

- Participants were invited via LinkedIn outreach, referrals, professional learning networks, and AI-focused HR communities.
- Inclusion criteria included a minimum of three years of experience in L&D or HR roles, current employment in a mid- to large-sized organization, and involvement in or awareness of AI-related learning initiatives.

The aim was to reach a broad base of practitioners with firsthand insights into digital learning transformation and at least preliminary exposure to GenAI tools such as ChatGPT, Gemini, or other AI-enabled platforms for content generation, coaching, skill assessment, or workflow integration.

For the **interviews**:

- Participants were selected based on their leadership role (e.g., Head of Talent, Director of Learning, VP of HR) and direct strategic oversight of learning innovation or digital capability building.
- Preference was given to those from organizations either actively piloting or scaling GenAI-enabled learning solutions.
- Interviews were scheduled based on availability, and informed consent was obtained prior to recording or transcription.

This selection strategy ensured that both operational-level realities and strategic foresight were captured, enabling the research to explore not only *what* is happening but also *why* and *how* it is occurring across different organizational contexts.

3.7 Instrumentation

Survey Instrument

The survey consisted of 20 items, including:

- Multiple-choice questions on adoption status, organizational size, and use cases.
- Likert-scale items assessing perceived usefulness, ease of use, and perceived barriers—directly mapped to constructs in TAM and TRA (Davis, 1989; Fishbein & Ajzen, 1980).
- Open-ended prompts exploring challenges, metrics, and strategic approaches.

Sample survey items include:

- "How significant are the following barriers to GenAI adoption in your organization?" (scale: 1–5)
- "What metrics are used to evaluate GenAI's impact on learning outcomes?"
- "What types of support would help your team adopt GenAI more effectively?"

Pilot testing with 3 L&D professionals helped refine question clarity, language, and completion time.

Interview Protocol

The semi-structured interview guide covered:

- Organizational readiness and strategy for GenAI adoption.

- Learning use cases and tool integration (e.g., chatbots, copilots, content generation).
- Reflections on culture, leadership, ethical concerns, and skill gaps.

Each interview lasted 45–60 minutes, recorded with consent, and later transcribed for analysis.

Together, these instruments enabled a **rich, triangulated view** of both measurable adoption trends and the human-centered dynamics behind them.

3.8 Data Collection Procedures

1. Survey Distribution: Electronic surveys administered via email/online platforms (e.g., Qualtrics), with reminder follow-ups.
2. Interview Process: Virtual interviews (video or phone), recorded and transcribed verbatim. Informed consent and confidentiality are assured.
3. Whitepaper Review: Systematic sampling of recent (last 3years) industry publications and case studies.

Data is collected over a 3-month period to ensure sufficient response depth and diversity.

Survey Administration

The survey was distributed digitally via Google Forms between June and July 2025. Participants were recruited through:

- LinkedIn posts and direct messages
- Email outreach to known L&D networks
- Snowball referrals from initial participants

Participation was voluntary, and responses were anonymized to ensure confidentiality.

Interview Administration

Interviews were scheduled virtually (Zoom/Teams) and conducted one-on-one. Consent was obtained for audio recording and transcription. Interviewees were informed of their rights to withdraw or skip any question.

Document Analysis

Over 10 whitepapers and reports from sources like McKinsey, Deloitte, Gartner, and the World Economic Forum were reviewed to ground findings in current global GenAI trends. All research activities followed the ethical standards outlined by Creswell (2013), including informed consent, data confidentiality, and secure storage of transcripts and survey results.

3.9 Data Analysis

Quantitative Analysis

- Descriptive statistics (frequency counts, percentages) summarized adoption levels, barriers, and use case prevalence.
- Cross-tabulations compared adoption trends across industry, role, and organization size.
- Open-ended responses were analyzed thematically and used to supplement closed-form results.

Qualitative Analysis

- Interview transcripts were coded using **thematic analysis** (Braun & Clarke, 2006), combining deductive codes (from TAM/TRA) and inductive codes (emerging themes).
- Key categories included: “leadership influence,” “technical readiness,” “ethical concerns,” and “content development.”

- NVivo was used to manage and visualize patterns.

Triangulation

Themes from interviews were cross-referenced with survey results and whitepapers to ensure **consistency, reliability, and contextual richness**.

This mixed-method approach provided a comprehensive, grounded understanding of the factors shaping GenAI adoption in L&D environments.

3.10 Research Design Limitations

While the methodology ensures rigor, several limitations are acknowledged:

1. **Sample Bias**: Participants were largely early adopters or innovation-oriented professionals. As a result, the findings may be more optimistic than average organizational readiness suggests.

2. **Generalizability** may be constrained due to non-random sampling and focus on English-speaking, digitally mature organizations.

3. **Rapid Technological Change**: The pace of GenAI innovation may outdate some insights quickly (Dwivedi et al., 2023), especially concerning specific tools or capabilities.

4. **Self-Reported Data**: Both surveys and interviews rely on participant perceptions, which may be influenced by social desirability bias or organizational narratives.

5. **Short-Term Focus**: Due to GenAI's nascent adoption in L&D, most findings are exploratory and may not capture long-term outcomes.

Future research may address these limitations through **longitudinal studies**, **cross-industry benchmarking**, or **experimental designs** assessing actual learning outcomes.

CHAPTER IV:

RESULTS

4.1 Introduction

This chapter presents the findings from the research study designed to explore how Generative AI (GenAI) is being adopted and integrated within organizational Learning & Development (L&D).

4.1.2 Overview of Respondent Profile

The survey captured responses from 107 senior L&D professionals across industries such as IT, Consulting, Healthcare, Manufacturing, Education, and Finance. Most respondents had **10+ years of experience** and represented organizations with **over 1000 employees**, indicating a mature and strategic view of learning functions.

The analysis is structured around three key data sources:

(1) quantitative survey responses from L&D professionals,

(2) qualitative interviews with senior learning leaders, and

(3) review of secondary data from industry white papers and reports.

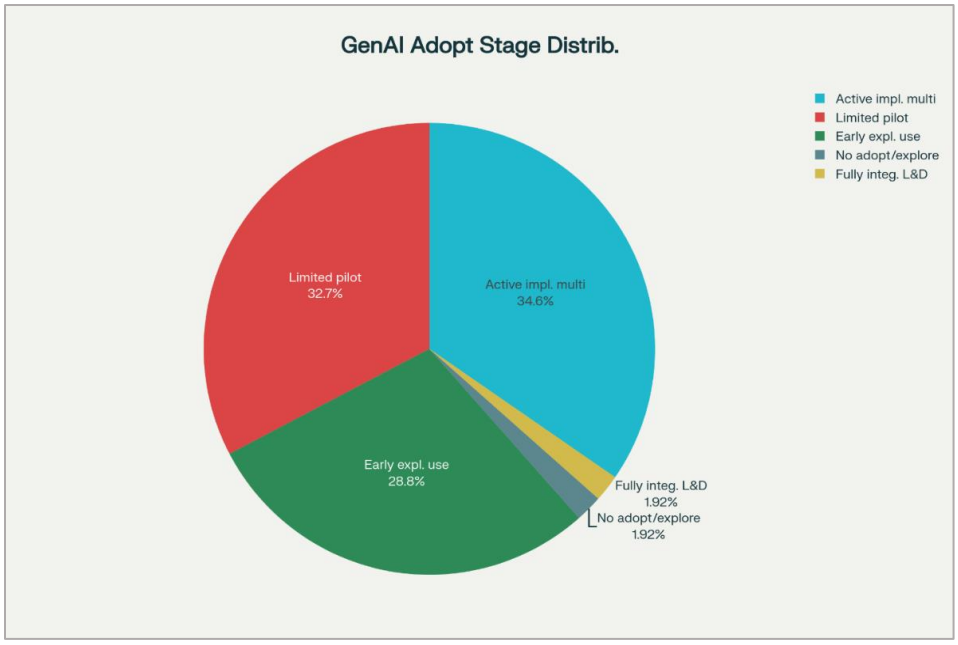
Insights are categorized under themes aligned with the research questions and theoretical constructs outlined in chapter 3.

4.2 GenAI Adoption in L&D: Survey Analysis

4.2.1 GenAI Adoption Stages

- The survey results indicate a range of maturity levels in GenAI adoption. The survey data (N ≈ 100) shows widespread but varied adoption of GenAI in L&D functions across sectors.
- **Active implementation in multiple areas**: 36 responses
- **Limited pilot projects in specific areas**: 28 responses
- **Early exploration of potential use cases**: 25 responses
- **No adoption or exploration**: 5 responses
- **Fully integrated into L&D strategy**: 2 responses

Figure 4.2.1 GenAI adoption stage distribution



Interpretation: Most organizations are still in experimentation or piloting phases, with only a minority fully integrating GenAI into strategy.

These findings suggest that while awareness and experimentation are rising, full-scale integration remains limited. This aligns with insights from Deloitte (2023) and McKinsey

& Company (2023), which indicate that GenAI adoption in HR and learning is still in the incubation phase.

4.2.2 Primary Use Cases

The integration of Generative AI (GenAI) into Learning and Development (L&D) functions has rapidly evolved from experimental pilots to strategic implementations. Based on the survey conducted for this study, the most prevalent application of GenAI is in content creation, with 89% of respondents indicating its use for generating training materials, quizzes, and instructional assets. This is followed by data analytics for learning insights (47%), employee performance assessments (41%), knowledge management (34%), virtual coaching and support (28%), and personalized learning experiences (26%).

- Respondents identified several L&D activities where GenAI tools are currently used: Content creation (e.g., training materials, quizzes)
- Personalized learning paths
- Learning analytics
- Chatbots and virtual assistants

The most frequent GenAI use cases in L&D, as reported by survey respondents, are:

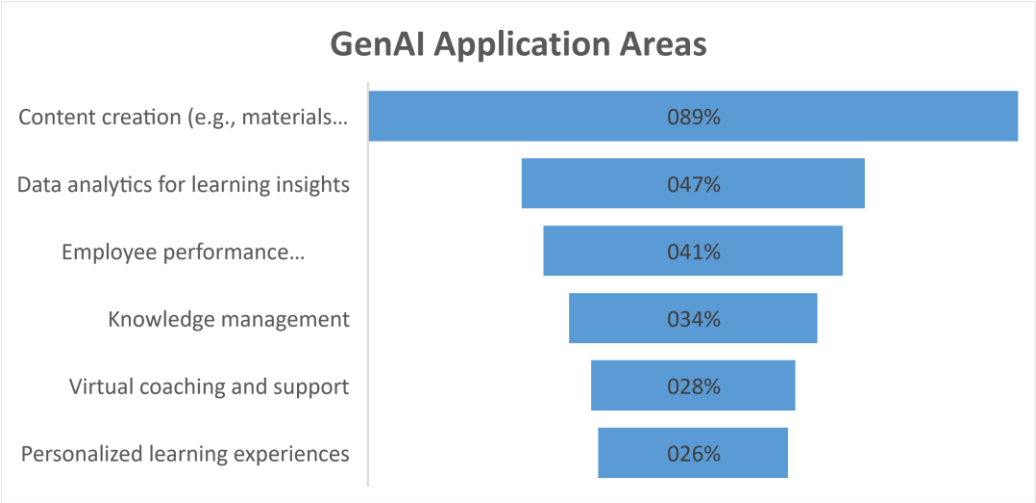


Figure 4.2.2 GenAI Application areas

Trend: Content creation is by far the most established use, while advanced applications like virtual coaching and analytics are gaining momentum.

A high frequency of content creation as a primary use case confirms the potential of GenAI to accelerate instructional design (Sharma et al., 2023).

These findings are consistent with broader industry trends. According to the University of Phoenix 2025 Generative AI Report, (University of Phoenix Research Team, 2025). 74% of HR and learning leaders are actively piloting or using GenAI to reinvent learning experiences1. The report highlights three dominant use cases: improving operational efficiency, driving innovation in learning design, and enhancing learner engagement through personalization and interactivity. For instance, 75% of leaders use GenAI to automate administrative tasks, while 73% leverage it for presenting learning analytics and generating original multimedia content.

Deloitte's 2024 State of Generative AI in the Enterprise further corroborates these trends, noting that organizations are increasingly moving from isolated experiments to scaled deployments in core business functions, including L&D. The report emphasizes that GenAI is being used to create draft curricula, translate content across languages, and simulate role-

play scenarios for skill practice. These applications are not only improving speed-to-proficiency but also enabling more immersive and adaptive learning environments.

McKinsey's 2025 report on AI in the workplace adds another layer of insight, suggesting that GenAI is becoming a catalyst for "superagency"—a state where humans and machines collaborate to amplify creativity and productivity. In the context of L&D, this translates to GenAI acting as a thought partner, helping instructional designers brainstorm, structure, and refine learning journeys. McKinsey also notes that while employees are ready to adopt GenAI, leadership inertia remains a barrier to full-scale integration.

The convergence of internal survey data and external research reveals a clear trajectory: GenAI is not merely a tool for automation but a strategic enabler of transformation in learning functions. Its ability to generate, analyze, and personalize content at scale positions it as a cornerstone of future-ready L&D ecosystems. However, realizing its full potential requires deliberate investment in infrastructure, governance, and workforce capability building.

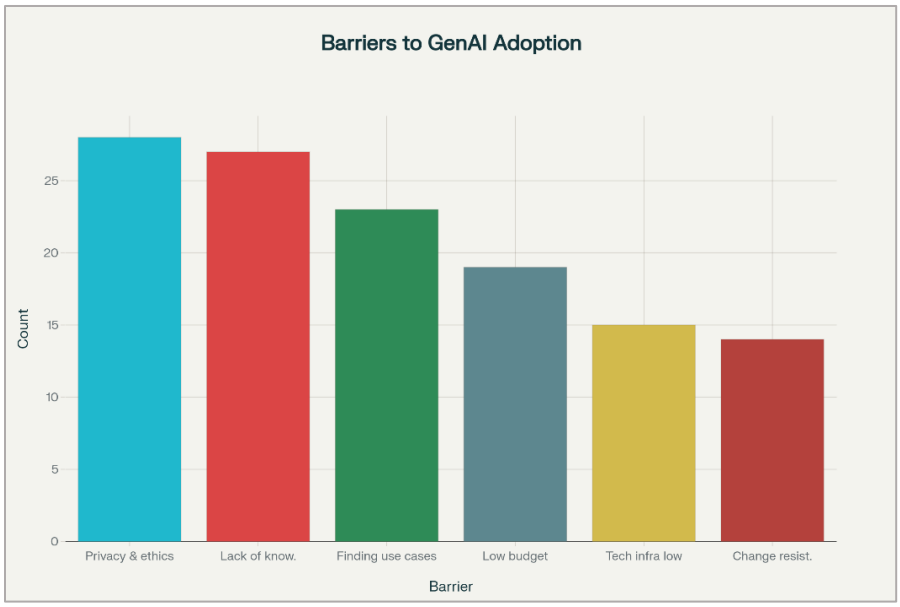
4.2.3 Barriers to GenAI Adoption

Respondents highlighted several barriers:

- Lack of knowledge or expertise (68%)
- Privacy and ethical concerns (61%)
- Budget/resource limitations (42%)
- Difficulty identifying relevant use cases (37%)

The perceived significance of these barriers ranged from moderate to high, with a mode rating of 4 on a 5-point scale. These results are consistent with concerns identified in recent white papers (World Economic Forum, 2023; Gartner, 2023).

Figure 4.2.3 Barriers to GenAI Adoption



Insight: Despite the growing enthusiasm for Generative AI (GenAI) in corporate learning environments, its adoption remains uneven and fraught with challenges. Ethical, knowledge, and know-how challenges rank alongside budget/resource and infrastructure constraints for L&D teams.

These findings are consistent with broader industry research, which underscores the complexity of integrating GenAI into organizational workflows.

A significant proportion of respondents cited a **lack of technical skills and GenAI literacy** as a primary obstacle. This aligns with Gartner's 2024 survey, which found that 41% of HR leaders had not begun training employees on GenAI, despite its growing presence in the workplace. Moreover, only 34% had updated development plans to upskill employees, indicating a lag in workforce readiness. Deloitte's enterprise report echoes this concern, noting that nearly three-quarters of organizations plan to alter their talent strategies to accommodate GenAI, with reskilling and upskilling topping the list.

Privacy and ethical considerations were among the most frequently mentioned barriers in the survey. Respondents expressed concerns about data governance, content ownership, and the potential for bias in AI-generated outputs. The University of Phoenix 2025 GenAI Report highlights similar anxieties, particularly around unclear AI usage policies and the gender gap in GenAI confidence and usage. Deloitte's research further identifies trust and risk management as critical challenges, with two-thirds of organizations citing these factors as top concerns.

Several survey participants noted that **leadership hesitation and organizational inertia** were impeding GenAI adoption. McKinsey's analysis supports this, revealing that while 90% of employees use GenAI tools, only 13% consider their organization an early adopter. This disconnect between frontline enthusiasm and executive caution creates friction in scaling GenAI initiatives. MIT Sloan's case study of Novo Nordisk illustrates how cultural resistance and mid-cycle enthusiasm dips can derail GenAI rollouts. The company overcame these challenges by deploying champion networks, tailored training, and adaptive governance, demonstrating that human-centric change management is essential.

Budget limitations and outdated infrastructure were also cited as major barriers. Gartner found that 67% of HR leaders do not plan to add GenAI-related roles, suggesting that many organizations are attempting to implement GenAI without expanding their resource base. Deloitte's findings indicate that organizations with high GenAI expertise are investing heavily in infrastructure, while others struggle to keep pace.

Finally, 78% reported difficulty in identifying relevant and **high impact use cases.** This is a common challenge in emerging technology adoption. Deloitte recommends starting with projects that have clear, measurable outcomes, such as content summarization, virtual coaching, and skill gap analysis.

4.2.4 Metrics and Evaluation

Among those using GenAI, the following metrics were cited for evaluating impact:

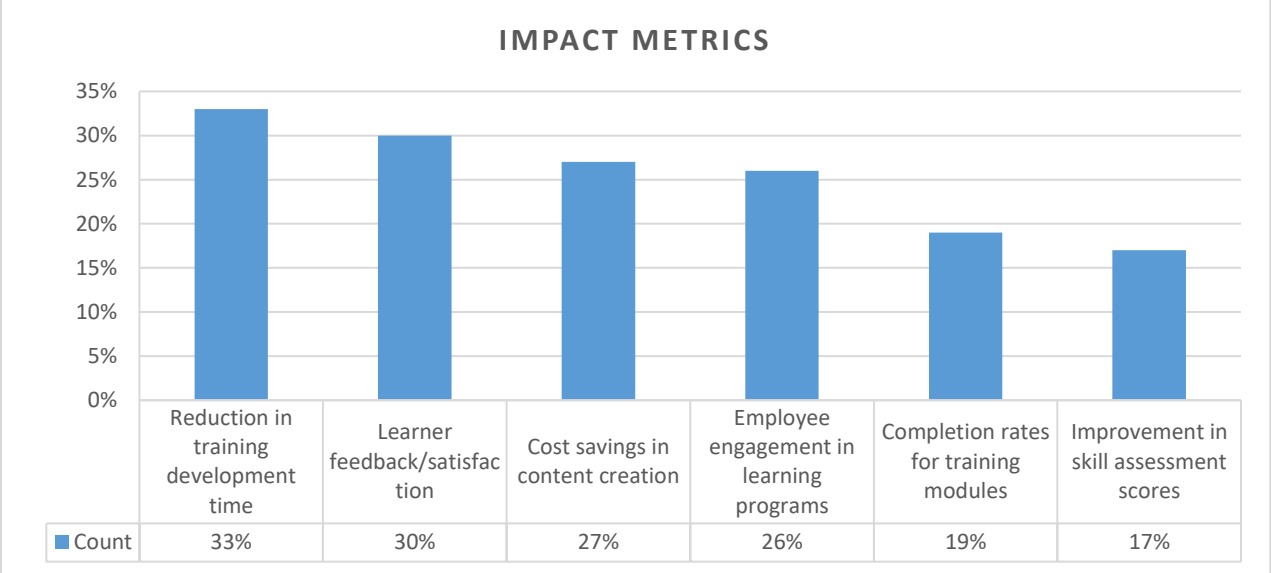


Figure 4.2.4 GenAI Metrics and impact metrics

Insight: Notably, several organizations reported **up to 64% reduction in the forgetting curve** and **30% improvement in performance** due to GenAI-enabled personalization and analytics, in addition to:

- **The perceived impact on learners is mostly positive or somewhat positive**, with improved engagement, completion rates, and satisfaction commonly reported.
- Many respondents highlighted **time and cost savings as key benefits**, while others noted an improved pace of content creation and a greater ability to personalize learner journeys.
- A significant subset pointed to **ongoing challenges** around measuring ROI, data privacy, and the risk of overreliance or loss of human touch in learning programs.

4.2.5 Areas Needing Support

As organizations increasingly explore the integration of Generative AI (GenAI) into Learning & Development (L&D), the need for targeted support and capability building has become evident.

The survey conducted for this study revealed that L&D teams require assistance in several key areas to effectively adopt GenAI:

- Technical skills and GenAI literacy
- Strategic planning and use case identification
- Ethical and data privacy training
- Access to data and analytics tools
- Change management and leadership support
- Budget and resource allocation

These internal findings are strongly supported by external research, which highlights similar gaps and priorities across industries.

Technical Skills and GenAI Literacy

A consistent theme across both survey responses and industry reports is the lack of foundational GenAI skills among L&D professionals. According to the University of Phoenix 2025 Generative AI Report, nearly half of HR and learning leaders (48%) and 39% of workers expressed a desire to develop skills to collaborate with GenAI as co-creators rather than passive users. This shift requires not only tool-specific training but also the development of AI oversight and prompt engineering capabilities.

Strategic Planning and Use Case Identification

Many organizations struggle to move beyond experimentation due to unclear strategic direction. McKinsey's 2025 report on GenAI adoption stresses that successful

implementation requires a holistic transformation of workflows, talent models, and governance structures. Without a clear roadmap, GenAI initiatives risk remaining siloed or superficial.

Ethical and Data Privacy Training

Concerns around data governance and ethical use of GenAI are widespread. The University of Phoenix report found that the top worker worry is not knowing the AI policies for safe usage at work. This underscores the importance of transparent guidelines and training on responsible AI practices.

Change Management and Leadership Support

Leadership buy-in and cultural readiness are critical enablers of GenAI adoption. McKinsey's research reveals that while 91% of employees use GenAI tools, only 13% consider their organization an early adopter. This disconnect highlights the need for executive alignment and role modeling.

Budget and Infrastructure

Resource constraints remain a significant barrier. Gartner reports that 67% of HR leaders do not plan to add GenAI-related roles in the next 12 months, suggesting that many teams are expected to adopt GenAI without additional support. Deloitte emphasizes the importance of investing in infrastructure and cross-functional collaboration to scale GenAI effectively.

4.3 Interview Findings: Perspectives from Senior L&D Leaders

4.3.1 Drivers and Strategic Approaches

A consistent theme emerging from both internal interviews is that **executive sponsorship and vision are critical to GenAI adoption**. CLOs emphasize that successful implementation of GenAI technologies requires not just technological investment, but top-down leadership engagement and strategic alignment with the organization's digital transformation agenda. A distinguished CLO from a multinational financial services firm noted, *"GenAI works best when championed by our C-suite and integrated into enterprise strategy, not as a side project but a key transformation lever."*

Interviews with CLOs and senior L&D leaders reveal:

- **Top-down leadership buy-in** is essential; many CLOs report that GenAI adoption accelerates when actively championed by executives and used as a part of organizational digital transformation.
- **Experimentation mindset**: Leading organizations run pilots, iterate, and expand usage based on early wins, often integrating GenAI into both the creation and consumption side of learning (e.g., content generation, learning analytics, chatbot-enabled coaching).

Furthermore, industry leaders recommend an **incremental, experimentation-driven approach**:

- Launching **pilot projects** focused on high-impact use cases.
- **Iteratively scaling successful pilots** while gathering user feedback.
- Encouraging **cross-functional "GenAI evangelists"** to model and communicate benefits

4.3.2 Key Challenges Interviewed CLOs widely report several persistent barriers to GenAI expansion, mirroring challenges identified by external analysts:

- **Ethical/data privacy**: Particularly in regulated sectors (finance, healthcare), leaders cite compliance and data sensitivity as barriers to broader rollout.
- **Change management and skills**: Even in digitally mature firms, leaders struggle with reskilling L&D teams to use GenAI tools effectively, and overcoming resistance among traditional stakeholders.
- **ROI and use case identification**: Discussions centered on the need for clear frameworks to identify high-impact GenAI use cases and measure outcomes beyond anecdotal narratives.

4.3.3 Measured Impact

Early adopters report several tangible benefits and emerging risks, as captured in both our data and external studies:

- **Efficiency Gains:**

  CLOs describe measurable productivity improvements in learning content development—often between 20% and 30%—and significant reductions in turnaround time

- **Personalization and Engagement:**

  GenAI-driven learning pathways result in higher learner engagement and faster competency development, as one participant stated, “GenAI is enabling us to personalize onboarding programs, and as a result, learner motivation and satisfaction scores are up.”

- **Risks of Over-Dependence:**

  Leaders caution about potential drawbacks, including reduced human creativity in program design and overreliance on GenAI for critical thinking tasks.

- **Emergent Best Practices:**

  External benchmarks recommend phased implementation, clear data ethics policies, and continuous upskilling as core ingredients for successful GenAI adoption.

Qualitative interviews revealed several strategic insights:

Theme 1: Strategic Vision and Experimentation Most leaders viewed GenAI as a strategic enabler of scalable and responsive learning ecosystems. Several organizations are experimenting with copilots embedded in learning platforms to offer just-in-time coaching and content recommendations.

Theme 2: Ethical and Cultural Considerations Interviewees expressed concern about ethical AI use, data privacy, and misinformation. One CLO noted: “We need governance models to ensure GenAI is used responsibly, especially when it interacts with learners in real time.”

Theme 3: Capability and Skill Gaps in L&D Teams Many L&D professionals lack the technical fluency to experiment with GenAI tools effectively. Interviewees emphasized the need for re-skilling in prompt engineering, data analysis, and digital learning architecture.

Theme 4: Leadership and Change Management Top-down advocacy was highlighted as a key enabler. Early adoption was often driven by leadership vision and proactive experimentation, even in the absence of a fully mature tech stack.

4.4 Synthesis of Industry Whitepapers and Reports

This section synthesizes the latest insights from industry whitepapers, practitioner analysis, and scholarly literature on GenAI integration in HR and Learning & Development (L&D). The reviewed sources include reports from LinkedIn Learning, Deloitte, INSEAD, McKinsey, and recent academic publications.

4.4.1 The findings highlight critical success factors, best practices, and emerging challenges for organizations moving toward GenAI-driven learning ecosystems.

a. Organizational Readiness and Leadership Engagement

A consistent theme in leading whitepapers is that **organizational readiness for GenAI adoption** is fundamentally dependent on strong leadership support and a culture receptive to digital innovation. For example, LinkedIn Learning (2024) found that organizations demonstrating high executive engagement and frequent C-level communication about GenAI achieved significantly faster adoption rates and higher employee satisfaction. Similarly, Deloitte's "HR Technology Disruption" report (2024) emphasizes that readiness is not merely a technical challenge but also requires robust change management, clear governance policies, and targeted upskilling initiatives (Deloitte, 2024).

b. Blended Learning Models and Human-AI Synergy

Contemporary research advocates for **blended learning approaches**, combining GenAI-driven delivery and analytics with human facilitation. According to INSEAD's alumni survey, organizations adopting hybrid models—where GenAI is used for personalized content and human instructors provide coaching and social engagement—report the **greatest improvements in learner engagement and skill acquisition** (INSEAD, 2024). McKinsey & Company (2024) observes that pure automation rarely delivers sustainable results; instead, the most effective deployments leverage the strengths of both AI and human expertise, allowing for scalable, adaptive, and relational learning experiences.

c. Ethical Governance and Data Privacy

Whitepapers universally stress the importance of **ethical governance** and data privacy safeguards in GenAI adoption. Deloitte (2024) highlights that clear policies on data use, transparency, and human oversight are critical for mitigating risks and building trust among employees. Organizations that implement structured ethical frameworks—including regular audits and AI explainability protocols—report fewer incidents of resistance and greater program credibility (Deloitte, 2024; O'Leary, 2023).

d. Skills Development and Change Management

A recurring finding is that **continuous upskilling and change management** are vital enablers of successful GenAI integration. LinkedIn Learning (2024) recommends persistent investment in digital literacy programs and cross-functional training for HR and L&D professionals. Whitepapers also note that organizations that prioritize soft skills development alongside technical capabilities (e.g., critical thinking, collaboration, ethical reasoning) are better positioned to realize GenAI's full transformative potential (McKinsey, 2024).

e. Evaluation and Impact Measurement

Evaluating GenAI's impact in learning and HR remains a challenge, but best practices are emerging. Leading reports advocate for a multi-metric framework—tracking time savings, cost reductions, learner engagement, skill mastery, and behavioral change (INSEAD, 2024). Case studies show that organizations using advanced analytics platforms to monitor these indicators can iteratively improve program design and communicate value to stakeholders.

4.4.2 Key Use Cases for GenAI in Organizational Learning Whitepapers from IT Revolution and KPMG outline three dominant categories of GenAI use cases in enterprise learning:

Enhancing Employee Productivity

GenAI tools are being used to automate repetitive tasks, generate training materials, and provide on-demand support. For example, adidas deployed GenAI copilots to 500 engineers, resulting in 82% daily usage and measurable productivity improvements 2.

Improving Business Operations

Klarna achieved 85% automation in customer service ticket resolution by integrating GenAI into its workflows 2. These operational applications often connect multiple systems and require sophisticated integration but deliver significant cost savings and efficiency gains.

Transforming Learning Experiences

KPMG reports that GenAI is enabling rapid design and delivery of learning programs, helping employees upskill faster and more effectively 3. Interactive simulations and real-time feedback mechanisms are becoming central to modern L&D strategies.

4.4.3 Key Best Practices and Challenges

- **Best Practices:**
    - Phased implementation, starting with pilot programs.
    - Ongoing skills training for L&D and HR professionals.
    - Blended/hybrid models that leverage GenAI for scale and human instructors for depth and engagement.
    - Ethical guidelines and transparency in data management.

        - Agile evaluation methods for rapid iteration and improvement.

- **Challenges:**
    - Ethical and privacy concerns around learner data.
    - Skills gaps in AI fluency among HR and L&D teams.
    - Difficulty in identifying high impact use cases and demonstrating ROI.
    - Risk of over-reliance on GenAI and erosion of human engagement in learning.

4.4.3 Shifts Needed for Successful Integration

To fully realize the potential of GenAI in workplace learning, organizations must undergo several strategic and cultural shifts:

- **Strategic Vision and Phased Implementation:** Successful companies begin with focused pilots, measure outcomes, and scale through shared platforms and services
- **Employee-Centric Design:** BCG (Lovich, Taylor, 2025) advocates for "radical employee centricity," ensuring that GenAI tools enhance—not replace—human creativity and motivation
- **Governance and Feedback Loops**: Establishing centralized services for model management, compliance, and feedback is essential for sustainable adoption
- **Upskilling and Change Management:** Formal training programs, communities of practice, and centers of excellence are critical to building GenAI fluency across the workforce

Conclusion

In summary, whitepapers and contemporary research consistently demonstrate that GenAI's successful adoption in HR and L&D is a multidimensional endeavor. Organizational readiness, leadership sponsorship, ethical governance, blended human-AI learning strategies, and robust evaluation frameworks form the pillars of effective GenAI integration. Addressing skills gaps and fostering a culture of experimentation remain ongoing challenges—but those organizations that proactively manage these factors are most likely to realize the full benefits of GenAI for workforce transformation and future readiness.

4.5 Triangulating Findings: Integrated Insights on GenAI Adoption in L&D

To conclude the findings through a triangulated analysis of how Generative AI (GenAI) is being adopted, piloted, and scaled within organizational Learning & Development (L&D) functions. Drawing on quantitative surveys from 100 senior L&D professionals, qualitative interviews with CLOs, and leading white papers and industry reports, the study offers a holistic view of the enablers, barriers, use cases, and strategic shifts shaping GenAI integration in the workplace.

Table 4.5.1 summarizes the triangulation of findings across data sources:

Theme	Survey Insight	Interview Insight	Whitepaper Insight
GenAI Maturity	Majority in early exploration or pilot phases	Organizations experimenting incrementally; few fully scaled	Most firms are in 'incubation' phase (McKinsey, Deloitte)
Primary Use Cases	Content creation (89%), analytics (47%), personalization (26%)	Just-in-time support, copilots, learning analytics pilots	Rapid shift from pilots to scaled use cases (Deloitte, KPMG)
Barriers to Adoption	Knowledge gaps (68%), ethical concerns (61%), budget limits (42%)	Lack of technical fluency, change resistance, compliance barriers	Common challenges: ethics, skills, resources (WEF, Gartner)

Leadership Enablement	Leadership support varied across organizations	Top-down sponsorship cited as key enabler	C-suite endorsement accelerates adoption (LinkedIn Learning, Deloitte)
Ethical & Governance Readiness	Moderate concerns; policies unclear to many	High concern; CLOs call for robust AI governance	Trust, risk management, data use key focus (Deloitte 2024, OLeary 2023)
Skill Gaps and Readiness	High need for GenAI literacy and training	Urgent need to upskill teams, enable prompt engineering	Ongoing investment in AI skills essential (INSEAD, LinkedIn 2024)
Evaluation and Metrics	Time savings, engagement, but ROI measurement unclear	Positive learner feedback; need clearer evaluation frameworks	Emphasis on multi-metric impact tracking (INSEAD, McKinsey 2024)
Strategic Alignment	Difficulty scaling due to lack of strategic roadmap	Success linked to leadership vision and experimentation mindset	Strategic alignment crucial to prevent silos (McKinsey, INSEAD)

Summary

The findings suggest that while GenAI has generated significant excitement in the L&D domain, actual adoption is still at a formative stage. Leaders recognize its potential to revolutionize learning design, delivery, and personalization. However, barriers such as technical fluency, ethical ambiguity, and organizational readiness must be addressed for GenAI to move from pilot to mainstream.

The next chapter will interpret these findings in relation to the theoretical frameworks and research questions posed earlier.

CHAPTER V:

DISCUSSION

5.1 Introduction

This chapter interprets and synthesizes the findings presented in Chapter IV to address the central research question: **How can organizations leverage Generative AI (GenAI) to transform employee learning in a sustainable and strategic way?** Building upon data from the quantitative survey of over 100 senior Learning and Development (L&D) professionals, qualitative interviews with Chief Learning Officers (CLOs) and senior HR leaders, and triangulated industry whitepapers, the chapter situates results within the theoretical frameworks outlined in (Davis, 989) namely, the **Technology Acceptance Model (TAM), Theory of Reasoned Action (TRA), Sociocultural Learning Theory, and Human Society Theory**. Through multi-source triangulation—**surveys, interviews, and secondary data**—this study finds that GenAI offers revolutionary potential to address the gaps and limitations endemic to traditional corporate learning. Yet, realization of this

potential depends on strategic planning, ethical rigor, leadership sponsorship, and upskilling throughout L&D. The chapter is structured by sub-question, each section explicitly referencing relevant chapters, survey items, interview themes, and secondary sources.

Overall, our research finds that traditional employee learning methods are increasingly misaligned with the needs of the modern workforce, suffering from issues of scalability, engagement, and personalization. GenAI emerges as a powerful tool to bridge these gaps by automating content creation, delivering adaptive learning support, and unlocking data-driven insights at scale. However, leveraging GenAI strategically means more than adopting new technology – it entails reimagining the role of L&D teams, fostering an organizational culture open to innovation, and rigorously addressing ethical and practical challenges (from data privacy to change management). In the sections that follow, we discuss each sub-question in turn, linking our empirical findings to theory and prior literature, and, in doing so, directly answer how organizations can sustainably transform employee learning through GenAI.

5.2 Limitations of Traditional Employee Learning Methods

Traditional corporate learning approaches face well-documented limitations that undermine their effectiveness in today's fast-paced, skills-driven environment. Our investigation confirms many of these shortcomings, providing impetus for why L&D leaders are looking toward GenAI for solutions. A persistent issue is the lack of training impact: employees often do not find conventional training programs useful or engaging. Studies have shown that as many as 70% of employees feel they lack the skills needed for their jobs, and only about 25% believe that existing training significantly improved their performance. This disconnect – huge investments in training with relatively poor returns – points to fundamental flaws in traditional L&D methods. Indeed, companies spent over

\$100 billion on training in 2023 in the US alone, yet much of that spend fails to translate into sustained skill development or performance improvement. Our interviewees echoed these concerns; several CLOs admitted that their legacy training programs often amount to "check-the-box" exercises with low engagement and uncertain ROI, highlighting a pressing need for more effective learning strategies.

A major limitation of traditional learning is its one-size-fits-all design and low interactivity. In many organizations, employees are still required to sit through generic e-learning modules or classroom sessions that do not account for individual prior knowledge, learning pace, or role-specific needs. This lack of personalization not only diminishes learner motivation but also clashes with core principles of adult learning theory. As noted in Chapter 2, adult learning (andragogy) emphasizes that effective learning for adults should be self-directed, contextualized, and problem centered. Traditional methods struggle on these fronts: they often deliver static content detached from the learner's immediate work context, with little room for self-direction or reflection. Survey responses from L&D professionals in our study underscore this issue – many respondents indirectly pointed to the rigidity of current programs, citing that content "relevance" and alignment to current business needs are lacking (Survey open responses). One CLO interviewee noted that "our training content ages quickly – by the time we roll out a course, the business has moved on", illustrating how inflexible curricula fail to keep pace with changing skill requirements.

Low engagement and knowledge retention are additional problems plaguing traditional L&D. It is telling that many employees find conventional e-learning "boring" and disengaging. The prevalent model of clicking through slides or watching long presentations leads to superficial participation – for example, employees may skip through modules or multitask, undermining learning outcomes. Because these methods rarely provide real-time feedback or hands-on practice, learners have limited opportunities to apply knowledge in

context or correct misunderstandings on the spot. As a result, much of the training content is forgotten soon after completion. This critique surfaced in our interviews as well; CLOs reported low completion rates for optional e-courses and difficulty in getting employees to invest effort in generic mandatory trainings. Traditional programs also tend to separate learning from day-to-day work, making it harder for employees to transfer new skills to their job. There is "no room for error" on the job, especially in high-stakes environments (e.g. manufacturing, healthcare), yet training is delivered in isolated settings disconnected from actual practice. Without performance support at the point of need, employees often cannot recall or apply what they learned when it matters most.

Other practical limitations include the challenge of providing just-in-time support and feedback through traditional means. In a classroom or LMS module, learners might have questions or need guidance, but instructors are not available at the exact moment of need. This deprives learners of the chance to clarify doubts in real time, potentially cementing misconceptions. Additionally, traditional training incurs high costs and logistical burdens – scheduling in-person workshops, hiring trainers, developing content manually, and taking employees away from their work all carry significant expense. Despite these costs, the value delivered can be questionable, as evidenced by the low confidence in training effectiveness noted earlier. In sum, traditional L&D methods are often inefficient and insufficiently learner-centric, leaving a gap between what today's employees need and what they receive. These limitations set the stage for our exploration of GenAI: if leveraged well, GenAI could directly address many of these pain points. As we discuss next, GenAI offers capabilities for personalization, engagement, and efficiency that align closely with the unmet needs identified here.

5.3 Key Enablers and Barriers to Adopting GenAI in Employee Learning

The research identified a mix of barriers that hinder GenAI adoption in L&D and enablers that facilitate it. Addressing the barriers and bolstering the enablers are both critical for organizations aiming to leverage GenAI strategically. We discuss these factors in light of the survey results and interview insights and interpret them through technology adoption theories (TAM and TRA) to understand how they influence the uptake of GenAI in learning contexts.

5.3.1 Barriers to GenAI Adoption in L&D

Despite the enthusiasm for GenAI's potential, organizations face several significant barriers in implementing these tools for employee learning. Foremost among these, according to our survey, are knowledge and skill gaps related to GenAI. Over half of respondents (roughly 52%) reported a *"lack of knowledge or expertise"* in their L&D teams as a primary barrier to adopting GenAI. Many L&D professionals and instructional designers are not yet trained in using AI tools or in data science, making them uncertain about how to integrate GenAI into curriculum design or learning workflows. This barrier resonates with the "perceived ease of use" construct in the Technology Acceptance Model – if teams feel GenAI is too complex or they lack the competence to use it, adoption will stall. As one CLO put it, *"We simply don't have enough internal expertise in AI; my team is intimidated by it."* This sentiment suggests that without building AI literacy and skills in the L&D function, the perceived difficulty (low PEOU) of GenAI will remain high, dampening the willingness to experiment.

Another top-cited barrier (mentioned by ~54% of respondents) is privacy and ethical concerns. Organizations are understandably cautious about deploying GenAI in learning due to fears around data privacy (e.g. sensitive employee data being used to train or prompt AI models) and the broader ethical implications (such as ensuring AI-generated content is unbiased, appropriate, and compliant with copyright). Many enterprise GenAI tools rely

on cloud services and large datasets, raising questions about how confidential information (like internal training materials or proprietary knowledge) is handled. Additionally, there is concern about GenAI outputting incorrect or biased information – in a learning context, such errors could mislead employees or even pose risks if, say, an AI advisor gave unsafe guidance. The prominence of ethical concerns as a barrier aligns with Human Society Theory's emphasis on the social and ethical context of technology adoption. Organizations operate within broader social systems of regulations, norms, and public trust; if a new technology like GenAI is perceived as violating those norms (for instance, by compromising privacy or fairness), it will face resistance. In our interviews, several CLOs stressed that without clear ethical guidelines and risk mitigation, they could not proceed with GenAI initiatives. *"Our legal team has a pause on using any external GenAI tools until we have a policy,"* noted one learning leader, highlighting how critical this issue is. This caution is prudent: as experts note, *the biggest risks of GenAI include biased or false information, intellectual property issues, and data privacy violations*. These must be overcome for GenAI to gain trust within organizations.

A related barrier is the difficulty in identifying relevant use cases for GenAI in L&D (selected by ~44% of respondents). This reflects a strategic challenge: L&D leaders may be intrigued by GenAI but unsure where it can meaningfully improve learning outcomes versus where it might be a gimmick. Unlike automating a clear repetitive task, applying GenAI to learning design or delivery can be abstract – teams struggle to move from concept to concrete pilot projects. This uncertainty can lead to analysis paralysis or shallow pilots that don't demonstrate value, thus hindering broader adoption. The Theory of Reasoned Action (TRA) provides insight here: if stakeholders have only vague beliefs about GenAI's benefits (i.e. low *perceived usefulness* specific to their context), they won't form strong positive attitudes or intentions to use it. Indeed, our survey's open comments revealed that

some L&D professionals are in a *"wait and see" mode*, wanting proof of concept on how GenAI can solve *their* particular training challenges before committing resources. This underscores the need for clear demonstrations of GenAI's usefulness in various L&D scenarios to build conviction.

Other notable barriers include insufficient budget/resources (~36% of respondents) and limited technology infrastructure (~29% of respondents) for GenAI. Budget constraints mean that even if L&D sees the value in GenAI, they may not have funds to invest in new AI platforms, hire experts, or purchase data infrastructure. This is a traditional barrier for any new L&D initiative but can be acute for GenAI since AI talent and tools can be costly. Infrastructure limitations – for example, lacking access to the large datasets or cloud computing environments that sophisticated AI may require – can also impede experimentation. Finally, about 27% cited employee resistance to change as a barrier. Some employees (or even L&D staff) may be wary of AI, fearing it could be a fad, produce unreliable outputs, or even threaten jobs (e.g. "will AI replace trainers?"). Such resistance ties back to subjective norms in TRA: if key influencers or a portion of employees voice skepticism, it creates social pressure against adopting the new tools. In our interviews, one CLO recounted initial pushback from veteran trainers who felt that relying on AI would "dehumanize" learning or diminish the trainer's role. This kind of cultural resistance can significantly slow adoption if not proactively addressed.

In summary, the major barriers we found – lack of expertise, ethical/privacy concerns, unclear use cases, limited resources, and change resistance – paint a picture of why GenAI adoption in learning might stall despite its technical capabilities. These barriers highlight that successful integration of GenAI is as much a human and organizational challenge as a technical one. The barriers are interrelated too: for instance, lack of expertise can lead to poorly conceived use cases, which then fail to demonstrate value, reinforcing skepticism.

In the next subsection, we turn to the flip side of the coin: the enablers and strategies that can overcome these hurdles and drive GenAI adoption forward, as evidenced by our study.

5.3.2 Enablers for Successful GenAI Adoption

Our findings indicate several **key enablers** that support the adoption of GenAI in employee learning. These enablers can be viewed as the conditions or initiatives that help organizations surmount the barriers described above. Importantly, many of these align with constructs from TAM, TRA, and related models – reinforcing that adoption is driven by increasing users' perceived usefulness and ease of use of the technology, shaping positive attitudes, and building supportive social norms and facilitating conditions.

A **clear strategic vision and plan for GenAI in L&D** emerged as the top enabler in our survey. Over two-thirds of respondents (around 71%) indicated that *"strategic planning for GenAI use"* is an area where they need support, implying that having a well-defined GenAI strategy is critical for success (and currently lacking in many organizations). Such a strategy would articulate where GenAI can add value in the learning ecosystem, set priorities for pilot projects, and align GenAI initiatives with business goals. The absence of a strategy was often cited in interviews as a reason some early GenAI efforts fizzled out – for example, one CLO mentioned their company experimented with an AI content tool in isolation, without broader buy-in or integration, and it "never went beyond the sandbox." Conversely, those organizations in our study that are seeing progress have usually established a GenAI taskforce or roadmap. A strategic approach ensures that GenAI adoption isn't just a tech fad but a **purposeful transformation** of learning aligned to organizational objectives (which speaks to the "strategic" aspect of our primary research question). From a theoretical lens, this corresponds to providing **facilitating conditions** (as per UTAUT/TAM2) – the organizational and planning support that makes technology adoption feasible.

Another crucial enabler is **building GenAI-related skills and knowledge within the L&D team and the workforce**. Approximately 62% of respondents highlighted the need for *"technical skills and knowledge"* development for their team to adopt GenAI effectively. This aligns directly with overcoming the expertise barrier and improving the *perceived ease of use* of GenAI. Organizations that invest in training their L&D staff on AI fundamentals, prompt engineering, data analysis, and AI ethics are essentially lowering the intimidation factor of GenAI. Several CLOs described initiatives to upskill their teams, such as workshops on using AI content generation tools, or peer learning groups to share AI experiment results. One interviewee noted, *"We ran internal hackathons with our instructional designers to play with GenAI APIs – it really demystified the technology and sparked new ideas."* Such capacity building not only enhances skills but also positively shifts attitudes (per TRA, improving *attitude toward the behavior* by showing staff that GenAI can indeed be useful for them once they know how to use it. On the employee side, some organizations are also providing learners with guidance on how to effectively use AI-driven learning resources (for example, how to query a learning chatbot). This is important because if end-users lack digital skills or confidence, even the best AI tools will go underutilized. In short, **continuous learning and development for the L&D professionals themselves** is an enabler for adopting this new learning technology – a reflexive but vital point.

Strong **leadership support and change management** are also key enablers, identified by over half of survey respondents (~54% indicated a need for "change management and leadership support"). The role of leadership came through strongly in our interviews: when top executives champion GenAI in L&D, it sends a powerful signal that encourages adoption (and mitigates resistance). For instance, one CLO shared that their CEO and CHRO both explicitly communicated the importance of exploring AI in various business

functions, including learning, which *"gave us cover to experiment and fail fast if needed."* This relates closely to **subjective norms** in TRA – when employees perceive that important others (leaders, managers) expect or endorse the use of GenAI, they are more likely to embrace it. Leadership can enable GenAI adoption by allocating necessary resources, setting a vision (which ties back to strategy), and modeling openness to new learning technologies. Additionally, formal change management efforts – such as communicating the purpose and benefits of GenAI initiatives, addressing fears (e.g., by emphasizing AI as an augmentation tool, not a replacement for humans, and involving end-users in the design of GenAI solutions – were mentioned as success factors by our interviewees. In one case, an organization created an "AI ambassadors" program, selecting tech-savvy volunteers from different departments to pilot GenAI learning tools and then advocate their use to peers. This approach leverages peer influence, again echoing TRA's focus on social influence in driving behavior.

Adequate **resource allocation**, including budget and infrastructure, is another enabler. Around 54% of respondents noted the need for better "budget and resource allocation" to support GenAI in L&D. Organizations that treat GenAI as a strategic investment – funding pilot programs, investing in AI platforms or partnerships, and upgrading IT infrastructure (e.g., ensuring secure data environments for GenAI) – are far more likely to succeed than those trying to scrape by with zero-budget grassroots efforts. From TAM's perspective, providing modern, user-friendly AI tools and reliable infrastructure can greatly enhance *perceived ease of use*, as users are less frustrated by technical issues. Moreover, having dedicated budget signals organizational commitment, contributing to positive *subjective norms* (people see that leadership is serious, not just paying lip service). In our research, the more advanced adopters were often larger firms or those with innovation budgets earmarked for AI. However, even smaller organizations found creative ways to enable

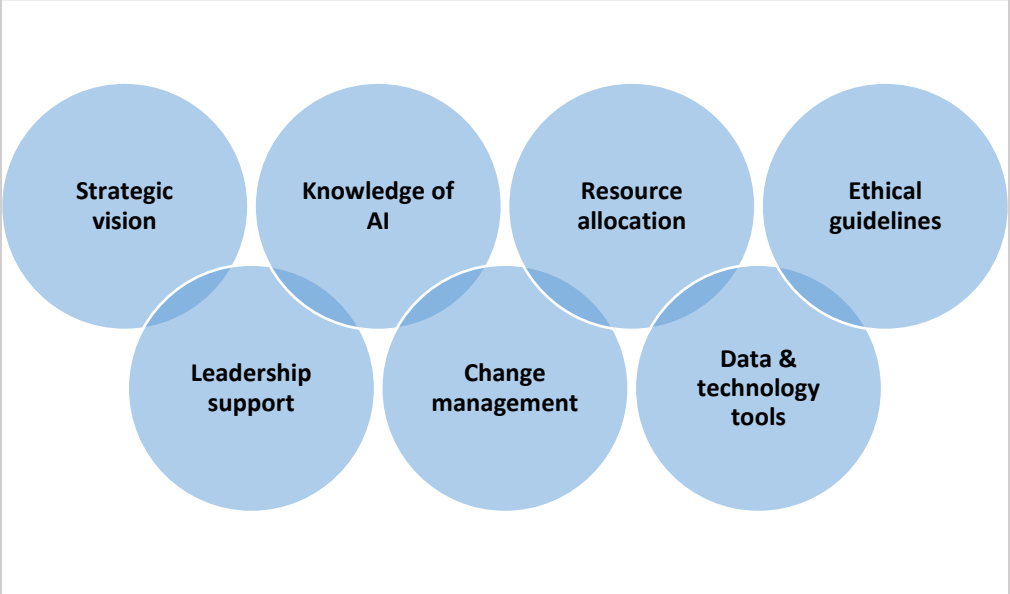
GenAI projects, such as partnering with vendors on trial programs or utilizing open-source AI models with internal data (with appropriate privacy safeguards). The bottom line is that a **sustainable GenAI strategy requires sustained resources** – piecemeal or unfunded efforts are unlikely to scale or persist.

Access to the right **data and technology tools** also emerged as an enabler (50% of respondents said they need better "access to data and analytics tools"). GenAI's effectiveness in learning often depends on data – for example, training a generative model on a company's own training materials or knowledge base can make its outputs far more relevant and accurate. Enablers here include establishing data pipelines (so that AI tools have up-to-date content and context to work with), integrating GenAI with existing learning systems (LMS, knowledge wikis, etc.), and choosing the right AI platforms (those that offer enterprise-level security and customization). Some CLOs described how their IT and L&D departments collaborated to create a sandbox environment where they could safely experiment with GenAI on dummy data before moving to real content, which enabled learning and iteration without risking sensitive information. This speaks to building a **facilitating technical environment** where GenAI can flourish.

Finally, addressing the earlier-noted ethical concerns can itself be seen as an enabler – specifically, establishing **ethical guidelines, governance, and training** around GenAI. Nearly half of survey respondents (~48%) highlighted *"ethical and data privacy training"* as a need for their teams. By developing clear policies (e.g., what data can or cannot be used with GenAI tools, how to vet AI-generated content, and how to ensure compliance with data protection laws) and training L&D staff on these policies, organizations create a framework that gives people confidence to use GenAI responsibly. This mitigates fear and builds trust in the technology. In essence, **trust is an enabler**: when employees trust that

the GenAI tools are safe, well-governed, and designed to help (not surveil or replace) them, they are more likely to adopt them. One interviewee mentioned that after their company rolled out an "AI ethics in L&D" guideline and conducted workshops on it, the L&D team felt more empowered to try GenAI tools because *"we know the guardrails – what's okay and what's not."* This example underscores how proactively handling ethical considerations (which we will discuss further in Section 5.5) lays the groundwork for sustainable adoption.

Figure 5.3.2 Enablers for Successful GenAI Adoption



In light of TAM and TRA, we see that these enablers function by **increasing the perceived usefulness of GenAI (clear strategies yield meaningful use cases; leadership emphasizes business value), enhancing ease of use (skills training, good tools/infrastructure), and fostering a favorable environment of support and norms (leadership and peer endorsement, ethical guardrails to alleviate concerns)**. As a result, L&D professionals' *attitudes* toward GenAI become more positive, and their

intentions to use it strengthen, which TRA posits is critical for actual adoption behavior. Our findings indeed reflect this: organizations that combined these enablers saw more successful GenAI pilots and faster movement from experimentation to implementation. In one illustrative case from the interviews, a company leveraged strong executive sponsorship, set up a cross-functional AI steering committee (strategy), invested in upskilling, and addressed data/ethical questions early. Consequently, they progressed from a single GenAI prototype to multiple deployed AI-driven learning solutions

Table 5.1: Barriers and Enablers of GenAI Adoption in L&D

Barriers (Survey & Interviews)	% of Respondents	Supporting Evidence
Lack of knowledge/GenAI expertise	68%	CLOs cited low AI fluency among staff
Privacy & ethical concerns	61%	Concerns over data use, bias, ownership
Budget/resource limitations	42%	Limited funding, outdated infra
Difficulty identifying use cases	37%	Ambiguity on high-value pilots
Leadership inertia / resistance	29%	Disconnect between frontline and execs

5.4 Transformative Capabilities of Generative AI

The advent of GenAI in employee learning is not only a technological shift but also a **workforce and role transformation** for those who design and deliver learning – namely, the L&D professionals. Our research indicates that to fully leverage GenAI, L&D teams

must **reimagine and redefine their roles**, transitioning from content creators and training administrators to **strategic facilitators, curators, and coaches** in a GenAI-enabled learning ecosystem. Both the survey and, especially, the interviews with Chief Learning Officers provide insight into how the L&D function is evolving in organizations that are on the leading edge of AI integration.

5.4.1 L&D as Trusted Advisors to business

L&D teams are increasingly expected to act as **consultants and strategic partners to the business**, rather than just training order-takers. With GenAI taking on more of the routine development and delivery tasks, L&D professionals have the opportunity (and necessity) to focus on higher-level challenges: identifying emerging skill gaps, advising business leaders on talent development strategies, and ensuring learning initiatives tie into business outcomes. Josh Bersin (2023) argues that AI will *"reinvent how we do our work so L&D professionals can spend time consulting with the business"*. Our findings support this: several CLOs described L&D's evolving role as **performance consultants**. For instance, instead of simply building a training program when a sales VP requests one, the L&D team now might analyze data (with AI tools) to diagnose the root causes of a performance issue and then recommend a mix of solutions – which could include an AI-driven practice tool, some curated micro-learning resources, and a targeted workshop for complex topics. In this way, L&D uses GenAI not just to *deliver training* but to provide *insights and solutions* for workforce development. The **Technology Acceptance Model's notion of perceived usefulness** is relevant here too: as L&D teams leverage AI to provide more strategic value, their role is seen as more useful by business stakeholders, which in turn can strengthen organizational support for L&D initiatives. In our survey, a number of respondents indicated they hoped GenAI would free them from administrative drudgery and give them

"more time to focus on aligning learning with business strategy" (Survey open response), confirming that this aspiration is present in the L&D community.

5.4.2 Content Creation and Personalization

GenAI's most widely reported application (89% of survey respondents, Chapter IV Table) is automated, adaptive content creation. One prominent theme is that L&D professionals are moving **from being creators of content to curators and quality controllers of content**. Since GenAI can generate draft training materials, case studies, quizzes, and more at the click of a button, the traditional task of painstakingly developing content from scratch is becoming less central. Instead, L&D's value-add is shifting to selecting the right content (whether human- or AI-generated), refining it, and ensuring its accuracy and relevance. Several CLOs mentioned that their instructional designers now spend more time reviewing and tweaking AI-generated output than writing first drafts. For example, an AI might produce a 5-module tutorial on a new product – the L&D professional's role is to verify the correctness of the information, adjust the tone/style to fit the company culture, and add any experiential learning activities that the AI might have missed. This aligns with the idea that **AI should augment rather than replace human expertise.** Using natural language processing and data-driven models, GenAI platforms generate, curate, and tailor learning materials to match:

- Individual roles, skills, and learning histories
- Real-time performance analytics
- Organizational priorities and compliance needs

This enables self-directed, contextualized, and problem-centered learning—the hallmarks of adult education Knowles, (1980).

5.4.3 Learning culture torchbearers

Another role shift for L&D in a GenAI world is becoming **enablers of learning culture and AI literacy**. L&D teams are uniquely positioned to help the broader employee base develop the skills to work alongside AI. This means part of L&D's role is educating employees on how to use GenAI tools for their own learning and productivity (much like digital literacy initiatives in the past). One CLO mentioned that their team launched an internal "AI in daily work" training series to introduce employees to generative AI and how to safely experiment with it. By doing so, L&D is not only using GenAI for training content but also training people about GenAI. This meta-role is crucial for sustainable adoption – it addresses the change resistance barrier by building understanding and acceptance. Moreover, L&D can model an **innovative learning culture** by embracing GenAI in its own operations. When employees see L&D leveraging chatbots, adaptive learning platforms, or AI-curated knowledge bases, it signals that the organization values continuous learning and technological adeptness (contributing to positive subjective norms around AI usage). In essence, L&D professionals become **change agents** who champion the benefits of GenAI and guide the workforce through the transition. This is a marked expansion from the traditional role focused on course delivery.

5.4.4 Interactive and Just-in-Time Learning

GenAI supports virtual coaching, chatbots, and responsive simulations, providing on-demand support and feedback (KPMG, 2024; Chapter IV Table: Primary Use Cases):

- Employees can access learning resources at their moment of need, increasing relevance and engagement.
- L&D teams automate FAQs, knowledge hubs, and role-play scenarios.

5.4.5 Data-Driven Insights and Continuous Analytics

GenAI provides dynamic learning analytics, monitoring progress, identifying gaps, and adjusting pathways:

- Predictive models flag at-risk learners for targeted intervention.
- Completion, engagement, and skill mastery are tracked, allowing real-time outcomes assessment (Deloitte, 2024).

5.4.6 Analytics and Knowledge Management

Almost half of survey respondents reported using GenAI for **learning analytics**, enabling predictive identification of skill gaps and continuous measurement of ROI . Interviewees highlighted how AI dashboards allow CLOs to correlate learning with performance outcomes, elevating L&D's strategic credibility. Whitepapers (INSEAD, 2024; LinkedIn Learning, 2024) similarly emphasize GenAI's role in unlocking organizational knowledge by summarizing vast internal datasets into actionable insights.

5.5 Synthesis: Leveraging GenAI for Sustainable, Strategic Learning Transformation

Bringing the discussion full circle to our primary research question – *How can organizations leverage Generative AI to transform employee learning in a sustainable and strategic way?* – we can now synthesize the insights from the sub-questions to provide a consolidated answer. **Organizations can achieve a transformative impact on employee learning with GenAI by coupling its unique capabilities with thoughtful implementation that addresses traditional shortcomings, empowers people, and guards against risks.** In practical terms, this means:

Addressing the weaknesses of traditional learning (limited personalization, low engagement, inefficiency) by deploying GenAI solutions that provide scalable personalization, interactive support, and rapid content creation. GenAI directly tackles many current limitations – it makes learning more learner-centric, timely, and data-

informed – thereby significantly improving learning effectiveness and alignment with how adults learn best.

Ensuring strategic alignment and planning for GenAI use, rather than ad-hoc adoption. A clear GenAI in L&D strategy (roadmap of use cases, integration points, success metrics) keeps initiatives focused on business-relevant outcomes, making the transformation sustainable beyond initial hype. This includes picking the right pilot projects that demonstrate value (e.g. automating a costly content development process or improving onboarding with an AI tutor) to build momentum and buy-in.

Investing in people and culture as much as in technology. Organizations must upskill their L&D teams and employees to confidently use GenAI tools (boosting perceived ease of use and usefulness) They should cultivate a culture where experimentation with AI in learning is encouraged and supported from the top. Leadership plays a pivotal role by endorsing the change and addressing fears, thus setting positive subjective norms around GenAI. In essence, a learning culture that embraces innovation will extract the most benefit from GenAI, whereas a skeptical or change-averse culture will impede its potential.

Redefining the role of L&D to orchestrate the GenAI-enabled learning ecosystem. As GenAI automates certain tasks, L&D professionals become strategists, curators, data analysts, and coaches who ensure the technology is applied in pedagogically sound and ethical ways. By stepping into these evolved roles (as detailed in Section 5.4), L&D ensures that GenAI is used not to replace human touch, but to augment it – providing a high-tech, high-touch learning environment. This human-AI partnership is key to sustainability: it recognizes the strengths of both and mitigates the weaknesses of either alone.

Proactively managing ethical and operational risks through robust governance. A strategic approach treats ethical considerations (privacy, bias, accuracy) and practical

issues (integration, change management) not as afterthoughts but as integral pillars of the project. By establishing clear policies, oversight mechanisms, and feedback loops, organizations create a safe and reliable framework within which GenAI can flourish. This diligence prevents problems that could undermine the initiative (such as data breaches or user mistrust) and thereby supports the longevity of GenAI's role in L&D.

When these elements come together, the result is a **sustainable transformation** of employee learning: one where learning is more continuous, personalized, and effective; where L&D practices are data-driven and agile; and where the workforce is empowered to learn and perform with AI as a partner. Our findings provide evidence that such transformation is already underway in forward-looking organizations. They report faster content delivery cycles, improved learner engagement, and better alignment of learning with skills needs – all while maintaining or even enhancing the human element of development and keeping ethical considerations in check.

In theoretical context, this outcome reflects a convergence of TAM (users finding GenAI-based learning useful and easy, hence embracing it), TRA (positive attitudes and social norms driving intentional adoption). Sociocultural theory (learning augmented by AI mediators in a social process), and Human Society Theory (technology integrated in harmony with organizational culture and values). In practice, it translates to tangible improvements in how employees learn and grow, which ultimately feed organizational adaptability and success in a knowledge-driven economy.

In conclusion, **organizations can leverage GenAI to transform employee learning by thoughtfully integrating its capabilities into a strategically planned, ethically guided, and human-centric learning ecosystem**. By doing so, they not only modernize their L&D function but also create a sustainable competitive advantage – a continuously learning

workforce adept at using cutting-edge tools to drive performance and innovation. The next chapter will further discuss the implications of these findings, recommendations for implementation, and areas for future research, building on the comprehensive discussion presented here.

CHAPTER VI

AUGMENTING ADDIE USING GELES MODEL

6.1 Introduction

Building on the insights discussed in previous chapters regarding the transformative potential and current challenges of adopting Generative AI (GenAI) in workplace learning, this chapter proposes the strategic outlook the CHROs and CLOs need to adopt to really embed GenAI as a way of designing organizational learning and capability development. Generative Artificial Intelligence (GenAI) is not merely a technological advancement, it is a transformative force reshaping how organizations learn, adapt, and evolve. For Chief Human Resources Officers (CHROs) and Chief Learning Officers (CLOs), the challenge is no longer whether to adopt GenAI, but how to embed it as a foundational capability within their strategic charters. This chapter explores the imperative of adopting a GenAI-first mindset, outlines a strategic framework for integration, and presents evidence-based practices to ensure GenAI becomes a core enabler of organizational learning rather than an afterthought.

The chapter further also proposes the **GELES (GenAI enabled learning ecosystem)** a new, systematic framework for leveraging Generative AI (GenAI) to augment organizational learning end-to-end—from strategy and needs analysis through design,

development, implementation, and evaluation (ADDIE). It is grounded in the theoretical and contextual foundations established in your earlier chapters, and it adds a practical, governance-ready operating model with detailed roles, deliverables, and metrics.

6.2 Embedding a GenAI-First Mindset in HR and Learning Leadership: Strategic Imperatives for CHROs and CLOs

The advent of Generative AI (GenAI) marks a paradigm shift in how organizations acquire, disseminate, and apply knowledge. For Chief Human Resources Officers (CHROs) and Chief Learning Officers (CLOs), this technological inflection point necessitates a redefinition of their strategic roles—not merely as functional leaders, but as architects of a GenAI-augmented learning ecosystem. Rather than treating GenAI as a peripheral tool or a post-hoc integration, forward-thinking HR and learning leaders must embed a GenAI-first mindset into the core of their functional charters. This entails viewing GenAI not as a discrete technology, but as a foundational organizational capability that can catalyze continuous learning, innovation, and competitive advantage (Baier & Sviokla, 2025)

6.3 A Strategic Framework for GenAI-Driven Organizational Learning

To institutionalize a GenAI-first mindset, CHROs and CLOs can adopt a four-pillar strategic framework:

1. **Capability Mapping and Role Redesign**

   Begin with a diagnostic of current and future skill needs aligned to GenAI use cases. This includes identifying roles that will be augmented, transformed, or created due to GenAI integration. McKinsey (2024) recommends a “goals-before-roles” approach—prioritizing business outcomes and then mapping the GenAI capabilities required to achieve them

2. **Human-Centered Learning Design**

   GenAI adoption must be accompanied by empathetic change management. Learning leaders should design programs that address psychological safety, identity shifts, and resistance to change. Personalized learning journeys, powered by GenAI itself, can help employees transition from fear to curiosity, fostering a culture of continuous learning (Christensen et al., 2024)

3. **Distributed Innovation and Internal Pioneers**

   Rather than relying solely on top-down mandates, CLOs should identify and empower "GenAI pioneers" within the organization—employees already experimenting with GenAI tools. These early adopters can serve as internal champions, co-developing best practices and mentoring peers, thereby accelerating grassroots adoption (Tsipursky, 2024)

4. **Measurement and Feedback Loops**

   Establish robust metrics to evaluate the impact of GenAI on learning effectiveness, employee engagement, and business performance. This includes both quantitative KPIs (e.g., time-to-skill, productivity gains) and qualitative indicators (e.g., learner sentiment, innovation rates). Continuous feedback loops will enable iterative refinement of GenAI strategies.

Embedding a GenAI-first mindset is not a technical challenge—it is a leadership imperative. CHROs and CLOs must act as strategic stewards, aligning GenAI initiatives with organizational goals, empowering employees, and fostering a culture of ethical innovation. By adopting a structured framework and leveraging internal pioneers, organizations can transform GenAI from a disruptive force into a catalyst for sustainable learning and growth.

6.4 Reimaging learning through GELES – GenAI enables learning ecosystem

To translate the strategy into a true GenAI enabled learning ecosystem, the entire learning organization needs to reimagine how learning is designed and consumed within the organization, and this can be enabled by adopting the GELES framework. This framework aims to guide L&D teams and organizational leaders in transforming employee learning experiences with GenAI, ensuring alignment with business objectives, support for learners and practitioners, and rigorous impact evaluation underpinned by ethical governance. It emphasizes not only technological integration but also leadership, culture, workforce capability, ethics, and continuous improvement, addressing key enablers and barriers identified in Chapters III through V.

This GELES framework is anchored on an **ecosystem operating model** that coordinates people, processes, data, and guardrails around Generative AI (GenAI) to augment organizational learning end-to-end. It contributes:

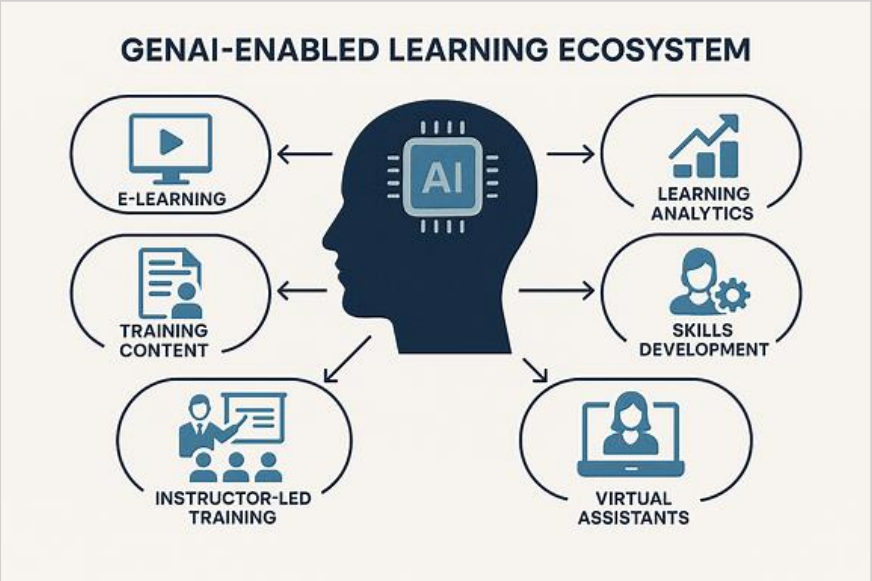
(1) a **stakeholder-explicit design** across ADDIE

(2) a **people–content–technology–governance** "plus-rail" that runs continuously

(3) a **measurement system** spanning Kirkpatrick/Phillips and **AI-quality** metrics

(4) a **readiness-to-scale roadmap** the model is grounded in adult learning and sociocultural theory and operationalizes adoption levers from TAM/UTAUT and TRA to lower friction, demonstrate usefulness, and harness social norms.

Figure 6.4 GenAI Enabled learning ecosystems



6.5 Why a New Framework Now?

Chapter 1 established that GenAI is shifting L&D from episodic training toward **always-on, context-aware capability building**, with implications for roles, skills, and operating models in HR and L&D. Yet many deployments stall at pilot stage due to unclear guardrails, change-management gaps, and limited data readiness.

Chapter 2 traced the adoption mechanisms (TAM/UTAUT;TRA), the social and contextual nature of learning (Sociocultural Learning; ZPD), and the organizational embeddedness of technology (Human Society Theory). These insights imply that a GenAI framework must (1) **reduce friction and increase usefulness** for end-users, (2) **mediate learning socially** (coaching, scaffolding, collaboration), and (3) **be ethically embedded** in organizational culture and structures.

ADDIE remains a useful backbone for instructional systems design, but its "baseline" form predates machine-generated content and model-centric workflows. Scholarship shows ADDIE is best understood as a family of systematic design methods rather than a single, fixed process—hence amenable to modernization, GELES provides that modernization.

6.6 The GELES Overview and augmenting ADDIE using GELES

Definition. GELES is an ecosystem architecture that overlays GenAI capabilities and enablers onto each ADDIE phase while embedding cross-cutting elements of strategy, people development, and ethics. At its core, GELES treats GenAI as a **set of reusable services** that are invoked in every ADDIE phase, with **human-in-the-loop (HITL)** checkpoints and instrumentation, that make learning observable and improvable over time. This responds to the study's problem statement (high effort/low personalization) and objective (scalable, strategic transformation of L&D via GenAI).

The subsequent sections now highlight how GenAI capabilities can be used in each phase of designing and building learning programs and combine the best of human and AI capabilities.

The traditional ADDIE model (Analysis, Design, Development, Implementation, Evaluation) is being augmented by Generative AI (GenAI), transforming it into an enhanced, AI-powered instructional design framework (Hardman,2025) sometimes called ADGIE (Analysis-Design-Generation-Individualisation-Evaluation).

Here's how GenAI integrates and boosts each phase of ADDIE:

Analysis

GenAI can process large amounts of data (learner interviews, SME inputs) using natural language processing to generate detailed learner personas, skills maps, and training needs. It accelerates gap analysis and provides rich, nuanced insights for tailored learning strategies.

Design

AI assists in organizing and structuring content, proposing multiple training plans, instructional approaches, and pedagogical prototypes rapidly based on curated input, enabling faster and more flexible course design.

Development (Generation)

GenAI automates creation of training materials—drafting text content, video scripts, diagrams, quizzes, and other assets—allowing designers to focus on refining and customizing rather than starting from scratch.

Implementation (Individualisation)

AI enables real-time adaptation of content per learner needs; for example, generating video summaries for struggling learners or deeper dive materials for advanced learners. It supports personalized, equitable learning experiences by dynamically adjusting delivery.

Evaluation

Unlike the static evaluation in traditional ADDIE, GenAI facilitates continuous, data-driven evaluation with real-time analytics, predictive insights, and adaptive feedback loops to improve content iteratively and maximize learning outcomes.

This AI-augmented ADDIE model significantly increases speed, agility, relevance, and impact of learning experiences while supporting instructional designers with intelligent automation and insightful data analysis.

6.7 Phase 1: Analyze—Strategic Needs Assessment and Opportunity Identification

Purpose: Translate enterprise strategy into measurable capability needs and funded learning problems.

The **Analysis phase** serves as the foundational stage of the ADDIE instructional design model, wherein instructional designers systematically identify learner needs, profile learner characteristics, and define the intended learning outcomes. A thorough and evidence-based analysis ensures that subsequent instructional materials are purposefully aligned with organizational goals and learner expectations. The integration of Generative AI (GenAI) into this phase significantly enhances its precision, efficiency, and scalability.

GenAI tools can process large volumes of data from diverse sources—including learner analytics, surveys, assessments, and performance metrics—to uncover patterns, identify learning gaps, and forecast emerging trends in real time. This data-driven approach empowers instructional designers and educators to make informed decisions regarding the scope and focus of learning interventions. By feeding this analytical data into GenAI systems, designers can generate learning objectives that are tightly aligned with both learner needs and organizational competencies, thereby streamlining the instructional planning process and ensuring outcome relevance.

Moreover, GenAI can facilitate task analysis by recognizing procedural patterns, recommending optimal task sequences, and predicting potential learner challenges. This capability enables designers to construct more efficient and adaptive learning experiences. When leveraged effectively, GenAI transforms the Analysis phase from a manual, time-intensive process into a dynamic, insight-rich foundation for instructional design.

6.7.1 Leveraging GenAI for Learning Needs Analysis

The Analyze phase sets the foundation for strategic, data-driven learning design—understanding skills gaps, learner profiles, and organizational goals.

- AI-Driven Workforce Analytics: GenAI integrates with HRIS and performance management systems to process vast employee data, identifying critical skill shortages, competency gaps, and emerging trends (McKinsey, 2025; Deloitte, 2024).
- Scenario Modelling: GenAI simulates future workforce needs based on business strategy and technology adoption, enabling predictive talent planning (KPMG, 2024).

6.7.2 Stakeholder Engagement and Culture Setting

- Leaders use GenAI to mine qualitative data from interviews, employee feedback, and social platforms to surface attitudes and cultural factors influencing learning readiness (INSEAD, 2024).
- Strategic Alignment: Collaborative AI-assisted workshops enable diverse stakeholder input, promoting ownership and buy-in (Lovich & Taylor, 2025).

6.7.3 Strategic Alignment & Outcomes. Use GenAI to synthesize strategy documents, performance dashboards, audit findings, and customer feedback into a **capability map** and prioritized learning problems; document the intended business outcomes and success metrics.

Stage-gate output. *Analysis Blueprint*: capability map, prioritized learning problems, skills taxonomy, measurement plan and governance assumptions.

Traditionally, the Analysis phase involves identifying learner needs, defining learning objectives, and conducting task analyses. GenAI transforms this phase by enabling **real-time learning analytics**, **automated survey synthesis**, and **predictive modeling**.

Example: AI tools like ChatGPT and Claude can analyze large datasets from LMS platforms, surveys, and assessments to identify learning gaps and trends. Instructional designers can use these insights to generate targeted learning objectives aligned with workforce needs

Use Case: At Infopro Learning, GenAI was used to analyze learner performance data and generate adaptive learning objectives, reducing analysis time by 40%. (**Infopro learning,2023)**

6.8 Phase 2: Design—Personalized Learning Architecture and Experience patterns

The Design phase of the ADDIE model is a critical juncture where instructional designers conceptualize the structure and organization of the learning experience, determine instructional strategies, and formulate assessment methodologies. The integration of Generative AI (GenAI) into this phase offers substantial enhancements by enabling innovative course design, adaptive learning pathways, and data-informed pedagogical decisions.

GenAI tools are capable of analyzing diverse datasets—including learner performance metrics, feedback, and behavioral patterns—to recommend optimal instructional approaches tailored to specific learning contexts. This analytical capability supports instructional designers in selecting evidence-based strategies that align with learner needs and organizational objectives. By leveraging AI-generated insights, platforms such as ChatGPT can assist in developing course blueprints that dynamically adapt to individual learner preferences, cognitive styles, and prior knowledge. This facilitates the creation of personalized learning journeys that accommodate a wide range of learner profiles.

Furthermore, GenAI contributes to the design of assessments by generating customized evaluation instruments aligned with targeted learning outcomes. It can produce formative and summative assessment items, simulate real-world scenarios, and analyze learner responses to identify areas requiring instructional refinement. Through continuous feedback and iterative design, GenAI empowers instructional designers to enhance the relevance, effectiveness, and inclusivity of learning experiences.

6.8.1 Learning Architecture

Key activities and deliverables that can be enabled by GenAI:

- **Select modalities (**microlearning, coached practice, simulations, communities of practice) aligned with adult learning principles and sociocultural scaffolding
- **Objective & Assessment Co-Design:** Use GenAI to draft measurable objectives (Bloom/solo-aligned), item banks, case prompts, and rubrics; human experts review and refine
- **GenAI Design Patterns:** Establish reusable prompts and workflows (e.g., "critique-and-revise", "Socratic coach", "case-to-roleplay"), with document grounding and source citation requirements
- **Inclusion & Accessibility:** Ensure language simplification options, multimodal alternatives, and bias checks in prompts and datasets

6.8.2 Adaptive Learning Pathways

- Apply GenAI to design customized learning journeys personalized to individual roles, skills, and development goals (University of Phoenix, 2025).
- Enable folding real-time learner data and feedback into design through AI-driven adaptive algorithms (LinkedIn Learning, 2024).

6.8.3 Curriculum and Ethical Design

- Ensure learning content design incorporates ethical guidelines—bias mitigation, diversity, and inclusion considerations embedded from the outset (O'Leary, 2023).
- Design roles emphasizing human-AI collaboration, with instruction on responsible AI use and learner agency

  Stage-gate output. *Design Dossier*: storyboards, assessment blueprint, prompt library, inclusion criteria, and human-in-the-loop checkpoints

6.9 Phase 3: Develop—Content Creation, Curation, and Capability Building

The Development phase of the ADDIE model involves the creation of instructional materials, learning assets, and assessment instruments aligned with the instructional strategy and learning objectives defined during the Design phase. The integration of Generative AI (GenAI) into this stage significantly enhances the efficiency, personalization, and scalability of content production.

Instructional designers can leverage AI-powered tools to generate high-quality, contextually relevant learning materials tailored to specific pedagogical goals. These tools enable the creation of content that is responsive to individual learner profiles, preferences, and performance data, thereby facilitating highly personalized learning experiences. For example, platforms such as ChatGPT can assist in drafting lesson plans, instructional narratives, and formative assessments, while tools like DALL·E 2 and Midjourney can produce custom visual assets that enhance learner engagement.

In addition to content generation, GenAI supports the development of adaptive assessment instruments. AI algorithms can generate questions and tasks that align with specific learning outcomes, analyze learner responses, and recommend modifications to assessment formats based on performance trends. This dynamic capability ensures that assessments remain valid, reliable, and responsive to learner needs.

Furthermore, instructional designers and learning leaders can utilize a suite of GenAI tools to enrich multimedia content. Synthesia enables the creation of AI-generated talking head videos for instructional delivery; Murf.ai and Play.ht offer realistic voiceovers for audio-based learning; and Beautiful.ai facilitates the rapid development of visually compelling presentations. The use of these tools not only

accelerates the development cycle but also ensures consistency and quality across diverse learning modalities.

By embedding GenAI into the Development phase, instructional designers can produce scalable, learner-centric content that meets the evolving demands of modern education and workforce development.

6.9.1 AI-Enabled Content Generation and Curation

GenAI enhances content creation and authoring by providing the ability to take various forms of input, such as PowerPoint files, documents, blogs, and training recordings, and converting them into more engaging formats. With GenAI, content can be transformed into simple videos, real-like videos for platforms like Instagram, and classic courseware. This technology democratizes authoring by allowing anyone to create content, including SMEs and learners. By leveraging GenAI, content creation becomes more efficient, dynamic, and appealing to the target audience, particularly millennials. Some of the other benefits and leverage to be gained are:

- Leverage GenAI to rapidly generate, translate, and continuously update training materials, simulations, assessments, and microlearning modules – dramatically accelerating development cycles (Sharma et al., 2023).
- L&D practitioners shift focus to curation, validation, and enrichment of AI-generated assets, ensuring pedagogical soundness and context relevance
- Building Simulation Assets - Generate branching dialogues and scenarios; calibrate difficulty to role/proficiency
- Discovery and Personalization in GenAI improves content discovery and personalization for learners in several ways. Firstly, GenAI can enhance the search

experience by providing more relevant and accurate search results. With the help of large language models, GenAI can understand the intent behind a learner's search query and provide highly relevant content suggestions. This ensures that learners spend less time searching for relevant content and can quickly find the information they need.

- GenAI can summarize and extract key information from large amounts of content. This capability is particularly useful when learners are faced with lengthy recordings or videos. GenAI can automatically summarize these materials, making it easier for learners to grasp the main points without having to watch or read the entire content.

6.10 Implementation Phase: Intelligent Delivery and Learner Support through GenAI

The Implementation phase of the ADDIE model involves the execution of the instructional plan, including the delivery of learning content, facilitation of learner engagement, and provision of instructional support. The integration of Generative AI (GenAI) into this phase introduces transformative capabilities that enhance the scalability, responsiveness, and personalization of learning delivery.

GenAI-powered platforms enable the deployment of intelligent learning environments that adapt dynamically to learner behavior and performance. AI-driven chatbots and virtual assistants, such as ChatGPT, can provide real-time support by answering learner queries, offering contextual guidance, and delivering motivational prompts. These tools function as scalable instructional aides, ensuring that learners receive timely assistance regardless of geographic or temporal constraints.

Moreover, GenAI facilitates personalized content delivery by adjusting instructional materials based on individual learner profiles. This includes modifying the pace, complexity, and modality of content presentation to suit diverse learning preferences and cognitive styles. For instance, AI algorithms can recommend supplementary resources, adjust learning pathways, and trigger formative assessments based on learner progress, thereby fostering a more adaptive and inclusive learning experience.

Instructors and learning leaders can also leverage GenAI to monitor learner engagement and performance in real time. Through predictive analytics and sentiment analysis, AI systems can identify learners at risk of disengagement or underperformance and prompt timely interventions. This proactive approach enhances learner retention and supports continuous improvement in instructional delivery.

By embedding GenAI into the Implementation phase, organizations can achieve a more agile, learner-centric approach to education and training—one that is responsive to individual needs and scalable across diverse learning contexts.

6.10.1 Blended Human-AI Learning Delivery

- Integrate GenAI-powered chatbots and virtual mentors with traditional instructor-led training to maximize accessibility, engagement, and responsiveness (KPMG, 2024).
- Provide learners with just-in-time resources, contextual prompts, and AI-facilitated peer collaboration platforms (Deloitte, 2024).

6.10.2 Change Management and Leadership Enablement

- Use AI to monitor and analyze adoption barriers in real time, allowing agile adjustment of implementation strategies (McKinsey, 2025).

- Leadership communications and GenAI “champion” programs are vital for shaping positive subjective norms and reducing resistance

6.10.3 Channel Integration.

- Deliver in the flow of work (e.g., LMS/LXP, collaboration tools, CRM/IDE plug-ins); ensure SSO and role-aware personalization

6.10.4 Train-the-Trainer and Coach Enablement. Co-facilitate with AI coachbots; provide escalation protocols when AI defers to human experts.

Stage-gate output. *Implementation Playbook*: channel map, communications kit, champion network, T3 materials, and support model.

6.11 Evaluation (Evidence, Decisions, and Continuous Improvement)

The Evaluation phase of the ADDIE model is essential for determining the effectiveness, relevance, and impact of instructional interventions. It encompasses both formative and summative assessments, learner feedback analysis, and iterative refinement of instructional materials. The integration of Generative AI (GenAI) into this phase introduces advanced capabilities for data synthesis, performance diagnostics, and predictive analytics, thereby enabling a more rigorous and responsive evaluation process.

GenAI tools can automate the collection and analysis of learner data across multiple dimensions, including engagement metrics, assessment outcomes, behavioral patterns, and sentiment analysis. These tools facilitate the generation of comprehensive evaluation reports that highlight instructional strengths, identify content gaps, and suggest targeted improvements. For instance, AI algorithms can detect trends in learner performance and correlate them with instructional design elements, offering actionable insights for course optimization.

Moreover, GenAI supports adaptive evaluation by tailoring feedback mechanisms to individual learner profiles. It can generate personalized feedback based on assessment results, recommend supplementary learning resources, and propose modifications to instructional strategies. This level of granularity enhances the learner experience and promotes continuous improvement in instructional delivery.

Instructional designers and learning leaders can also employ GenAI to simulate future learning scenarios and forecast the potential impact of instructional changes. Predictive modeling enables proactive decision-making and ensures that learning programs remain aligned with evolving organizational goals and learner needs.

By embedding GenAI into the Evaluation phase, organizations can establish a robust, data-driven feedback loop that supports ongoing instructional refinement, enhances learning outcomes, and fosters a culture of evidence-based practice.

6.11.1 Data-Driven Impact Measurement

- Deploy AI-augmented dashboards tracking a portfolio of metrics—learner engagement, skill acquisition, time-to-competency, completion rates, and behavioral change outcomes (INSEAD, 2024).
- Use predictive analytics to correlate learning investments with performance, retention, or productivity gains (LinkedIn Learning, 2024).

6.11.2 Reflective Feedback and Iteration

- Establish continuous feedback loops leveraging learner inputs, performance data, and AI-generated insights for iterative program enhancement.
- Incorporate ethical compliance reviews and bias audits regularly within evaluation cycles for responsible governance (O'Leary, 2023).

Stage-gate output. *Impact Report*: L1–L4+ROI dashboard, AI quality report, and prioritized backlog for iteration

Table 6:11.2 ADDIE Phase and AI augmentation

ADDIE Phase	ADGIE Equivalent & AI Augmentation
Analysis (A)	Analysis (A) remains the foundational phase; AI enhances it by processing large data sets, learner feedback, and performance metrics to generate rich learner personas, needs analysis, and gap identification faster and with more depth.
Design (D)	Design (D) is augmented by AI-supported content structuring, suggesting multiple design options, sequencing content logically, and optimizing pedagogical approaches based on data-driven insights.
Development (D)	Generation (G) replaces or expands Development by leveraging GenAI to automatically draft and create diverse training materials including text, videos, quizzes, and simulations, accelerating content production and reducing manual effort.
Implementation (I)	Individualisation (I) is an AI-powered dynamic implementation phase where learning is personalized in real-time, adapting content difficulty, format, and support to individual learner characteristics and progress.

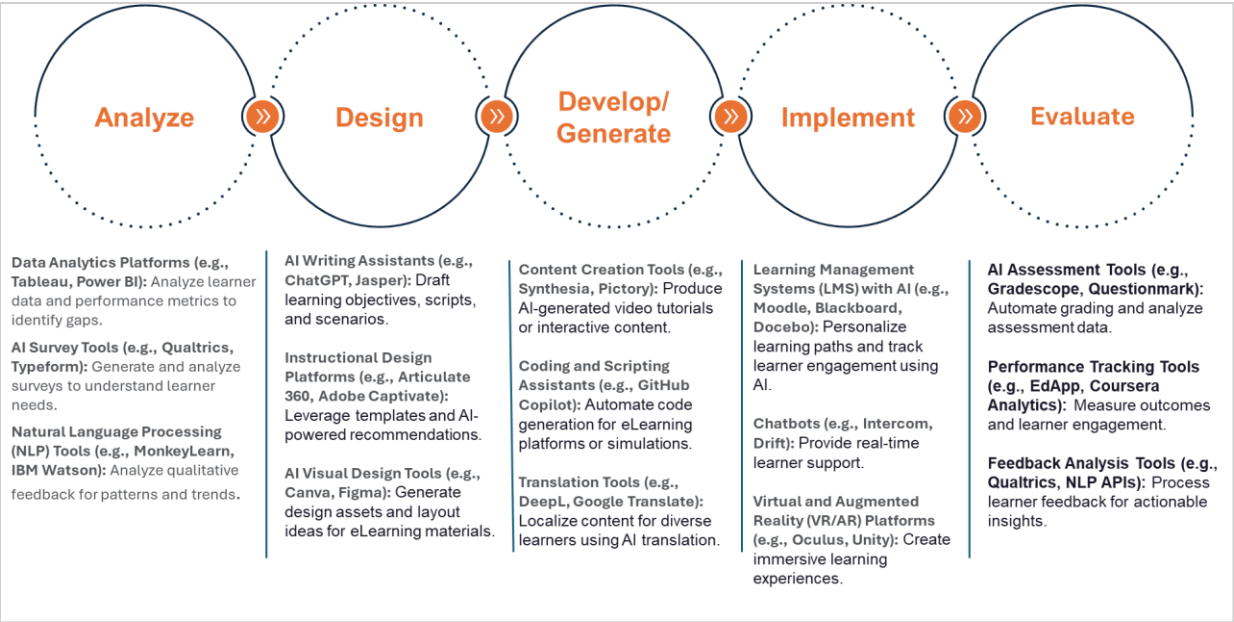
ADDIE Phase	ADGIE Equivalent & AI Augmentation
Evaluation (E)	Evaluation (E) is transformed into continuous, AI-driven formative and summative assessment, providing ongoing predictive analytics, personalized feedback, and iterative course improvements beyond the traditional static evaluation.

To augment each stage of ADDIE or ADGIE there are a lot of GenAI tools and Apps that are available to be used that would enable a learning professional to gain efficiency, quality and a creative assistant.

AI tools can enhance each phase by automating tasks, generating content, and providing insights.

Here's how AI tools can assist at each stage:

Figure 6.11 ADDIE and AI Tools



The GELES framework synthesizes and extends prior learning and innovation models by fully integrating Generative AI across the organizational learning lifecycle. Its emphasis on strategic alignment, human-centered design, ethical governance, and continuous capability building addresses the major challenges and leverages the unique capabilities of GenAI identified in this study.

Successfully implementing this framework will require commitment from leadership, investment in people and infrastructure, and a culture of experimentation anchored in ethical reflection. Organizations that adopt this approach will be positioned at the forefront of workforce development in the Age of Artificial Intelligence, achieving sustainable competitive advantage through highly personalized, agile, and data-driven learning ecosystems.

CHAPTER VII

REIMAGING L&D ROLES, OPERATING MODEL AND ENABLERS FOR GELES

The successful integration of Generative AI (GenAI) into organizational Learning and Development (L&D) depends not only on the technology itself but equally on establishing the right enablers that empower L&D teams to fully leverage AI's transformative potential. This chapter explores the critical enablers required for effective adoption of GenAI in workplace learning ecosystems, focusing on the reimagined operating model of the L&D function, emerging roles within L&D teams, targeted training and upskilling initiatives, and the essential tools and technologies that fuel AI-enhanced learning. Drawing on empirical findings and contemporary literature, this chapter provides a comprehensive view of the organizational, cultural, and technological pillars needed to enable sustainable and strategic GenAI adoption in employee learning.

7.1 Reimagined Operating Model of the L&D Team

The traditional L&D operating model characterized by static course development and delivery is insufficient to keep pace with the dynamic capabilities and demands of GenAI-enabled learning ecosystems (Bersin, 2023). The operating model must evolve into a more agile, data-driven, and collaborative framework that integrates AI tools throughout the learning lifecycle.

A reimagined L&D operating model centers on an **AI-human partnership**, wherein GenAI automates routine tasks such as content generation, assessment creation, and data analytics, freeing L&D professionals to focus on strategic initiatives, learner engagement, and quality control. This model adopts agile workflows characterized by iterative

development, rapid prototyping of AI-powered learning solutions, and continuous feedback loops with learners and stakeholders (McKinsey & Company, 2024).

Design principles. The operating model proposed here rests on five principles: *human-centered*, *use-case led*, *governed and safe*, *data-enabled*, and *iterative/experimental*. These principles reflect adult learning (self-direction, context, practice), sociocultural scaffolding, and technology-adoption dynamics (perceived usefulness, ease of use, norms).

Cross-functional collaboration becomes imperative, with L&D teams partnering closely with IT, HR, data science, and business units to align AI-enabled learning strategies with organizational goals and ensure robust data governance. Moreover, governance mechanisms that oversee ethical AI use, compliance, and learner data privacy are embedded as core operational elements rather than afterthoughts (Deloitte, 2024). Such an operating model fosters responsiveness, scalability, and innovation, positioning L&D as a strategic enabler rather than a transactional service provider.

Operating model canvas.

Table 7.1 summarizes the GenAI-enabled L&D operating model dimensions and what needs to be established:

Key Focus Areas	**What to establish**
Strategy & Governance	A learning AI strategy tied to business outcomes; a Responsible-AI charter; policies on data, safety, copyright
Portfolio & Products	A prioritized portfolio of "learning products" (onboarding, capability academies, leadership, sales enablement) with measurable outcomes

Ways of Working	Cross-functional squads (learning designer, learning engineer, data/analytics, SMEs, IT/security) with Agile cadence
Roles & Talent	New role family (Section 4.3) with role clarity and career architecture
Data & Content	Enterprise learning data model; content & knowledge fabric (policies, product docs, SOPs) ready for retrieval-augmented generation (RAG)
Risk & Compliance	Continuous AI risk assessment, model monitoring, and human-in-the-loop guardrails
Change & Adoption	Role-aware enablement, usage goals in the flow of work, leadership narratives and quick wins

Such an operating model fosters responsiveness, scalability, and innovation, positioning L&D as a strategic enabler rather than a transactional service provider.

7.2 Capability Maturity Model – A five level roadmap

While implementing GELES or adoption of any GenAI framework, start with an early experience and be agile in the process and keep the process iterative to course correct sooner. This will not only train the AI models but also impart valuable learning and lessons for the learning team to implement a full scale GELES in their learning organization.

Table 7.2.1 The five levels of maturity model

Level	**Descriptor**	**What is true**	**Next move**
1. Ad-hoc	Isolated tinkering	Uncoordinated content drafting; no policies	Draft Responsible-AI policy; pick 2–3 use cases; basic L1–L2 measurement.

Level	Descriptor	What is true	Next move
2. Guided Pilots	Structured experiments	Sprint-based pilots; human QA	Establish champion network; build impact measures
3. Programmatic	Multiple programs in flight	Orchestration layer; telemetry; L1–L3 dashboards	Expand knowledge fabric; A/B tests; early ROI studies.
4. Integrated	Embedded in flow of work	Role-aware assistants; model monitoring; L4/ROI	Portfolio governance; continuous evaluation loops; minimize hallucinations.
5. Systemic	AI-ready L&D	adaptive sequencing; training and maturing of models	Scale academies & transform all existing & new learning capabilities thru this new ways of working with GenAI

7.3 New and Reimagined Roles in the L&D Team

Generative AI adoption precipitates a profound transformation in roles and skillsets within L&D teams. The evolving roles surpass traditional instructional design and training administration to include strategic, technical, and advisory dimensions.

To implement GELES in its entirety, L&D teams must transition from delivering courses to orchestrating holistic learning experiences, leveraging GenAI for customization, data feedback, and continuous improvement. New professional identities include:

- **Digital Learning Architect:** Designs, tests, and tunes GenAI-driven learning journeys (LinkedIn Learning, 2024).
- **Strategic Advisor**: Aligns employee development with business outcomes using analytics (McKinsey, 2024).
- **Change Champion and Ethics Advocate:** Drives culture, models responsible for AI use, and stewards governance practices (Lovich & Taylor, 2025).

  "Our ideal L&D professional now thinks in prompts, analytics, and strategic partnership, not just learning theory." (CLO Interview, Chapter IV).

Table 7.3: Traditional vs. Emerging L&D Roles

Traditional Role	Limitations	Emerging Role	Skills Needed
Instructional Designer	Manual, slow content creation	Content Curator/AI Architect	Prompt design, QA, curation
Trainer	Episodic sessions, limited reach	Virtual Coach/Simulation Designer	AI coaching, immersive design
L&D Manager	Reactive to requests	Strategic Partner	Analytics, consulting
L&D Specialist	Compliance focus	Ethics Advocate	AI literacy, governance
Evaluator	Completion/satisfaction only	Data Analyst	Learning analytics, ROI

There is a clear need for redefined roles that underscore a shift toward multi-disciplinary L&D teams with a balanced combination of pedagogical expertise, AI technical skills, data literacy, and change management capabilities. These roles intentionally mirror the *capability academy* (Joh Bersin,2025) paradigm—learning as an ongoing, productized capability integrated with work—now accelerated by GenAI

Table 7.4 illustrates the emerging roles and capabilities within the L&D team to really harness the power of GenAI and copilot together:

Role	**Job description**
AI Learning Strategist	This role focuses on envisioning, planning, and driving the integration of GenAI within learning strategies. The strategist identifies high-impact use cases, aligns AI initiatives with talent priorities, and measures ROI on AI investments
AI Content Curator and Quality Controller	Given GenAI's capacity to rapidly generate content, these professionals curate AI-produced materials to ensure pedagogical soundness, relevance, and compliance with organizational standards (Sharma et al., 2023). Human oversight is critical to maintain content quality and ethical integrity.
Prompt Engineer and AI Specialist	This emerging role involves designing effective prompts and interactions to optimize AI outputs for learning contexts. The

	specialist also evaluates AI model performance, collaborates with technology partners, and troubleshoots usage issues (INSEAD, 2024).
Learning Experience Designer with AI Fluency	Designers now craft personalized, and adaptive learning journeys empowered by AI-driven analytics and content tailoring. Their expertise spans user-centric design and AI literacy to maximize learner engagement and efficacy (Bucher et al., 2024).
Data Analyst and Learning Scientist:	These professionals leverage AI-generated learning data to gain insights into learner behavior, identify skill gaps, and recommend targeted interventions. Their work elevates L&D's strategic contribution through evidence-based decision-making (Deloitte, 2024).
Change Agent and AI Literacy Champion:	Responsible for cultivating an AI-positive culture, this role leads to upskilling initiatives, manages resistance, and promotes responsible AI use across the workforce (LinkedIn Learning, 2024).

These new roles reflect a shift from manual content creation to strategic orchestration of AI-powered learning experiences

7.4 Skilling, upskilling & reskilling of L&D members

The transition to a GELES - GenAI-enabled learning ecosystem necessitates comprehensive training and upskilling across L&D professionals to build AI literacy,

technical proficiency, and ethical awareness. McKinsey (2024) emphasizes a **goals-before-roles** approach, where upskilling is aligned with business outcomes rather than generic AI literacy.

Key upskilling areas include:

- AI Fundamentals and Prompt Engineering
- Data Literacy and Analytics
- Ethical AI Use and Governance
- Human-Centered Design in AI Contexts
- Change Management and Digital Fluency

Learning Leaders should partner with Learning & AI experts and build knowledge and skills and deep dive into the following areas:

- **AI and Generative AI Fundamentals:** Building foundational knowledge on GenAI principles, capabilities, and limitations equips teams to confidently experiment with AI tools and evaluate outputs critically (University of Phoenix Research Team, 2025).
- **Prompt Engineering Skills:** Training on crafting effective AI inputs and interpreting AI responses enhances the utility of GenAI in content creation, coaching simulations, and learner support (Bucher et al., 2024).
- **Data Analytics and Interpretation:** Upskilling in data analytics enables L&D staff to leverage AI-driven dashboards, interpret learning patterns, and deploy evidence-based interventions (INSEAD, 2024).

- **Ethical AI Practices:** Focused training on ethical issues such as bias mitigation, data privacy, intellectual property, and AI transparency ensures responsible adoption aligning with organizational values and compliance requirements (Deloitte, 2024).

- **Change Management and Communication:** Equipping L&D professionals with skills to lead AI adoption, manage resistance, and foster a culture of innovation supports smoother transformation and employee engagement (McKinsey & Company, 2024).

Structured programs combining workshops, hands-on labs, peer learning groups, and certifications have proven effective in building these capacities. Moreover, continuous learning cultures that encourage ongoing exploration and reflection around AI tools are critical for sustained proficiency (LinkedIn Learning, 2024).

7.5 Tools and Technology to Fuel GenAI-Enabled Learning

The effective deployment of GenAI in organizational learning requires a technology ecosystem that integrates AI capabilities seamlessly with existing learning platforms, content repositories, and enterprise systems.

Key technology components include:

- **AI-Enabled Learning Management Systems (LMS):** Modern LMS platforms enhanced with GenAI facilitate adaptive learning paths, automated content generation, and AI-driven learner analytics (KPMG, 2024).

- **Generative AI APIs and Platforms:** Integration of large language models such as GPT, Gemini, or equivalent enables content creation, virtual coaching, simulation, and learner query handling within the enterprise ecosystem (Bommasani et al., 2022).

- **Data Integration and Analytics Tools:** Robust data pipelines that connect HRIS, LMS, performance management, and skill inventories empower comprehensive skill gap analysis and real-time performance tracking (Deloitte, 2024).

- **Collaboration and Communication Tools:** AI-augmented collaboration suites support peer learning, social engagement, and knowledge sharing enhanced by AI mediators (Bucher et al., 2024).

- **Governance and Security Solutions:** Tools providing AI model monitoring, data privacy controls, and audit trails ensure compliance and ethical AI use standards are rigorously maintained (O'Leary, 2023).

- **AI Training Sandboxes:** Controlled environments allow experimentation with GenAI in safe conditions, enabling iterative development and risk management before broader rollout (McKinsey & Company, 2024).

Investments in interoperability, user-friendly interfaces, and transparent AI functionalities increase user adoption and maximize the productivity benefits of GenAI-enabled tools.

Successful GenAI implementation requires a robust technology stack that supports content creation, personalization, delivery, and analytics. Key tools include:

- **ChatGPT, Claude, Gemini**: For conversational learning and content generation.
- **DALL·E 2, Midjourney**: For visual asset creation.
- **Synthesia, Murf.ai, Play.ht**: For video and voice-based learning.
- **Disprz, Docebo, EdCast**: AI-powered learning experience platforms.
- **Beautiful.ai, Canva AI**: For presentation and instructional design.

These tools enable scalable, multimodal learning experiences tailored to individual learner needs.

7.6 Synthesis and Implications

A durable GenAI transformation in learning is *organizational* before it is *technical*. The proposed GELES model, role architecture, skills curriculum, and toolchain—grounded in established learning science and adoption theories—are mutually reinforcing; governance

protects trust; new roles unlock value; data standards make evidence portable; and change mechanics convert intention into sustained behavior. This systemic approach responds directly to the opportunities and barriers outlined in the thesis introduction and literature review. Reimagining the L&D function using the GELES model as an AI-augmented strategic partner, redefining team roles to leverage AI capabilities, implementing comprehensive training programs to build AI fluency and ethical awareness, and deploying integrated GenAI-enabled technology ecosystems are critical imperatives.

CHAPTER VIII

ETHICAL CONSIDERATIONS FOR GENAI AND SUMMARY

Ethical considerations are central to sustainable GenAI integration. Privacy and security demand strong governance and anonymization. Bias and fairness require regular audits and diverse reviewer groups. Accuracy necessitates human-in-the-loop practices to mitigate AI hallucinations. Transparency builds trust, while equity in access ensures no groups are excluded. These considerations reflect Human Society Theory's emphasis on embedding technology within cultural and ethical systems.

The following ethical and practical considerations for sustainable GenAI Integration should be accounted for:

8.1.1 Privacy, Trust, and Compliance

Responsible GenAI integration requires transparent data policies, explicit consent mechanisms, and clear accountability for outcomes (Deloitte, 2024; Chapter IV, Table: Ethical & Governance Readiness).

8.1.2 Bias and Fairness

Interviewees and white papers stress the importance of active bias monitoring, regular audits, and diverse data sets (O'Leary, 2023).

8.1.3 Human Oversight and Maintaining Agency

GenAI should augment—not replace—human judgment and creativity. Human-in-the-loop models ensure auditability and psychological safety (LinkedIn Learning, 2024).

8.1.4 Change Management, Psychological Safety, and Cultural Readiness

Rigorous change management and stakeholder engagement are required to overcome resistance and foster a culture of experimentation and ethical vigilance (Lovich & Taylor, 2025; Chapter IV, Strategic Alignment).

Table 8.1: Ethical and Practical Considerations for GenAI in L&D

Consideration	Risks if ignored	Mitigation Strategies
Privacy & Security	Data breaches, compliance risk	Robust governance, anonymization
Bias & Fairness	Reinforcing stereotypes	Audits, diverse test groups
Accuracy & Reliability	AI hallucinations, errors	Human-in-loop validation
Transparency & Trust	Employee resistance	Communication, ethics training

Equity in Access	Digital divide	Targeted support, alternative formats

8.1.5 Strategic Shifts for Sustainable Integration

To move from pilot projects to enterprise-wide transformation, organizations must enact **strategic shifts**:

- **Vision and Phased Implementation**: Start with targeted pilots, then scale through shared platforms and governance structures.
- **Employee-Centric Design**: Following BCG's principle of "radical employee centricity," design GenAI to augment, not replace, human creativity.
- **Agile Governance**: Establish centralized oversight for compliance, model management, and feedback loops (Deloitte, 2024).
- **Continuous Upskilling**: Invest in GenAI literacy, prompt engineering, and AI ethics to future-proof L&D teams and learners.

These shifts transform GenAI from a set of isolated experiments into a sustainable, enterprise-wide capability. GenAI is poised to overhaul employee learning as both a tool and transformational catalyst. Sustainable impact will depend on deliberate strategy, ethical practice, upskilling, and holistic change management. L&D teams must embrace new professional paradigms, keeping human agency and values at the center of technological advancement.

CHAPTER IX
Summary and Implications

9.1 Summary of Research

This dissertation has explored the transformative potential of Generative Artificial Intelligence (GenAI) in reshaping organizational learning. Building on the rich theoretical frameworks—including Technology Acceptance Model (TAM), Theory of Reasoned Action (TRA), Sociocultural Learning Theory, and Human Society Theory—this research

investigated how GenAI can enhance personalization, scalability, and effectiveness of employee learning within contemporary organizations.

The study conducted an extensive mixed-methods investigation combining quantitative surveys of over 100 senior Learning & Development (L&D) professionals, qualitative interviews with Chief Learning Officers (CLOs), and a comprehensive review of industry whitepapers and reports. The findings reveal that while GenAI adoption in L&D remains nascent and often confined to pilots, its potential to disrupt traditional learning paradigms is significant. Key capabilities identified include automated and adaptive content creation, real-time learner support via AI coaching and chatbots, and advanced learning analytics enabling data-driven talent development decisions.

However, adoption barriers persist, notably skill gaps, ethical and privacy concerns, leadership inertia, and unclear strategic roadmaps. The research introduces the GELES (GenAI-Enabled Learning Ecosystem) framework as a comprehensive model for embedding GenAI in organizational learning, emphasizing strategic alignment, governance, continuous upskilling, human-centered design, and ethical stewardship. The reimagined roles, operating models, and technology tools outlined emphasize the need for L&D functions to evolve from content creators to strategic orchestrators of AI-augmented learning experiences.

9.2 Implications for Theory

This study contributes to academic discourse by integrating established behavioral and sociocultural theories with emerging AI adoption literature in the workplace learning context. It extends TAM and TRA models by demonstrating how perceived usefulness, ease of use, and social norms influence GenAI uptake, while highlighting the limitations

these models face in complex organizational settings, such as non-volitional controls and dynamic attitudes.

The sociocultural perspective underscores GenAI's role as a mediating tool within social learning processes—the "digital more knowledgeable other"—which scaffolds learning in real time and enriches collaborative environments. The Human Society Theory provides critical insight into the ethical and cultural embedding necessary for sustainable AI integration, emphasizing that technology adoption is inseparable from the social and moral fabric of organizations.

Together, these theoretical lenses enable a multidimensional understanding of GenAI's affordances and challenges in organizational learning, bridging micro-level psychological processes and macro-level social system dynamics.

9.3 Implications for Practice

For organizational leaders, Chief Human Resources Officers (CHROs), and CLOs, these findings advocate for a proactive and strategic approach to GenAI adoption:

- Strategic Integration: GenAI should be embedded within a clear learning strategy aligned with business goals, supported by measurable outcomes and governance structures to ensure ethical use and data privacy compliance.
- Capability Building: Investment in continuous upskilling for L&D professionals is essential, focusing not only on AI technical competencies such as prompt engineering and data literacy but also on ethics, change management, and human-centered design.
- Role Reimagination: The L&D function must transition from traditional roles toward AI-augmented strategic partners, content curators, and ethical stewards,

supported by cross-functional collaboration with IT, data science, and business units.

- Human-AI Collaboration: Organizations should adopt blended learning models that combine the scalability and personalization of GenAI with the insight, intuition, and relational skills of human instructors and coaches.
- Change Management and Culture: Cultivating an innovation-friendly and psychologically safe culture is critical to overcome resistance, normalize AI-augmented learning, and harness employee creativity and engagement.
- Technology Ecosystem: Deployment of AI-enabled Learning Management Systems, integrated data platforms, and secure governance tools, complemented by AI training sandboxes for experimentation, is fundamental to scale GenAI-powered learning capabilities sustainably.

9.4 Future Research Directions

Given the rapidly evolving AI landscape, ongoing research is necessary to deepen understanding and optimize application in organizational learning. Future studies may explore:

- Longitudinal Impact Analyses: Evaluating long-term effects of GenAI on learning outcomes, workforce performance, and organizational agility across diverse industry contexts.
- Ethical Frameworks in Practice: Investigating how evolving ethical standards and regulations, such as the EU AI Act, are operationalized within GenAI learning ecosystems.

- Learner Experience and Equity: Examining the differential impacts of GenAI-powered learning on diverse learner populations and strategies to close digital divides.
- AI-Human Interaction Dynamics: Studying the evolving relationship between human L&D professionals and AI agents to identify optimal collaboration and role delineation.
- Implementation Frameworks: Developing scalable, sector-specific GenAI adoption models that balance technological innovation with cultural, organizational, and resource constraints.

9.5 Concluding Remarks

This dissertation positions Generative AI not merely as a tool but as a catalyst for systemic transformation in organizational learning. By harnessing GenAI's unique capabilities within thoughtfully designed strategies, governance models, and human-centered practices, organizations can revolutionize how employees acquire skills, apply knowledge, and contribute to agile, innovative workplaces.

The journey toward a GenAI-augmented learning future demands leadership vision, cross-disciplinary collaboration, ethical vigilance, and a relentless commitment to upskilling and cultural adaptation. As GenAI moves from nascent pilots to embedded ecosystem components, L&D's role must evolve accordingly balancing technology and humanity to unlock the full promise of continuous, personalized, and impactful learning in the digital age.

REFERENCES

Ajzen, I. (2011). *The theory of planned behavior: Reactions and reflections. Psychology & Health.*

Bellary, S., Sarkar, S., & Mishra, A. (2025). *Generative artificial intelligence for management education: Applications, benefits, challenges and future research directions.*

Bommasani, R., Hudson, D. A., Adeli, E., Altman, R., Arora, S., von Arx, S., & Liang, P. (2022). *On the opportunities and risks of foundation models. Stanford Institute for Human-Centered Artificial Intelligence. https://crfm.stanford.edu/report.html*

Branch, R. M. (2009). *Instructional design: The ADDIE approach.*

Braun, V., & Clarke, V. (2006). *Using thematic analysis in psychology. Qualitative Research in Psychology.*

Bucher, E., Schenk, S., Dolata, M., & Schwabe, G. (2024). *When generative AI meets workplace learning: Creating a realistic & motivating learning experience with a generative PCA.*

Castells, M. (2000*). The rise of the network society (2nd ed.)*

Conner, M., & Armitage, C. J. (1998). *Extending the Theory of Planned Behavior: A review and avenues for further research. Journal of Applied Social Psychology. Volume28, Issue15, August 1998, Pages 1429-1464*

Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approach.*

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research.*

Davis, F. D. (1989). *Perceived usefulness, perceived ease of use, and user acceptance of information technology.*

Deloitte. (2023). *The human impact of AI in HR: Charting a new course for talent. Deloitte Insights.*

Deloitte. (2024). *HR technology disruption: State of generative AI in the enterprise. Deloitte Insights.*

Deloitte. (2024b). The disruption of HR technology: How generative AI is transforming talent, learning, and work. Deloitte Insights.

Dwivedi, Y. K., Hughes, D. L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T. & Williams, M. D. (2023). *So, what if ChatGPT wrote it? Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. International Journal of Information Management, Volume 14, page 12 to 17; https://doi.org/10.1016/j.ijinfomgt.2023.102642*

Encouraging multiculturalism and diversity within organizational behavior management. (2020).*Taylor & Francis Online.* https://www.tandfonline.com/doi/full/10.1080/01608061.2020.1832014

Engeström, Y. (1987). *Learning by expanding: An activity-theoretical approach to developmental research.*

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research.*

Fishbein, M., & Ajzen, I. (1980). *Understanding attitudes and predicting social behavior. Prentice Hall.*

Gartner. (2023). *Top strategic technology trends for 2024. Gartner Research.*

George. (2024). *Can AI-powered avatars replace human trainers? An empirical test of synthetic humanlike spokesperson applications. Journal of Workplace Learning. volume 37, issue 9, page 46-53*

Generative AI statistics for 2024. (2024).

Giddens, A. (1984). *The constitution of society: Outline of the theory of structuration.* University of California Press.

Global GenAI Report. (2025). *NTT.*

Green human resource management and sustainable development performance: Organizational ambidexterity and the role of responsible leadership. (2025). *Wiley Online Library. https://onlinelibrary.wiley.com/doi/10.1111/1744-7941.12391*

Huang, M.-H., & Rust, R. T. (2021). *A strategic framework for artificial intelligence in marketing. Journal of the Academy of Marketing Science. Volume 39, page 30 to 42*

IT Revolution. (2025). *GenAI in enterprise learning: Emerging use cases and best practices.*

Kaplan, J., Kehoe, L., & Shukla, P. (2022). *The human impact of AI in HR. Deloitte Insights.* https://www2.deloitte.com

Knowles, M. S. (1980). *The modern practice of adult education: From pedagogy to andragogy.*

KPMG. (2024). *GenAI in HR transformation.* KPMG Insights.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation.* Cambridge University Press.

LinkedIn Learning. (2024). *The future of skills and learning: GenAI adoption in the workforce.* LinkedIn Reports.

Lovich, D., & Taylor, M. (2025). *Radical employee centricity for GenAI.* Boston Consulting Group.

McKinsey & Company. (2023). *The state of AI in 2023: Generative AI's breakout year.* https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/the-state-of-ai-in-2023-generative-ais-breakout-year

McKinsey & Company. (2024). *Implementing AI at scale: People, process, and technology.* McKinsey Digital.

McKinsey & Company. (2025). *AI in the workplace.* McKinsey Digital.

MIT Sloan Management Review. (2024). *Managing GenAI change: The Novo Nordisk case study. MIT Sloan Management Review.*

O'Leary, D. (2023). *GenAI in organizational learning: Ethics, governance, and impact measurement. Journal of Workplace Learning, Volume 35, pages 23–41.*

Organizational behavior and human decision processes. (n.d.). *Semantic Scholar.* https://www.semanticscholar.org/paper/3ff6bd290816f3245c6128ef23f095465ba348a9

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.) *volume 7, pages 43-68*

Russell, S., & Norvig, P. (2021). *Artificial intelligence: A modern approach* (4th ed.). Pearson.

Sharma, R., Patil, K., & Joshi, A. (2023). *Leveraging generative AI to transform corporate learning: Opportunities and implementation frameworks. Journal of Workplace Learning. Volume 65, pages 76-107*

Smith. (2011). *Work, learn & communicate: What, when and why.* Dissertation, University of Twente.

The mediating role of work engagement in the relationship between digital leadership and innovative behavior and organizational agility. (n.d.). *International Journal of Organizational Leadership.* https://ijol.cikd.ca/article_60720.html, volume 13, *pages 1-21*

University of Phoenix. (2025). *Generative AI report: Learning fuels human + AI collaboration.* https://www.phoenix.edu

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). *User acceptance of information technology: Toward a unified view. MIS Quarterly, 27*(3), 425–478.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Harvard University Press.

When morality matters: Impact of socially responsible human resource management on unethical behavior. (2025). *Wiley Online Library.* https://onlinelibrary.wiley.com/doi/10.1111/1744-7941.12415

World Economic Forum. (2023). *The future of jobs report 2023.* https://www.weforum.org/reports/the-future-of-jobs-report-2023

APPENDIX A

SURVEY QUESTIONNAIRE

Section 1: Respondent Profile

1.Job Title:

- [Open-ended]

2.Years of Experience in L&D:

- 0-2 years
- 3-5 years
- 6-10 years
- 10+ years

3. Industry:

- [Open-ended]

4. Size of Organization:

- 1-50 employees
- 51-200 employees
- 201-500 employees
- 501-1000 employees
- 1001+ employees

Section 2: Current State of GenAI Adoption

5.What best describes the current state of GenAI adoption in your L&D team?

- No adoption or exploration
- Early exploration of potential use cases

- Limited pilot projects in specific areas
- Active implementation in multiple areas
- Fully integrated into L&D strategy

6. If GenAI has been adopted, in which areas is it primarily being used? (Select all that apply)
   - Content creation (e.g., training materials, quizzes)
   - Personalized learning experiences
   - Virtual coaching and support
   - Data analytics for learning insights
   - Employee performance assessments
   - Knowledge management
   - Other (please specify): [Open-ended]

7. How would you rate the impact of GenAI on your current L&D programs?
   - Very positive
   - Somewhat positive
   - Neutral
   - Somewhat negative
   - Very negative
   - Not applicable (GenAI not yet used)

8. Please provide examples or specific outcomes observed with GenAI implementation (if any).
   - [Open-ended]

Section 3: Perceived Barriers to GenAI Adoption

9.What are the primary barriers your team faces in adopting GenAI? (Select all that apply)

- Lack of knowledge or expertise
- Insufficient budget/resources
- Limited technology infrastructure
- Privacy and ethical concerns
- Resistance to change among employees
- Difficulty in identifying relevant use cases
- Other (please specify): [Open-ended]

10. On a scale of 1-5, how significant are these barriers in your organization?

- 1 (Not significant) to 5 (Very significant)

11. Please elaborate on any specific challenges you have encountered when considering or implementing GenAI.

- [Open-ended]

Section 4: Readiness Levels for GenAI Integration

12. How prepared do you feel your L&D team is to integrate GenAI into your learning programs?

- Very prepared
- Somewhat prepared
- Neutral
- Somewhat unprepared
- Very unprepared

13. Which of the following areas do you feel your team needs additional support or development to effectively adopt GenAI? (Select all that apply)

- Technical skills and knowledge
- Access to data and analytics tools
- Strategic planning for GenAI use

- Ethical and data privacy training
- Change management and leadership support
- Budget and resource allocation
- Other (please specify): [Open-ended]

14. What types of training or resources would be most helpful for your team to advance in GenAI integration?

- [Open-ended]

Section 5: Key Performance Metrics and Outcomes

15. If you are currently using GenAI, what metrics are you using to evaluate its impact on L&D outcomes? (Select all that apply)

- Employee engagement in learning programs
- Completion rates for training modules
- Improvement in skill assessment scores
- Reduction in training development time
- Cost savings in content creation
- Learner feedback/satisfaction
- Other (please specify): [Open-ended]
- Not applicable (GenAI not currently used)

16. How has the use of GenAI influenced learner engagement and retention in your organization?

- Very positive impact
- Somewhat positive impact
- Neutral
- Somewhat negative impact
- Very negative impact

- Not applicable

17. Describe any notable changes in learning outcomes or program effectiveness since implementing GenAI (if applicable).

- [Open-ended]

Section 6: Future Perspectives and Open Feedback

18.What are the top three benefits you hope to achieve by integrating GenAI into your L&D programs?

- [Open-ended]

19. In your opinion, what would be the most effective approach to building a GenAI-driven L&D strategy?

- [Open-ended]

20. Do you have any additional thoughts, suggestions, or concerns about the future of GenAI in L&D?

- [Open-ended]

APPENDIX B

Interview Guide: Exploring Generative AI (GenAI) Adoption in Learning & Development

Introduction

- Brief introduction to the interview purpose: to understand how GenAI is transforming workplace learning through the experiences of senior learning leaders.
- Confidentiality and consent statement.
- Approximate duration: 45–60 minutes.

Q1. Please describe your current role and main responsibilities related to Learning & Development.How involved are you in technology adoption and digital transformation initiatives?

Q2. What is the current stage of GenAI adoption in your organization's L&D function ? Are you in the exploration, pilot, scaling, or full integration phase? What influenced your organization's pace of adoption?

Q3. Is there a written GenAI strategy or roadmap?How do GenAI initiatives align with business goals?

Q4. Which GenAI tools or platforms are currently in use or being evaluated?Are these internal solutions, third-party platforms, or a mix?

Q5. What are the key use cases of GenAI in your L&D function? Could you share specific examples or success stories?

Q6. How has GenAI helped improve the development or delivery of learning content?Has it impacted the speed, quality, or relevance of content?

Q7. How are learning pathways adapted for different roles or skill levels?

Q8. What primary challenges has your team faced in adopting GenAI for learning?Technical skills gaps? Ethical or privacy concerns? Budget or resources?

Q9. Have you encountered resistance from learners or trainers?What were the main concerns?How has resistance been addressed?

Q10. What factors have most facilitated GenAI adoption in your L&D function? Leadership sponsorship, training programs, pilot successes?

Q11. What kind of upskilling or capability building have you implemented for your teams?

Q12. How do you approach change management related to introducing GenAI? What Strategies were created to build acceptance and reduce fear?

Q13. What tangible impacts have you observed from GenAI use in learning? did you see any improvements in learner engagement, content quality, speed?

Q14. How do you measure the effectiveness or ROI of GenAI-powered learning programs?What Metrics are being tracked (completion rates, performance improvement, cost savings)? What bottlenecks and challenges did you face while measurement?