EDMONDSON'S TAXONOMY

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Abstract

Edmondson's Taxonomy for AI Adoption Provides Individuals A Blueprint to Support the New Frontier of Work: Collaboration Between Humans and Technology

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Introduction

In today's volatile, uncertain, complex, and ambiguous (VUCA) global marketplace, organizations must navigate rapid technological advancements, shifting economic landscapes, and evolving consumer expectations. Edmondson's Taxonomy of AI Adoption provides a structured, progressive framework that enables organizations to integrate artificial intelligence effectively, ensuring both short-term operational efficiency and long-term strategic growth. By moving from fundamental awareness to leadership-driven visionary thinking, this model ensures that AI adoption is not just a technical upgrade but a transformational shift. With AI influencing decision-making, automation, and innovation, organizations that follow this taxonomy can position themselves to develop the necessary competencies to remain competitive, adaptive, and forward-thinking in an era where agility and strategic execution are paramount.

As identified in the *LinkedIn Learning Future of Work Report* published in January 2025, the activation of "a strong culture of learning around both technical and uniquely human skills" remains the strategic imperative for organizations interested in having a sustainable future. Navigating the ongoing waves of uncertainty requires leaders support upskilling initiatives in order to help both themselves and their employees to acquire a broader array of skills and to do so on an ongoing basis. This in and of itself serves as a competitive advantage for professionals and organizations. The Conference Board noted this necessity in an April 15, 2024 article when it explained how organizations need to future-proof their workforce for the AI era by expanding training opportunities, leveraging business guidance, and promoting stackable credentials to

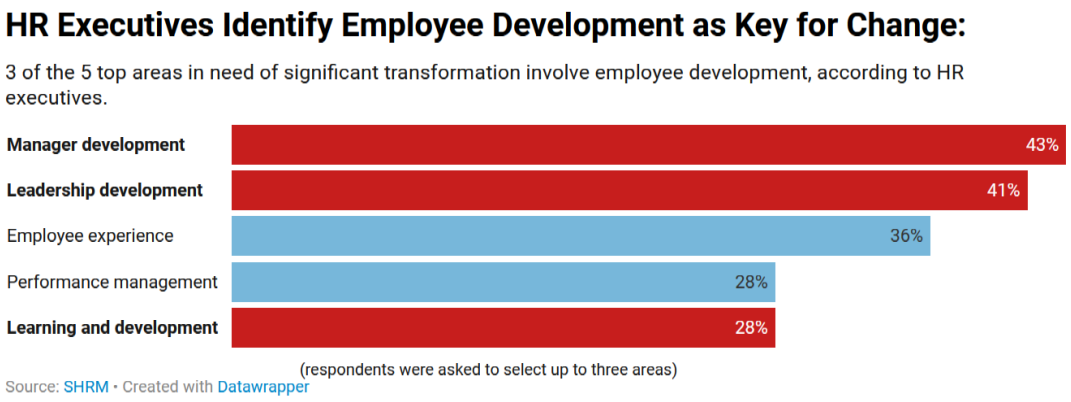
prioritize future-focused upskilling. Edmondson's Taxonomy of AI Adoption serves as a blueprint for any organization, regardless of size, industry, or location that is future-focused and dedicated to ensuring a sustainable path forward.

Level 1: Awareness & Recognition

- At the foundational level of AI adoption, organizations focus on raising awareness of AI's potential benefits and limitations. This involves ensuring that all employees recognize the strategic importance of AI and understand its basic applications within their field. By fostering this awareness, organizations lay the groundwork for cultivating an AI-aware culture, which is essential for seamless integration and future advancements of AI and related disruptive technological innovations.

Supporting References:

- A January 23, 2024 report by the World Economic Forum noted for those employees currently using AI, they need adequate training to ensure effective and responsible use. This need for employee development is further supported by the SHRM graph below.
- A January 28, 2025 McKinsey report "Superagency in the workplace: Empowering people to unlock AI's full potential," revealed while nearly all companies are investing in AI, only 1% consider themselves "mature" in AI deployment, indicating a significant gap in employee readiness and the need for comprehensive AI education to achieve seamless integration.



Level 2: Application & Basic Usage

- At this stage of AI adoption, organizations focus on the practical application of AI technologies to improve operational efficiency. This includes deploying AI tools for routine processes, such as customer service automation or data entry, to streamline workflows and reduce manual effort. The primary goal is to enhance productivity through AI-driven solutions without requiring employees to have deep technical expertise, allowing for seamless integration into existing operations.

Supporting References:

- An October 10, 2024 Accenture report entitled "New Accenture Research Finds that Companies with AI-Led Processes Outperform Peers," noted 74% of organizations have observed their investments in generative AI and automation have met or exceeded expectations.
- A 2024 collaborative report published by the World Economic Forum and PwC highlighted that companies are increasingly integrating AI to augment jobs and enhance workforce productivity. The report provides a practical guide drawn from the experiences of over 20 'early adopters' who have been implementing generative AI into their operations since late 2022.

Level 3: Analysis & Critical Evaluation

At this level of AI adoption, organizations focus on analyzing data produced by AI systems and critically evaluating outcomes to ensure the effectiveness of their strategies. This involves scrutinizing AI models for accuracy, identifying potential biases, and making data-driven decisions that align with broader strategic goals. By developing a deeper understanding of AI-generated insights, organizations can refine their approaches, optimize performance, and ensure responsible and ethical AI implementation.

Supporting References:

- In "The state of AI in early 2024" report, McKinsey found 65% of respondents' organizations are regularly using generative AI, nearly double the percentage from the previous survey ten months prior. However, less than half are mitigating risks such as inaccuracy, underscoring the need for critical evaluation of AI outputs to ensure accuracy and alignment with strategic goals.
- **In** "AI governance trends: How regulation, collaboration, and skills can mitigate risks" (2024) the World Economic Forum discussed leaders' concerns about AI risks, including bias, safety, security, and reputational loss. It emphasizes the importance of

assessing and addressing these risks to maintain trust and ensure responsible AI implementation.

Level 4: Synthesis & Creative Problem-Solving

At this level of AI adoption, organizations integrate AI solutions to creatively solve complex problems and synthesize data from various sources for more informed decision-making. This involves leveraging AI to generate new insights, optimize workflows, and develop innovative products or services. By harnessing AI's analytical and predictive capabilities, organizations can drive innovation, enhance operational efficiency, and maintain a competitive edge in an increasingly data-driven marketplace.

Supporting References:

- In her article "Aligning Learning and Development with Evolving Workforce Needs," SHRM, February 24, 2025, Olivia Gebreamlak noted "The effectiveness of learning and development varies across industries, as each sector navigates unique challenges and drivers of change that shape its training needs and priorities." For example, "service industries must adapt to evolving customer expectations, with the increasing demand for personalized experiences driving shifts in service-oriented AI projects, such as cashier-less solutions."

Level 5: Adaptation & Strategic Implementation

At this level of AI adoption, organizations emphasize the ability to adapt AI strategies to evolving business environments and ensure their effective implementation across departments. This requires agility in leveraging AI technologies to address emerging challenges, optimize processes, and maintain a competitive advantage. By continuously refining AI-driven strategies, organizations can enhance efficiency, foster innovation, and respond proactively to shifts in market dynamics and operational demands.

Supporting References:

- In the article "Synergizing AI and business: Maximizing innovation, creativity, decision precision, and operational efficiency in high-tech enterprises," published in the *Journal of Open Innovation: Technology, Market, and Complexity*, September 2024 by Muhammad Ali and others, the researchers concluded "AI adoption significantly enhances organizational capabilities in terms of employees' innovation, creativity, and experimentation. Moreover, AI adaptation positively impacts decision making thus yielding more accurate and timely valuable decisions."

Level 6: Leadership & Visionary Thinking

At the highest level of AI adoption, organizations focus on developing a strategic vision for their AI initiatives, positioning AI as a core driver of long-term innovation and growth. Leaders at this stage leverage AI to shape the organization's direction, anticipate future challenges, and create sustainable competitive advantages. This level involves fostering a culture that embraces AI-driven transformation, ensuring that AI is integrated into decision-making, operational strategy, and business evolution to future-proof the organization in an increasingly digital world.

Supporting References:

- In their 2019 *Harvard Business Review* article "Building the AI-Powered Organization: Technology isn't the biggest challenge, culture is," authors Tim Fountaine, Brian McCarthy and Tamim Saleh emphasized the necessity for leaders to develop a strategic vision for AI, ensuring it is a core driver of long-term innovation and growth when they wrote, "Leaders have to provide a vision that rallies everyone around a common goal. Workers must understand why AI is important to the business and how they'll fit into a new, AI-oriented culture. In particular, they need reassurance that AI will enhance rather than diminish or even eliminate their roles."

Conclusion

In a May 8, 2024 article "Companies Cannot Afford to Lag Behind on Implementing AI" published for The Conference Board, Meenakshi Janardhanan identified fear of job displacement, resistance to change, and entrenched workflows as three threats to an organization's experimentation and adoption of AI. Additionally, Janardhanan also wrote, "misunderstandings by leaders around what AI can and cannot accomplish can be a roadblock to integration and finding the right use cases. Along with investing in AI, companies need to invest in AI learning and effective change management to avoid pushback to the rapid pace of innovation we are experiencing."

As one of the many services offered by NJIT's Learning and Development Initiative (LDI), Edmondson's Taxonomy for AI Adoption can help an organization avoid these three threats and misunderstandings. At the LDI, we begin with answering the question 'why do we do what we do?' The short answer is because in a world of constant change, disruptive technological advancements, and a high degree of uncertainty, people deserve a chance to connect to the skills and knowledge they need to succeed. The LDI provides various opportunities for people to learn via a portfolio of non-degree credentials (NDCs) consisting of courses, programs, events, custom training, and learning and development services such as Edmondson's Taxonomy.