

Mind the Learning Gap: The Missing Link in AI's Productivity Promise

Unlocking the multi-trillion dollar productivity prize demands learning and augmentation, together.

Making people better at what they do is the real prize of AI

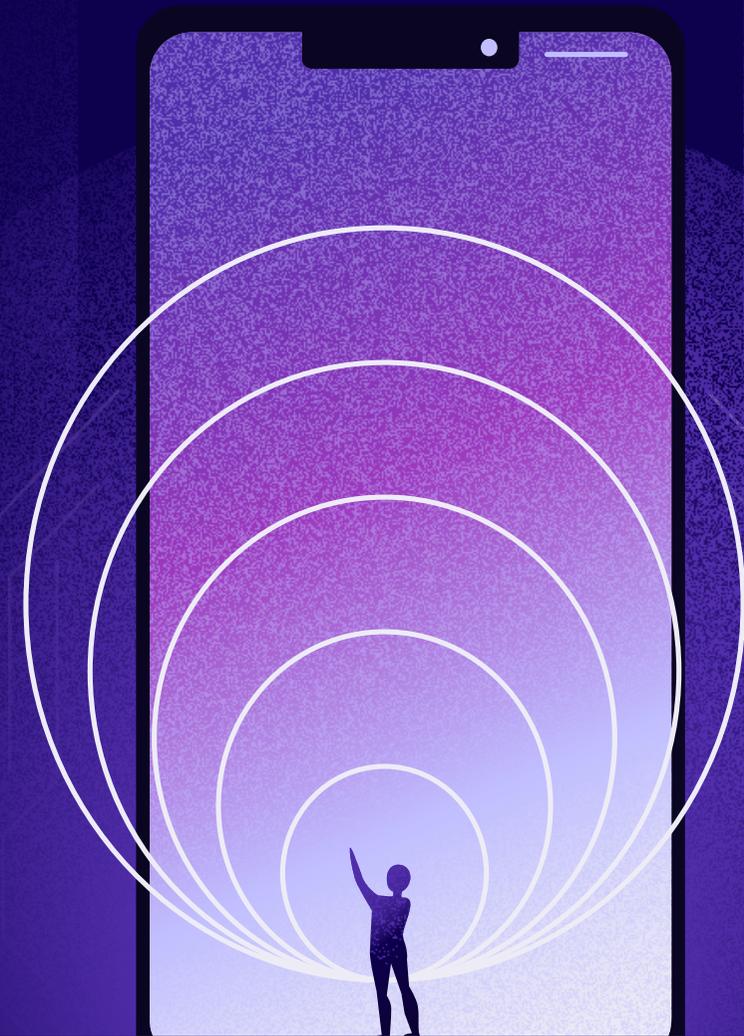
Knowledge work is undergoing a fundamental shake-up as AI technologies transform daily tasks, habits and expectations, leaving a mixture of excitement and uncertainty in their wake. One thing is certain: Future growth depends on a collaboration between AI and knowledge workers. The great promise of productivity from AI investment lies in enhancing human potential: making people better at what they do with the aid of machine technology. The real path to sustainable productivity gains is not about replacing people through automation, it is about building on, accelerating, and augmenting human knowledge, expertise, and experience.

Our detailed modeling of over 300 knowledge-intensive occupations in the US shows that, under a range of scenarios, AI-powered worker augmentation could add between US\$4.8 trillion and US\$6.6 trillion to the US economy by 2034. That represents, at the lower end of the range, about 15 percent of its current size. Yet, this prize is contingent on organizations closing the critical "learning gap", the distance between workforce readiness and what AI makes possible. Learning is the missing link between AI promise and performance.

Knowledge workers and AI systems learning together, in the flow of work

Effective AI augmentation requires organizations to invert the traditional technology-reskilling paradigm. Instead of technology investments coming first and worker reskilling trailing later, knowledge workers and new AI systems must learn together in lockstep from the start. Imagine a worker performing a particular task aided by AI: the system maintains a continuously updating model of what the worker knows and can do, allowing AI assistance to occur in context, relevant to the activity at hand, and personalized to the worker—not as separate training modules or generic advice.

Rather than interrupting the workflow, the system can provide just-in-time explanations, reminders of previously learned frameworks, and comparative examples drawn from the worker's own past decisions. Each interaction feeds back into the system, informing how it will support other workers in a similar situation. As AI agents free up worker time, the locus of knowledge work will swing decisively towards new tasks requiring critical thinking, discernment, and creativity.



How can organizations start to make this new learning paradigm a reality?

Our D.E.E.P. learning framework—Diagnose, Embed, Evaluate, and Prioritize—provides a detailed guide to unlocking AI productivity:

Diagnose:

Define your task augmentation plan

Defining an AI augmentation strategy involves multiple steps and phases of work as AI is introduced into the system. The focus ultimately is on understanding the current workforce: the processes they work within, the roles they hold, the tasks they perform, and the skills they apply; and how all of these need to change in light of generative and agentic AI. The evolution of tasks, and the roles that tasks add up to, sit at the heart of the transformation.

To begin, organizations need to conduct task-based analysis, led by the efforts of “AI expert enthusiasts”. These are the experienced knowledge workers who are most inclined to experiment, fail, try creative solutions, and pinpoint the use-cases where AI can be used most effectively. These enthusiasts in turn can participate in cross-functional groups that bring together technologists, operations managers and Learning and Development (L&D) professionals—who collaboratively design and roll out proven use-cases and training for successful augmentation across the workforce.

This task-based approach requires a blend of top-down strategic and operational guidance with bottom-up experimentation and discovery by the front-line knowledge workers themselves.

Embed:

Instill effective learning in the flow of work

Continuous learning must be embedded into the fabric of every role. This requires leadership to develop and nurture a culture that embraces learning as an organizational value and fosters informal learning and knowledge-sharing between employees.

Finding time to learn at work is a key challenge, but with AI, learning can become integrated into everyday workflows. Rather than pulling employees out of work to learn, AI allows learning to happen in the moment, personalized to the experience and performance of the individual employee. Even effective feedback can be scaled with the help of AI: employees can receive individualized feedback that is relevant, actionable, and based on holistic data gathered from across a wide range of work activities.

In an environment where tools evolve rapidly, tasks shift dynamically, and roles continuously change, the decisive advantage belongs to workers who understand how they learn, how they adapt, and how to work effectively in partnership with AI. Consequently, “Learning to Learn” becomes an essential capability across the workforce, as well as other durable human skills, such as teamwork, social intelligence and creative problem solving.

Evaluate:

Measure progress toward an AI-augmented workforce

The shift to an AI-powered workforce—where human and machine specialists continually evolve and intermesh—demands a more finely-grained understanding of worker skillsets. Measuring and tracking the evolution in the supply and demand of skills is crucial to ensure that workforce adaptation is always aligned with the business strategy. Organizations often collect a lot of data on their people but struggle to access it and create personalized insights from it. This changes in the AI era through technologies such as data fabrics, which use AI capabilities to extract and analyze the data in its existing location without moving it around. In fact, AI itself can play a pivotal role in measuring and guiding our progress toward the augmented workforce.

AI technology can do much more than data gathering. It can upend traditional approaches to skills assessment. Ambient assessment uses AI to infer the skills that workers possess from their behavior, work artifacts, and actions, enabling a more organic approach to skills measurement.

AI technology also offers the transformative prospect of almost-continuous assessment. This supports organizations as well as employees by creating a powerful feedback loop: Learn, improve, measure, and repeat.

Prioritize:

Position learning as a strategic investment

AI is catalyzing a profound rethinking of the role of L&D from content distributors to “curators of capability.” L&D is responsible for developing the ability to map, measure, and maintain visibility into the changing skills of the workforce. Organizations should no longer structure their workforce and learning plans around static roles but rather on skills, which act as more reliable building blocks that can be moved across shifting job requirements.

A focus on skills requires building a measurable and trackable skills ecosystem, allowing organizations to assess progress, match people to opportunities, and personalize development, which supports the reprioritization of investments. Employees sit at the heart of this transformation, and their enthusiastic participation must inform these investment decisions. A fundamental starting point is to realign incentives and structures to motivate knowledge workers to learn and grow in this new environment.

There is no question that AI augmentation is immensely complex and unpredictable, demanding time and the balancing of investments. In fact, it implies a continual process of prioritization and reprioritization, as leaders, workers and AI agents iteratively define new, better paths to achieving organizational goals.

Charting a path to the augmented future

The path to unlocking the economic prize of AI is not a race against machines, but a race to augment human capacity. The true promise of AI is unleashing human potential. At Pearson, we believe that investing in learning and fostering a partnership between people and technology unlocks new levels of productivity, wellbeing, and opportunity for all.

Success requires decisive leadership and active learning from experience. Leaders must be willing to make the sustained, human-centered investments that the augmented future demands. As AI adoption accelerates, leaders must frame upskilling as empowerment; they must build trust and motivate employees to embrace new workplace roles.

To truly realize the transformative potential of AI, organizations must close the 'learning gap' by ensuring that skill-building and technological advancement progress hand in hand. Empowering individuals to adapt and grow alongside intelligent systems

is not just beneficial; it is essential for thriving in an AI-augmented world. This ongoing commitment to learning is the foundation upon which the full value of AI can be achieved.

AI augmentation is, at its core, a test of organizational imagination. Used narrowly, it can compress costs but hollow out capability. Used wisely, it can become a multiplier of human judgment, creativity, and human potential. The reward is profound: boosting productivity, realizing AI's vast economic potential, and enabling meaningful work that enhances lives globally.



Close the learning gap with us.
Read the report:
[Pearson.com/ai-learning-gap](https://www.pearson.com/ai-learning-gap)



This report is just the beginning. Our future depends on how we invest in people and learning, making human development the foundation of progress. Together, we can close the learning gap and place learning at the heart of productivity, innovation, and wellbeing.

Connect with us at efficacy@pearson.com