

For Every Future

Preparing Early-Career Skilled Trade, Technical and Service Talent for an AI-Infused World

Much of the AI conversation has focused on office work. But AI is reshaping skilled trade, technical and service roles, changing tasks, workflows and expectations of competence. As AI becomes embedded in day-to-day work, judgment, safety and human oversight become even more valuable.

Demand is rising as expertise walks out the door

The challenge is not simply filling jobs. It is building expertise faster and transferring practical know-how to the next generation.

United States

98.5%

of annual openings in US skilled trade, technical and service occupations are driven by replacement demand.

(14.1M of 14.3M annual openings are replacement hires).

United Kingdom

99%

of skilled job openings in the UK stem from replacing workers who retire, change careers or leave the workforce.

(4M+ openings over the decade are replacement hires).

China

130 Million

additional skilled trade, technical and service jobs projected in China by 2035.

(from 347M to 477M).



The triple capability gap

As AI reshapes skilled work, early-career workers must build three capabilities at once:



Role-specific AI literacy & critical judgment

Knowing when to use AI, when to question it and how to apply it safely and responsibly.



Human capabilities

Communication, collaboration, adaptability, emotional intelligence and learning agility.



Institutional knowledge & practical know-how

Knowledge developed through mentoring, observation, feedback, simulation and hands-on experience.

Training is not keeping pace

Case study occupations: how AI is reshaping skilled work.

Pharmacy Technicians

The vast majority of early career workers say AI was not explicitly covered in their training.

Skills that remain most valued :

- Patient communication
- Judgment
- Pharmacy foundations

Industrial Machinery Mechanics

Most trainees expect they'll use AI on the job, but less than half felt confident their training was preparing them for AI-augmented work.

Skills that remain most valued:

- Interpersonal skills
- Curiosity and metacognitive agility
- Technical and mechanical knowledge



AI is not replacing skilled workers.

It is reshaping how work is done, how expertise is developed and what workforce readiness looks like in the future.

Building expertise for every future

Closing the triple capability gap requires action now.

Education, training and workplace learning must evolve to build role-specific AI literacy, strengthen human capabilities and accelerate the transfer of practical know-how.



Four priorities for action

1.

Establish trust & responsibility

Define when AI should be trusted, questioned or overridden, and ensure accountability for AI-enabled decisions and outcomes.

2.

Build AI-ready education & training

Design pathways that evolve as fast as the work itself, combining AI literacy, technical capability, human skills and authentic assessment.

3.

Accelerate experience & knowledge transfer

Capture the expertise of retiring workers while helping early-career talent build judgment through mentoring, observation, simulation and hands-on experience.

4.

Strengthen the human advantage

Develop communication, collaboration, adaptability, emotional intelligence and judgment as core workforce capabilities.

What should leaders do next?



Policymakers

Create the conditions for responsible AI adoption and more responsive education and workforce systems.



Industry bodies

Establish shared standards, guidance and best practices that help occupations adapt to AI-enabled work.



Employers

Embed responsible AI, workplace learning, mentoring and continuous capability development into day-to-day work.



Education and training providers

Build AI literacy, technical capability, human skills and practical experience as equal priorities.



**AI is changing skilled work.
The imperative now is
building expertise.**

Read the report:
[Pearson.com/ai-ready-careers](https://www.pearson.com/ai-ready-careers)