

ADULT LEARNING AND THE FUTURE OF WORK

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BIG IDEA

Age-Diverse
Workforce

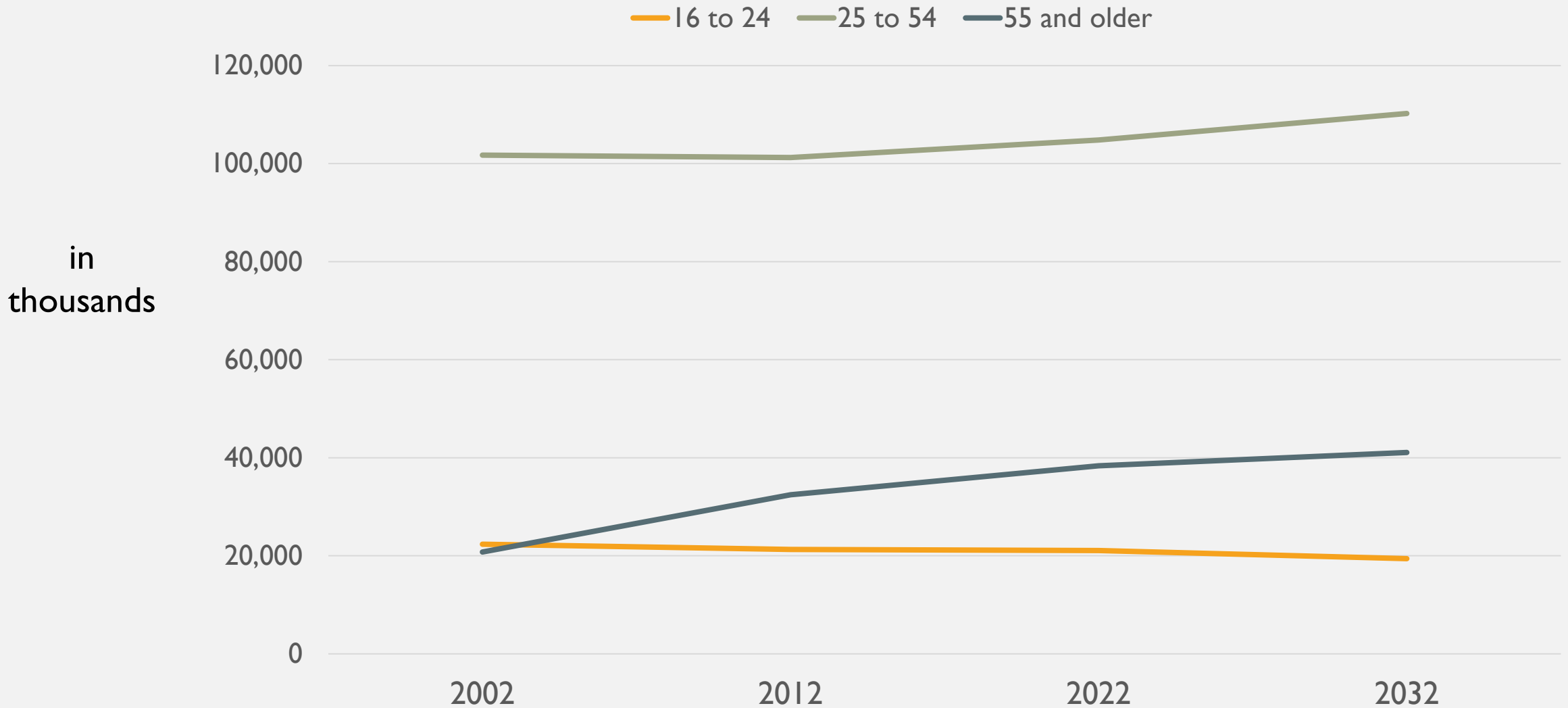
Technology
and
Automation

**Future of
Work**

Reskilling: Gaining skills
for a new role

Upskilling: Enhancing skills
for one's current role

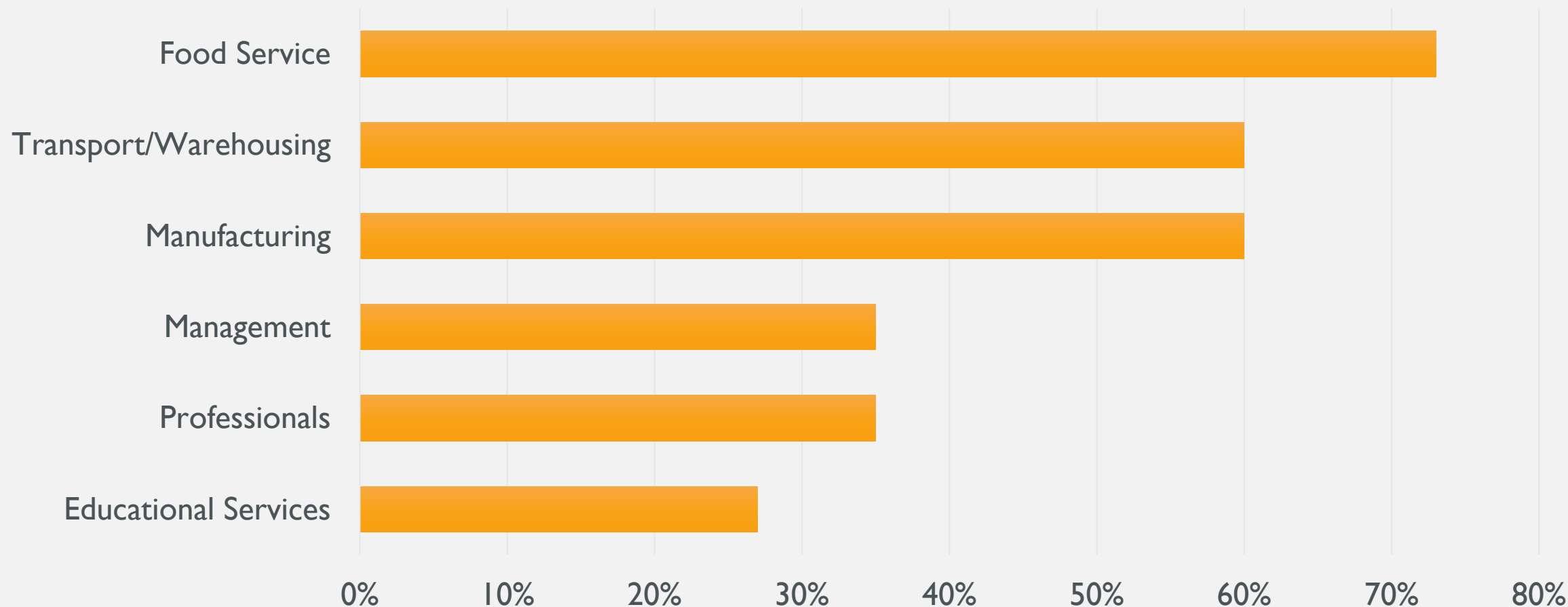
Labor Force Participation Rates by Age



Source: US Bureau of Labor Statistics: <https://www.bls.gov/emp/tables/civilian-labor-force-participation-rate.htm>

JOB SECTOR AUTOMATION POTENTIAL

(TOP AND BOTTOM THREE SECTORS)



Source: McKinsey Global Institute

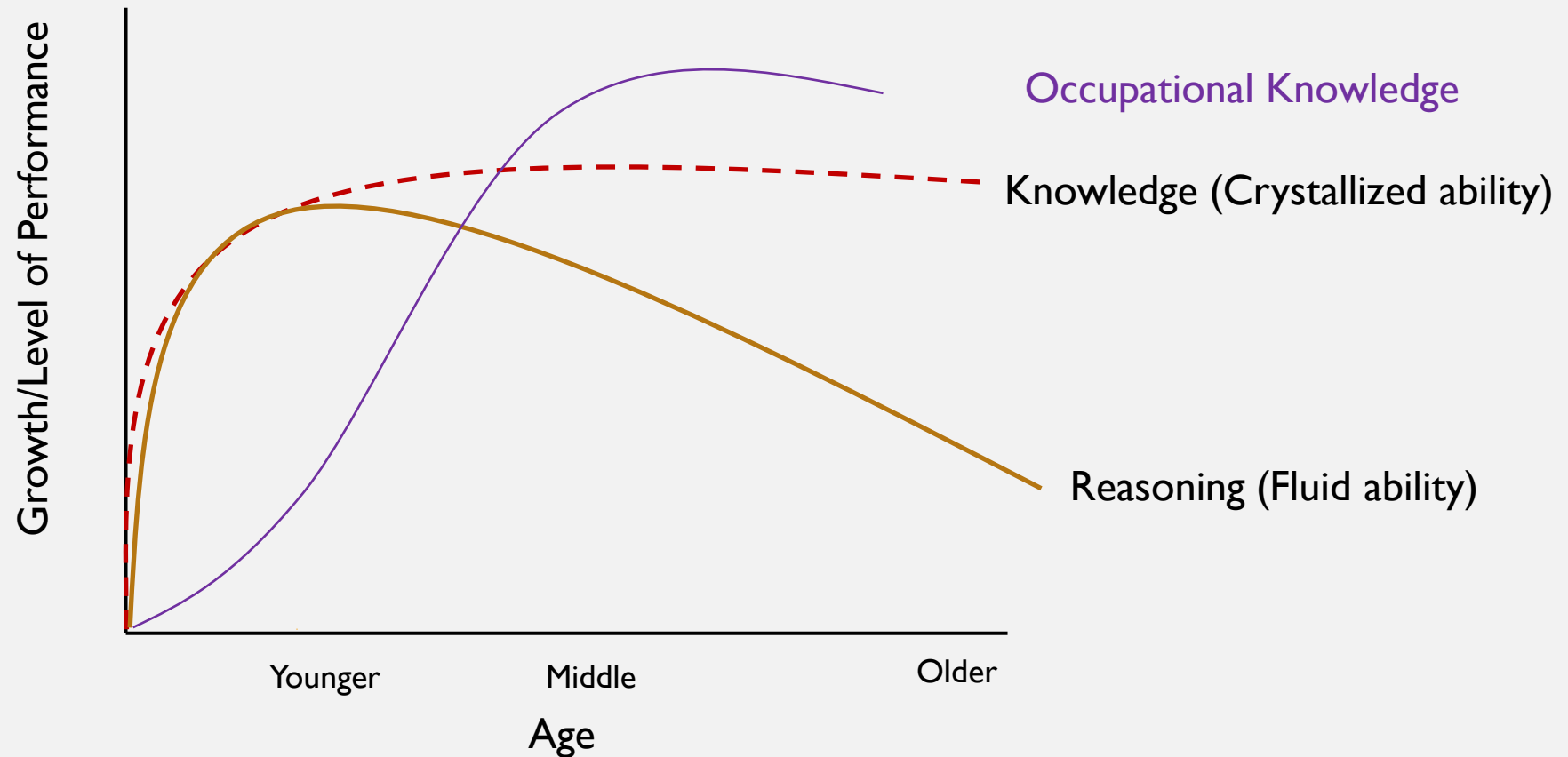
IMPACT OF AUTOMATION

- Workers will be displaced from jobs will need to switch occupations
- These workers will range widely in age
- Most of these workers will be the most vulnerable in the workplace
 - Low wage workers
 - Gig workers

McKinsey Global Institute, 2023

ABILITIES

(ACKERMAN, 2007; CATTELL, 1987)



AGE AND LEARNING

- In training, age is ...¹
 - Positively related to time taken
 - Negatively related to performance
 - Negatively associated with self-efficacy for training
 - Not associated with attitudes about learning
- Older learners can do well in self-directed learning contexts, but expend more effort²



CHILDHOOD VERSUS ADULT LEARNING

(KNOWLES, 1980; LYNDGAARD ET AL., 2024)



- Topic-centered
- Instructor guided
- No prior experience
- Society dictates readiness



- Problem-centered
- Self-directed
- Learners with expertise
- Individual dictates readiness

PRINCIPLES OF EFFECTIVE LEARNING

- **Conditions of effective learning environments remain the same:**
 - **Vary learning conditions** (Hall et al., 1994; Jiang et al., 2024; Shea & Morgan, 1979; Schmidt & Bjork, 1992; Wulf & Schmidt, 1997)
 - **Interleaved**
 - **Spaced** (al., 2008)
 - **Testing** (Roediger III & Butler, 2011; Yang et al., 2021)
 - **Multiple opportunities for mastery** (Rawson & Dunlosky, 2022; Rawson et al., 2013; Rawson et al., 2018)

Learning is effortful!

A SHIFT IN PERSPECTIVE

ORGANIZATION-CENTERED

- Training as a method for increasing organizational effectiveness
 - Based on needs assessment (Arthur et al., 2003)
 - Organization Analysis
 - Task Analysis
 - Person Analysis

PERSON-CENTERED

- Learning for employability
 - Individual needs assessment
 - What are the opportunities available to me?
 - What are the skills/knowledge required to acquire these opportunities?
 - Do I have those skills/knowledge?
 - How can I get them?



IMPLICATIONS

- Motivation is key for success in adult learning contexts
- Perceptions of effort affect choices to engage in learning
 - Reduced self-efficacy for learning
 - Reduced self-efficacy for engaging in learning activity
- Adults need to structure their own learning environment

ADULT LEARNING SELF-EFFICACY

How confident are you that you can...

- Adaptive
 - Make enough time in your schedule to do assignments
- Academic
 - Avoid mind wandering while studying

How confident are you that you can use what you learned to...

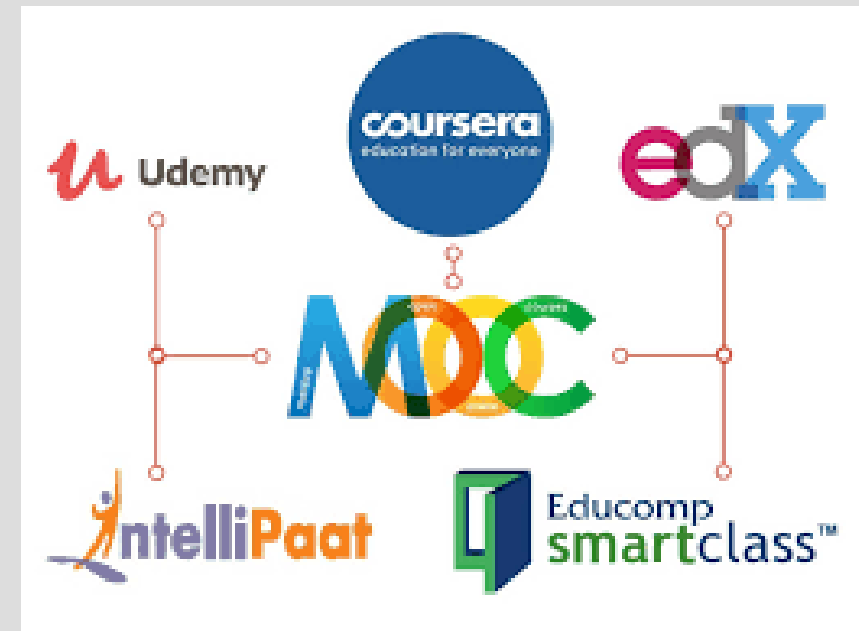
- Transfer
 - Be a more effective employee



Adult learning self-efficacy is more related to course engagement in a MOOC than traditional learning self-efficacy (Ruffin & Beier, under review)

TECHNOLOGY-SUPPORTED ADULT LEARNING

- Plentiful opportunities
 - MOOCs
 - YouTube
 - Virtual and Adapted Reality
- Affordances
 - Adaptive and personalized learning
- Technology also promises to improve assessment





CURRENT/ FUTURE RESEARCH DIRECTIONS (TOP 5)

- Determinants of motivation (e.g., prior learning experiences)
- How are adult learners assessing their learning needs?
- Technology-assisted learning and adults including AI
- What learning strategies do adults use and are they effective?
- Emotion, stress, and learning