

“Adult Learning, Artificial Intelligence and Workplace Transformation: Towards a Democratic Digital Transition”

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- INAPP

SCUOLA DEMOCRATICA · IV INTERNATIONAL CONFERENCE · ROME 2026

1-4 settembre 2026 · Università La Sapienza di Roma, Italia

*Panels: H.02. Adult Learning as Democratic Renewal: Empowering
Citizenship and Envisioning Alternative Futures*

«The things that make us human will become much more important»

Daniela Amodei, Co-founder of Anthropic



Presentation Overview

1. Background
2. Research Questions
3. Data and Methodology
4. AI and Inequalities
5. Conclusions



Background

Artificial intelligence is transforming learning, work and social participation.

Artificial Intelligence (AI)

Machine-based systems capable of performing tasks that typically require human intelligence (UNESCO).

AI literacy

Knowledge, critical understanding and ethical awareness needed to engage with AI systems (Long & Magerko, 2020).

The challenge is no longer only to adopt AI, but to ensure equitable opportunities to develop AI literacy.



Why does this study matter?

Research on AI is growing rapidly, but in Italy there is still **limited evidence** on how adults and enterprises use AI and develop AI-related competences.

The main challenge is not only **technology itself**, but also the capacity of **people and organisations to develop the skills** needed to use AI effectively and responsibly (*Benlian & Pinski 2024*).

Our study explores these issues through **two national INAPP surveys**:

- ❖ **INDACO-Adulti (Indagine sui Comportamenti Formativi degli Adulti) IV Edition, 2025**
- ❖ **INDACO-Imprese (Indagine sulla conoscenza nelle imprese) V Edition, 2025.**





How do adults use AI?



How are enterprises adopting AI and supporting AI-related learning?



Who has access to AI-related learning opportunities?



Is AI narrowing or widening existing inequalities?



Two distinct national surveys producing official statistics (2025)

1. **INDACO-Adults** (*Survey on Adult Learning*)
2. **INDACO-Companies** (*Knowledge Survey in Companies*)

Analytical comparison – no data integration

- AI diffusion
- learning opportunities
- inequalities



Survey	INDACO-Adults 2025	INDACO-Companies 2025
Edition	4th edition (2025)	5th edition (2025)
Sample	≈35,000 adults	≈18,000 companies
Target population	Italian population aged 18–64 (Employees, public employees, self-employed and non-employed)	Active companies with ≥6 employees
Main objective	Participation in formal, non-formal and informal learning	Demand and supply of training in companies (Incidence, Participation, Intensity and Costs of training)
AI module (2025)	AI use, purposes, perceptions and AI-related learning	AI adoption, purposes, organisational impacts and AI-related training
Data collection	CATI	Mixed CAWI/CATI
European framework	Harmonised with Eurostat AES	Harmonised with Eurostat CVTS

AI and Inequalities



INDACO-Adults 2025 reveals differentiated patterns of AI use and learning opportunities across social groups



AI adoption across firms in INDACO-Enterprises 2025 remains uneven and highly differentiated



AI Use by **Adults**, by Purpose and Socio-demographic Characteristics (INDACO-Adults 2025)

	ADULTS WHO USED AI SYSTEMS (%)	PERSONAL PURPOSES (%)	PROFESSIONAL PURPOSES (%)
Gender			
Men	49,4	46,1	26,2
Women	43,2	40,2	20
Age group			
18-24	59,4	56,7	27,7
25-34	57,3	53,9	31,3
35-44	50,8	47,1	26,7
45-54	43,8	40,3	21,7
55-64	31,9	29,6	14
Educational level			
Low educational level	32,3	31	10,6
Medium educational level	54,2	50,5	27,5
High educational level	66	58,9	46,8
Employment status			
Unemployed	46,7	44,8	14,1
Inactive	37,6	36,2	12,9
Employed	50,4	46,4	28,6
Total	46,3	43,2	23,1

● Groups More Involved in AI Use

Higher education → higher AI use
 Younger adults → higher AI use
 Professional use → highly educated adults
 Modest gender differences

● Groups Less Involved in AI Use

Lower education → lower AI use
 Older adults → lower AI use

PERSONAL AI USE IS MORE WIDESPREAD THAN PROFESSIONAL USE



Participation in AI-Related Training **Adults** Aged 18–64 (INDACO-Adults 2025)

	ADULTS (%)	ADULTS WHO COMPLETED A LEARNING ACTIVITY (%)	ADULTS WHO USED AI (%)
Gender			
Men	8,3	14,6	16,2
Women	5,5	10,5	11,8
Age group			
18-24	8,5	13,9	13,8
25-34	8,5	14	14,6
35-44	7,6	13,7	14,6
45-54	6,9	12,5	14,9
55-64	4,3	9,6	12,2
Educational level			
Low educational level	2,1	4,7	6,5
Medium educational level	6,9	12,6	13,2
High educational level	13,7	20,6	21,5
Employment status			
Unemployed	4,8	12,1	10,2
Inactive	4,2	11,4	10,4
Employed	8,4	13	16
Total	6,9	12,7	14,1

Who has access to AI training?

Participation increases with the level of education.
Educational differences are smaller among AI users.
Employed adults → about twice the participation rate

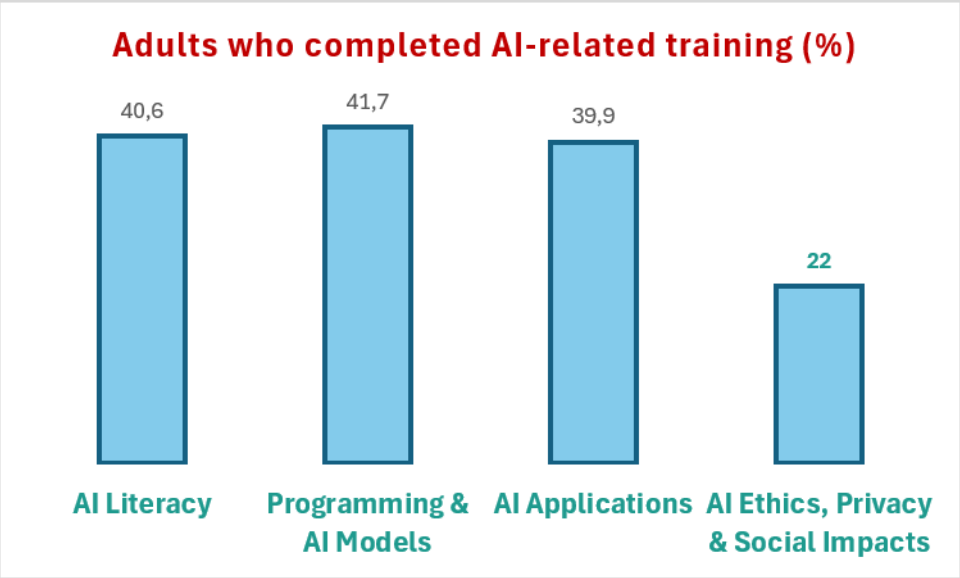
Limited Training Opportunities

Lower education → less AI training
Older adults → lower participation

ONLY 6.9% OF ADULTS PARTICIPATED IN AI-RELATED TRAINING → STRONG EDUCATIONAL INEQUALITIES



What do Adults learn about AI?



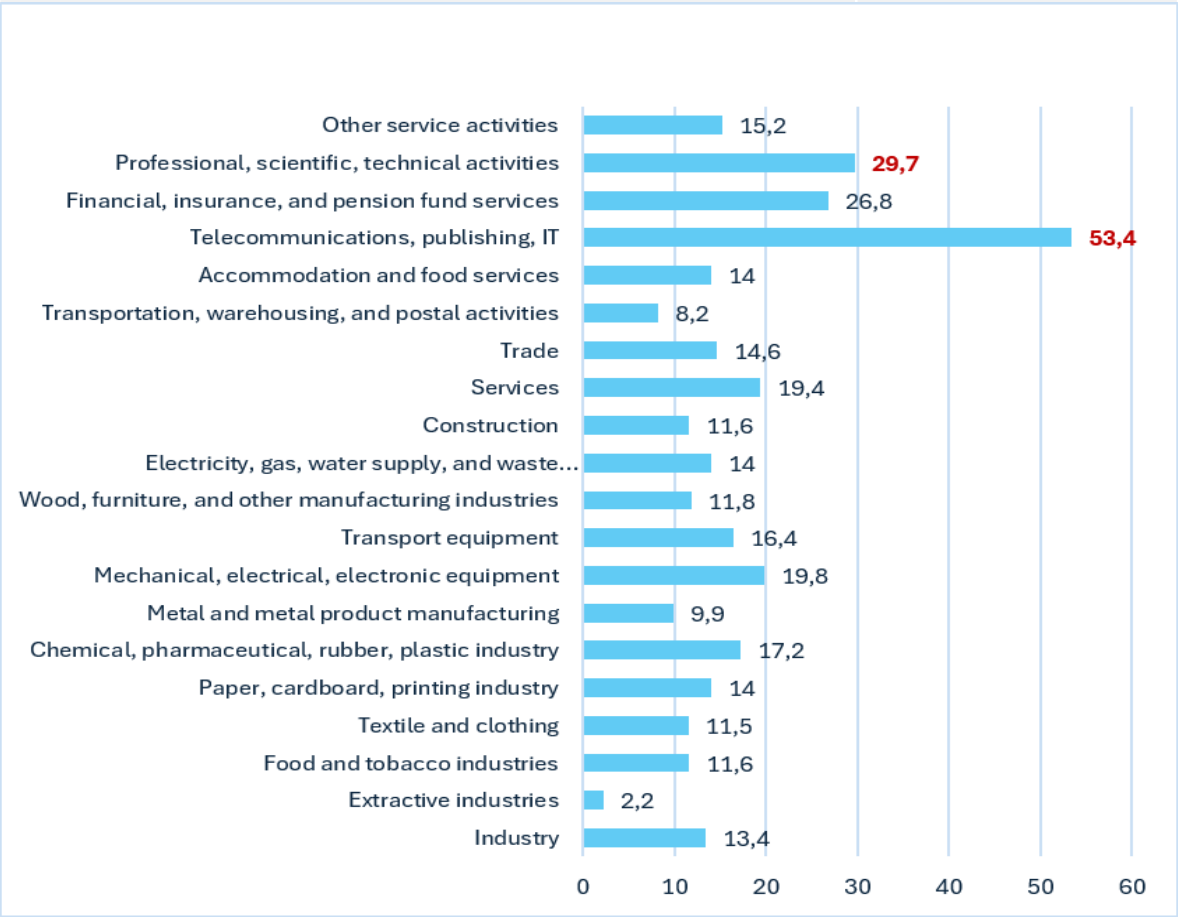
ETHICS REMAINS A MARGINAL COMPONENT OF AI RELATED TRAINING, DESPITE ITS GROWING IMPORTANCE IN THE AI ERA.



Companies with over 10 employees using AI technologies (%)

Company Size

Small	15.4
Medium	22.7
Large	38.0
Total	16.7
Systematic use = 4.2%	



Higher AI Adoption

Large companies → higher AI use
Knowledge-intensive sectors → higher AI use

Lower AI Adoption

Small companies → lower AI use
Systematic AI use → only 4.2%

AI ADOPTION IS ASSOCIATED WITH FIRMS' RESOURCES, INVESTMENT CAPACITY AND SKILLS.



Areas and motivations for use *(% of companies with over 10 employees, using AI)*

Motivations	%
Automation of repetitive tasks and reduction of manual labor	39.5
Reduction of operating costs	33.6
Optimization of production and operational processes	30.1
Increased competitiveness through innovation	23.9
Data-driven support for business decisions	23.7
Improvement of product/service quality and control	21.5
Increased data protection and cybersecurity level	21.5
Personalization of products/services for the end-user	20.6
Improvement of human resource management	11.1
Reduction of environmental impact	9.6

Areas of use	%
Marketing or sales	42.3
Production or service processes	32.1
Organization of administrative or business management processes	27.6
Research and development (R&D) or innovation activities (excluding AI research)	19.6
Accounting, control, or financial management	15.8
ICT security	14.7
Logistics	8.4

AI IS PRIMARILY USED TO OPTIMIZE EXISTING PROCESSES RATHER THAN TO TRANSFORM ORGANISATIONS.



Training on AI (% of companies with over 10 employees using AI)

Companies providing training	21.7
Companies without training	78.3

Types of training

Companies with training courses	11.9
Companies with training activities other than courses	16.1
On-the-job training	8.7
Participation in conferences	7.5
Self-learning	7.4

Unequal access to AI training

Higher participation among senior staff, younger workers and men



Limited Training

Older workers

Workers and auxiliaries

Training is mostly informal





AI training participation by gender and age (%)

Men	15.4
Women	12.3
Under 50	16.7
Over 50	10.0

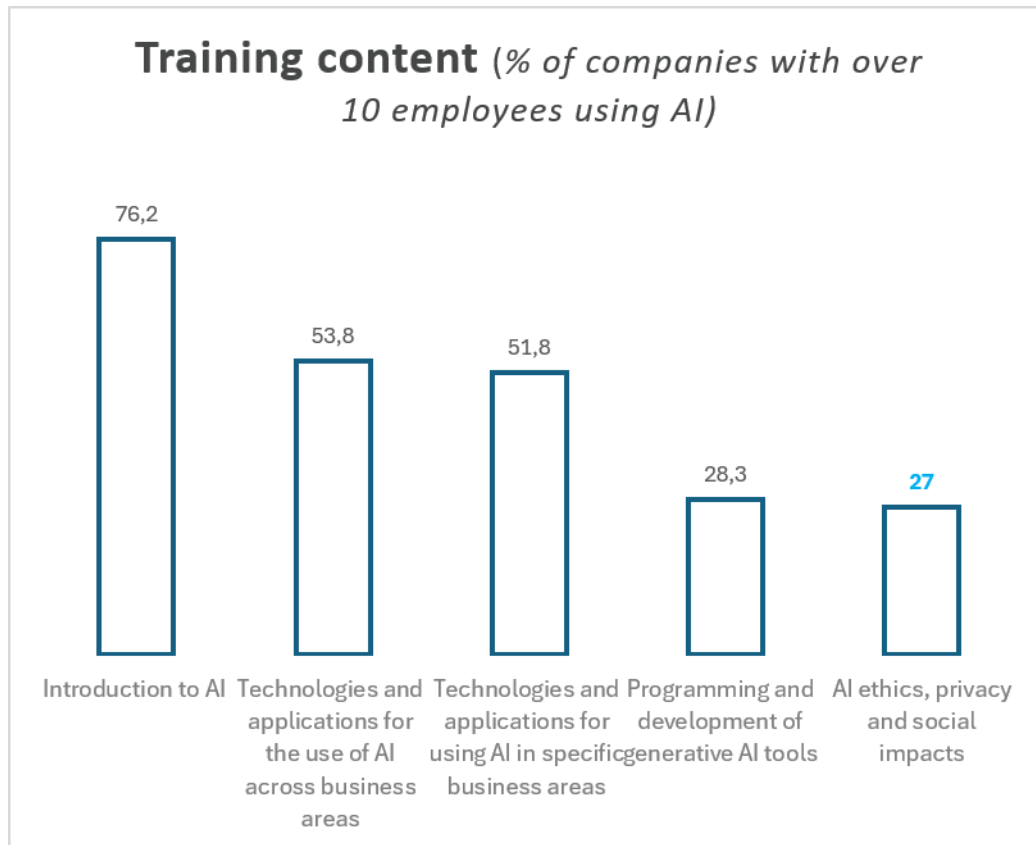
AI training participation by occupational position (%)

Entrepreneurs, Owners, Partners	32.9
Managers, Executives	18
Employees	14.5
Workers and Auxiliaries	7.5
Total	14.1

AI ADOPTION PROCEEDS FASTER THAN SKILL DEVELOPMENT



What do companies learn about AI?



Training focuses on AI USE rather than on its ethical and social implications.



AI DIFFUSION AND LEARNING (INDACO 2025): A COMMON PATTERN

INDACO-ADULTS 	INDACO-COMPANIES 
46.3% uses AI systems	16.7% uses AI technologies
Only 6.9% participated in AI training	Only 21.7% of AI-using companies provide training
Strong differences by education	Strong differences by company size and occupational position

AI IS SPREADING FASTER THAN LEARNING OPPORTUNITIES.

This may reinforce existing inequalities.



Conclusions

What did we learn?

AI use is growing rapidly, driven by **personal rather than professional use**.

AI is spreading **faster** than **learning opportunities**.

Education and organisational factors shape access to AI and learning.

Critical and ethical dimensions remain marginal in AI training for both adults and enterprises.





Why does it matter?

AI is not only a **technological issue**, but also an **educational** and **social one**.

Unequal access to AI learning may reinforce existing inequalities.

The challenge is to **ensure equitable opportunities** to develop **AI competences**.

Lifelong learning should integrate **technical, critical and ethical competences** for a human-centred transition.



Where do we go next?

INDACO-Adults and INDACO-Companies 2026 are underway

AI use is expected to grow, **especially in the workplace**

Redesigned AI modules will explore contexts of use and user profiles

The challenge is not only to use AI, but to engage with technology **critically**, while keeping the **human dimension at the centre**.



Future perspectives



Key References

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LEARNING — DEMOCRACY

FOR DEMOCRACY FOR LEARNING

SEPTEMBER 1-4, 2026 · SAPIENZA UNIVERSITY OF ROME, ITALY

This conference is dedicated to the memory of children killed in contemporary wars.

It recalls the more than 20,000 children who have died in the Gaza Strip since 7 October 2023 and the 38 children killed in Israel during the terrorist attacks of that same day. It also remembers children whose lives have been taken or shattered by violence in Iran, Lebanon, Ukraine, Syria, Yemen, Sudan, the Sahel, Somalia, and Myanmar, as well as those who died while attempting to cross the Mediterranean in search of safety from war, drought, and poverty.

According to UNICEF, approximately 473 million children today—one in six worldwide—live in areas affected by armed conflict. For them, there was no democracy — and there will be no education.

Thank you

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