

WYSD 2025

Youth empowerment through AI and digital skills

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The Fourth Industrial Revolution, driven by artificial intelligence (AI), presents both opportunities and challenges for global labour markets. Specifically, for technical and vocational education and training (TVET), AI has introduced transformative tools and opportunities for innovation and personalized skills development, while also posing significant systemic challenges. Without comprehensive reforms in TVET systems, the digital divide will widen, deepen global inequalities and leave marginalized youth further behind.

15 July 2025 marks the 10th anniversary since World Youth Skills Day (WYSD) was first celebrated in 2015. The theme for WYSD 2025, **Youth empowerment through AI and digital skills**, underscores the urgent need for the multidimensional integration of AI into TVET systems to empower youth, bridge digital divides and build inclusive, peaceful and resilient societies.

Harnessing opportunities

In today's rapidly evolving global landscape, equipping young people with digital and AI skills is essential to unlock their full potential, actively engage in their communities and participate in AI driven economies. Digital skills range from basic digital literacy, such as proficiency in using computers, smartphones and the internet, to advanced digital and data skills in areas like coding, data analysis, cybersecurity and digital marketing. Core skills such as media literacy, critical thinking, problem-solving, socio-emotional skills and communication are equally essential.

Digital technologies are transforming how skills are being taught, assessed and aligned with labour market needs, making education and TVET more accessible and engaging. Innovations such as adaptive learning platforms, virtual reality (VR) and intelligent tutoring systems are enhancing personalized learning (e.g. providing automated feedback on assessments), facilitating immersive training for fields like healthcare and engineering¹, modernizing curricula, streamlining certification and progress tracking², developing robust AI-powered learning platforms³ and improving career guidance systems.

¹ Fraunhofer Institute. (2025). Expert meeting report: AI integration in technical and vocational education. <https://www.fraunhofer.de>

² Brighteye Ventures. (2025). AI in vocational education: Market trends and innovations [White paper]. <https://www.brighteyevc.com>

³ UNESCO 2023. Guidance for generative AI in education and research. [Artificial intelligence in education | UNESCO](#)

Key challenges

Despite these opportunities, significant challenges remain:

- **Algorithmic bias** embedded in AI tools can perpetuate gender and geographic disparities. Only 22% of global AI professionals⁴ are women and women are 13 times less likely to file ICT- related patents⁵.
- **Ethical concerns** related to algorithms bias, data privacy and the broader impact of AI on the workforce dynamics risks reinforcing gender and socioeconomic disparities.⁶
- **Gender inequality and inclusion gaps** persist in AI-related TVET fields due to underrepresentation, lack of role models and systemic barriers.
- **Data privacy concerns** are significant as personalized learning depends heavily on student data.
- **Infrastructure limitations** and limited internet access continue to exacerbate digital divides. Only 34% of TVET institutions globally have the bandwidth to support advanced AI tools.⁷
- **High implementation costs** and a lack of sustainable funding models restrict the scaling of AI-driven curricula and infrastructure. For example, UNESCO's \$50 million investment in AI labs currently only benefits 8% of Sub-Saharan Africa's TVET institutions.⁸
- **Lack of trained teachers** in AI pedagogy, with 78% of teachers lacking confidence in using AI tools and few trained in integrating AI into hands-on, technical training.⁹
- **Absence of comprehensive national AI strategies** in TVET resulting in uneven adoption and implementation
- **Low usage of advanced AI in TVET** remains a concern, the actual share of workers using advanced AI in TVET and related sectors remains limited (less than 0.5-1% in advanced economies).¹⁰
- **Over-reliance on AI technologies** risks diminishing human connection, mentorship, communication and teamwork, essential components of holistic learner development.
- **Security and misinformation risks** arise from poorly governed AI use. While AI can support social cohesion and peaceful coexistence, it can also fuel hate speech, online bullying, political disinformation, inflammatory language and cyberattacks.

Towards a just and AI-enhanced TVET system

Equipping young people with AI and digital skills enhances digital well-being, mental health and holistic development. It empowers them to navigate online spaces safely, access valuable resources, build supportive networks and unlock opportunities for personal and professional growth, fostering a sense of purpose and resilience.

When implemented equitably, AI can bridge skills gaps, reduce apprenticeship dropout rates, align training with industry needs, improve career guidance and ultimately *empower youth for an automated future of work*.

TVET systems must:

- Ensure equitable access to digital skills
- Address ethical implications
- Promote social cohesion and peaceful coexistence
- Strengthen financing efforts to modernize TVET, especially in low-income regions
- Encourage lifelong learning
- Prevent the spread of divisive narratives in educational environments¹¹

⁴ <https://www.interface-eu.org/publications/ai-gender-gap>

⁵ Women's access to and participation in technological developments. <https://www.unesco.org/en/artificial-intelligence/gender-equality>

⁶ Gianini S. 2023. Generative AI and the future of education. <https://unesdoc.unesco.org/ark:/48223/pf0000385877>

⁷ AI applications in vocational training. In Emerging technologies in education (pp. 89–105). Scilit Press.

⁸ Digital transformation of TVET. <https://www.unesco.org/en/articles/unesco-partners-unesco-inruled-promote-digital-transformation-tvet-and-sustainable-rural-development>

⁹ International Training Centre of the ILO. (2025). Digitalization and AI in TVET: Challenges and opportunities (Report No. ITCILO-2025-01). <https://www.itcilo.org>

¹⁰ <https://www.giz.de/akademie/en/downloads/Spoettl%20AI%20MD%20FEB%202025%20FINAL.pdf>

¹¹ <https://www.cambridge.org/core/journals/data-and-policy/article/ai-for-peace-mitigating-the-risks-and-enhancing-opportunities/797BCCFF182A0367F2A99FC5FB064150>

To guide the WYSD dialogue and shape an inclusive future for TVET, we must consider:

1. What urgent actions are needed to ensure equitable access to AI infrastructure and digital training for all youth — especially those in marginalized contexts?
2. How can teacher training be redesigned to integrate AI ethically into their pedagogy, while preserving human-centric values?
3. How can TVET embed ethical AI, media literacy and critical thinking to foster responsible digital citizenship?
4. What strategies best promote gender equality and inclusion in AI-related TVET fields?
5. How can multi-stakeholder partnerships- governments, multi-lateral organizations, private sector and youth - collaborate to finance and scale AI-driven innovations to transform TVET for inclusive and sustainable development?

A call to action

To celebrate WYSD 2025, the Permanent Missions of Portugal and Sri Lanka to the United Nations, along with UNESCO, ILO, the United Nations Youth Office, UNESCO-UNEVOC, WorldSkills International, and the UNEVOC Network, will host global panel discussions and activities.

We call upon all TVET stakeholders including governments, educators, policymakers, youth and technology developers, to lead the integration of AI onto TVET systems, while ensuring human dignity, values, inclusivity and ethical practices are upheld amidst technological advancements.¹²

We urge all participants to:

- **Advocate for inclusive, ethical and human-centered AI-powered TVET systems** that address the digital divide and uphold human rights and ensure equitable AI infrastructure and comprehensive teacher training.
- **Collaborate across sectors and regions** to share best practices, drive innovation and fund inclusive AI skills development.
- **Highlight the role of AI in enhancing youth employability** by supporting community-driven initiatives
- **Amplify youth voices** by engaging them in dialogue and decision-making processes to shape the future of work.

WYSD celebration activities:

- **High-level panel** at the Learning Planet Institute in Paris and UN Headquarters in New York.
- **Regional satellite events** through [UNEVOC Network Centres](#).
- **Youth skills showcase** via [youth voices storytelling campaigns](#), [youth perspective survey](#) and [skills in action photo competition](#).
- **Online learning via the Global Skills Academy (GSA):**
 - Access free, self-paced, certifiable training with recorded lectures, interactive sessions and quizzes on digital skills, AI literacy, critical thinking and other skills for the future of work.
 - Receive a partner certificate upon completion.

¹² Gianini S. 2023. Generative AI and the future of education. <https://unesdoc.unesco.org/ark:/48223/pf0000385877>

Proposed modules (based on WYSD survey report 2023/24)	Partner (UNEVOC/ GSA Partners)
Generative AI, machine learning and more	IBM SkillsBuild
Digital literacy and skills	Cisco, Coursera, Fundación Telefónica, ITU, Microsoft, Orange, Aleph Inc. , Anthology , GIZ-atingi , Huawei , IBM , Outsystems , Pix , Technovation
Entrepreneurial skills (e.g. creativity, initiative, risk-taking)	HP LIFE , GIZ-atingi , Generation Global
Communication and interpersonal skills (e.g. teamwork, collaboration)	Coursera
Green economy & sustainability practices	HP LIFE, FESTO, GIZ-atingi , IBM , Siemens , Stiftung , SkillEd
Critical thinking and problem solving	Coursera
Mental health and well-being	GIZ-atingi , Coursera
Conflict resolution and resilience	Coursera
Mentorship programmes	DIOR, KPMG , Junior Achievement Americas
Digital marketing	HP LIFE
Generative AI leadership and strategy	Coursera

Happy World Youth Skills Day!