

SUMMARY

ETF Skills Lab Network of Experts Webinar

FROM SKILLS NEEDS TO LEARNING PATHWAYS: THE ROLE OF AI IN MICRO-CREDENTIALS

30 September 2026, 10.00 – 12.00 CET

This webinar of the ETF Skills Lab Network of Experts explored the growing role of Artificial Intelligence (AI) in the design and delivery of micro-credentials as flexible tools for upskilling, reskilling and lifelong learning. Against the backdrop of rapidly changing skills needs, technological transformation and increasingly diverse learner profiles, the webinar examined how AI can support the identification of skills needs, the formulation of learning outcomes, assessment and personalised learning pathways. Particular attention was given to the conditions required for the responsible use of AI in micro-credentials, including quality, transparency, recognition, inclusion, human oversight and trust.

Cristiana Burzio (ETF) opened the webinar by welcoming participants to the third Skills Lab Network webinar of 2026 and highlighting the continued growth of the Network, which now brings together around 900 members from ETF partner countries and beyond. She provided an update on upcoming Network activities, including the regional webinar on 6th October on "[Skills anticipation and labour market intelligence: Tools, methods and policy applications in the Eastern Neighbourhood](#)" and the the Central Asia regional webinar "[Skills anticipation methodologies and institutionalisation of labour market intelligence systems](#)", an online peer learning session with the European Network of Regional Labour Market Monitoring (EN RLMM) in November and the final webinar of the year on 'Enhancing the employment of persons with disabilities: from research to action'. She also announced the forthcoming call for papers on 'Holistic approaches to youth transitions in times of disruption'. Turning to the webinar theme, Burzio emphasised the need for education and training systems to respond more rapidly and flexibly to changing skills needs and explained that the session would explore how AI can support the design and delivery of micro-credentials while keeping quality, transparency, recognition, inclusion and trust at the centre. She concluded by introducing the programme and encouraging participants to actively engage in the discussions following each presentation.

The first speaker, **Satu Järvinen (ETF)**, framed the discussion by introducing the European approach to micro-credentials and explaining how AI tools can support their development and use. She defined micro-credentials as documented and assessed evidence of learning outcomes from a small volume of learning, stressing that they should not be confused with the courses or learning experiences that may lead to them. Their value, she explained, depends on clearly defined learning outcomes, assessment, workload, quality assurance, portability and recognition, which together create the trust needed for learners, education institutions and employers to understand and use them. Järvinen highlighted the central challenge of balancing flexibility with trust, noting that micro-credentials need to respond rapidly to changing labour market needs while remaining credible and recognisable across different contexts.

Järvinen then presented the micro-credential process as a chain extending from identifying skills needs and designing learning outcomes to assessment and quality assurance, issuing credentials, and their recognition and use. She showed how AI can support each stage, for example by analysing labour market data, helping formulate learning outcomes, supporting assessment design and generating structured credential information. At the same time, she emphasised that the purpose, risks and

consequences of AI use differ across these stages and therefore require appropriate human judgement and institutional governance. Particular attention was given to data protection, validation, transparency, AI literacy and accountability, also in light of the [European Union AI Act](#), with Järvinen stressing that responsibility cannot be delegated to AI. She summarised this principle by emphasising that people should define the task and validate the output, while institutions remain accountable for the final decisions and the quality and reliability of the credential.

During the Q&A session, participants discussed trust, recognition and the appropriate role of AI in micro-credential systems. In response to a question on the portability of micro-credentials across countries, Järvinen highlighted the diversity of national and institutional approaches and stressed the importance of transparency, quality assurance and verifiable information in building trust over time. Asked who should validate learning outcomes, she noted that there is no single model and emphasised the need for an ecosystem involving both public and private actors. Participants also discussed the limits of AI in assessment. Järvinen distinguished between using AI to support assessment processes and allowing it to make assessment decisions, stressing that decisions on grades, pass or failure should remain human. The exchange also highlighted the greater complexity of assessing skills and aptitudes compared with knowledge, as well as the need to balance the potential benefits of AI-supported assessment with significant ethical, regulatory and practical risks.

The second speaker, **Bareen Haval Sadiq (Duhok Polytechnic University)**, presented findings on the use of AI in universities in the Kurdistan Region of Iraq, drawing on surveys of academic staff and university leaders. The findings revealed a gap between the rapid, largely informal adoption of AI and the institutional frameworks needed to govern its use. While almost two thirds of academic staff reported already using AI in their research, mainly for language-related tasks, universities had yet to introduce dedicated policies or training. Sadiq described this situation as “shadow adoption”: AI is already being used, but without clear rules, oversight or systematic quality checks. She also highlighted a gap between staff perceptions of AI’s potential and their actual ability to use it for more advanced research tasks, identifying structured training as an important unmet skills need.

Turning to ethics and possible responses, Sadiq identified four main challenges: limited financial resources, lack of expertise, the absence of institutional AI policies and the limited representation of the Kurdish language in AI tools. She proposed addressing these gaps through a short, stackable micro-credential comprising three modules on responsible AI use, AI in research and AI in teaching, with ethics and human oversight embedded throughout. She concluded with four recommendations for universities and policymakers: regularly measure staff skills needs, provide targeted AI training, establish recognition of the micro-credential between universities and the Ministry, and introduce clear rules on AI use and disclosure. Her central message was that institutions should govern the AI use that is already taking place while developing and recognising the skills required to use it responsibly.

In the discussion that followed, participants explored how universities could encourage academic staff and institutional leaders to engage with AI-related training and micro-credentials, as well as how the proposed approach might apply beyond the Kurdistan Region. Sadiq acknowledged that formal training could face resistance, particularly among more experienced academics, and suggested combining AI-related learning within existing pedagogical structures with workshops and online courses, supported by clear institutional rules and guidelines. She also noted that tools better adapted to the Kurdish language could encourage engagement.

The following speaker, **Zebo Isakova (Kimyo International University in Tashkent)**, focused on the institutional conditions needed to move AI-enabled micro-credentials from innovation to implementation, drawing particularly on the experience of Uzbekistan and Central Asia. She highlighted the potential of short, modular learning to respond more quickly and precisely to changing skills needs, while warning that flexibility can lead to fragmentation if providers apply incompatible definitions, weak assessment or unclear recognition arrangements. Isakova explained that AI can support different stages of the learning cycle, from identifying skills gaps and personalising learning to organising evidence and matching verified skills with jobs or further learning, but stressed that responsibility for assessment, quality assurance, credential issuance and recognition must remain with people and institutions. She proposed

four tests for credible micro-credentials: quality, recognition, inclusion and stackability, with particular attention to locally relevant validation and the linguistic context in which AI systems operate.

Turning to implementation, Isakova argued that Uzbekistan already has emerging conditions for piloting AI-enabled micro-credentials through its Technical and Vocational Education and Training (TVET) system, digitalisation initiatives, employer partnerships and quality assurance structures. At regional level, she advocated interoperability rather than uniformity, suggesting that Central Asian countries could align learning outcomes, occupational profiles, metadata and assessment principles while retaining national authority over qualifications, recognition, language and funding. She proposed starting with employer-linked pilots in digital, green and logistics skills and following a six-step process from selecting an occupational competence and co-designing the learning outcomes to assessment, recognition and evaluation. Isakova concluded that AI should be viewed as an enabler rather than the credential itself, that recognition should be built into micro-credential design from the outset, and that scaling should take place only when evidence demonstrates that credentials are genuinely used and valued.

In the Q&A session, participants explored how regional cooperation and institutional culture could support the development and recognition of AI-enabled micro-credentials. Isakova highlighted voluntary common metadata, comparable evidence requirements and shared multilingual testing as useful areas for regional cooperation, while stressing that recognition should remain the responsibility of the competent national authorities and institutions. She also emphasised the importance of agreeing on competences, assessment evidence and recognition rules before investing in technological platforms. Isakova stressed the need for an inclusive approach involving stakeholders at all levels, including people in remote regions and vulnerable groups. She noted that regional cooperation should build on shared cultural characteristics while ensuring that approaches are appropriately validated and aligned with national frameworks, identities and institutional contexts.

The fourth speaker, **Mitchell Peters (Universitat Oberta de Catalunya (UOC))**, presented a practical human-in-the-loop approach to designing trusted micro-credentials with AI, drawing on several years of experience developing and scaling the university's micro-credential portfolio. He situated this work within a rapidly changing labour market characterised by skills mismatches, technological transformation and evolving skills demand, arguing that higher education needs responsive and high-quality lifelong learning opportunities. At Universitat Oberta de Catalunya, micro-credentials are designed around labour market intelligence and clearly defined quality and transparency principles, with more than 100 courses currently organised across different competency areas. Peters stressed that AI can support different stages of curriculum development, but should not replace human judgement. Using the European Learning Experience Platform (EULEP) EULEP project as an example, he showed how AI was used to draft learner and trainer personas, formulate learning outcomes and generate options for learning and assessment activities. In each case, the outputs were checked against labour market and small and medium-sized enterprise evidence, reviewed by relevant stakeholders and ultimately validated by people.

Peters then explained how the EULEP experience was adapted to the Catalan context and subsequently developed into a UOC micro-credential on AI for decision-making. Feedback from trainers and learners informed the localisation of the programme, including translation, adaptation of terminology and examples, a stronger focus on practical small and medium-sized enterprise cases and a shorter, more applied format. In the resulting micro-credential, competences remained human-developed, while AI supported the drafting of learning outcomes, course content and video scripts, all subject to human fact-checking, rewriting and final approval. Peters linked these checkpoints to the European Union AI Act, distinguishing lower-risk uses such as drafting educational content from applications involving decisions about learners, and also highlighted transparency considerations surrounding AI-generated avatars and cloned voices. He concluded by stressing that a human-in-the-loop approach needs to be supported by institutional leadership and governance, AI literacy and clear responsibility for academic integrity and trust, particularly in highly digital learning environments.

In the Q&A session, participants continued the discussion on the role of human judgement in AI-supported assessment. Responding to a question on whether AI could eventually support assessment

at scale, Peters acknowledged its potential but stressed that human judgement remains essential for academic integrity, particularly given concerns around bias and ethics. He also highlighted the importance of institution-wide AI training for academic, management and educational staff, alongside clear governance and ethical leadership. The discussion further emphasised that human oversight is needed not only for final assessment decisions but throughout the design of assessment environments, since AI-supported choices about criteria and processes can also influence outcomes.

The fifth speaker, **Sidita Duli (Researcher in Digital Transformation and AI)**, shifted the focus from how AI can support the development of micro-credentials to the new human competencies required to design, supervise and take responsibility for AI workflows. Drawing on her practical experience, she distinguished between using an AI tool, where one person provides a prompt, reviews the output and makes a decision, and running an AI workflow, where several interconnected steps may take place before a person sees the result. Duli argued that failures in such workflows are often not technical failures but failures of supervision: errors may move through successive stages without being checked, while responsibility for the final output remains unclear. She therefore proposed four observable and assessable competencies for AI workflow supervision: decomposition, deciding what can be delegated to AI and what must remain with a person; specification, defining instructions, context and what a correct output should look like; verification, applying checks proportionate to the level of risk; and accountability, retaining ownership of the final output and being able to reconstruct how it was produced.

Turning to how these competencies could be translated into micro-credentials, Duli stressed that they should remain independent of particular AI products, which can quickly become obsolete, and should be assessed through evidence of judgement in real working conditions rather than conventional knowledge tests. She suggested approaches such as portfolios, observed practice and supervised work to assess these competencies. Reflecting on the Albanian context, she noted that AI adoption is advancing rapidly while governance and definitions of the competencies needed to supervise AI systems are developing more slowly, a gap she argued is not unique to Albania. Duli concluded by proposing that competencies should first be clearly described and mapped in terms that employers can understand, assessed through evidence of real supervised work and embedded in continuing vocational education and training for working adults. She invited Network members to consider whether similar gaps exist in their own contexts and whether this could provide a basis for future joint work.

During the Q&A session, the discussion focused on accountability and the expertise needed to design and supervise AI workflows. Responding to a question about the profiles required within a team and who should ultimately be accountable, Duli explained that the responsible person should combine a strong understanding of AI with in-depth knowledge and experience in the domain in which the workflow operates. The exchange highlighted the need to bring together technical and domain expertise when assigning responsibility for AI-supported workflows, with a parallel drawn to governance roles such as those used in data protection.

In her closing remarks, **Cristiana Burzio (ETF)** thanked the speakers, moderators and participants and reflected on the main messages emerging from the presentations and discussions. She highlighted trust, accountability, credibility, transparency, ethics and integrity as recurring themes, alongside the importance of governance and stronger connections between the actors involved in micro-credentials. She stressed that while AI can support the development and use of micro-credentials, responsibility and human agency must remain central, with human judgement not replaced by AI. She encouraged participants to continue the debate through the Network's [LinkedIn group](#) and confirmed that all presentations, referenced materials and the webinar recording would be made available on the ETF [Open Space](#), together with an event summary.

Resources

All presentations and materials presented at the event can be found at:

<https://openspace.etf.europa.eu/events/skills-needs-learning-pathways-role-ai-micro-credentials>

Universitat Oberta de Catalunya – Manifesto for academic integrity in teaching and learning: <https://www.uoc.edu/en/university/educational-model/academic-integrity>

Universitat Oberta de Catalunya – OMEGA Mission: towards an AI-native university:

<https://www.uoc.edu/en/news/2026/uoc-omega-mission-ai-native-university-uoc>

If we started from zero, what "university" would we design today? <https://universidadcero.org/>