Foundations for Developing AI-Powered Course Curriculum

for Vocational teachers

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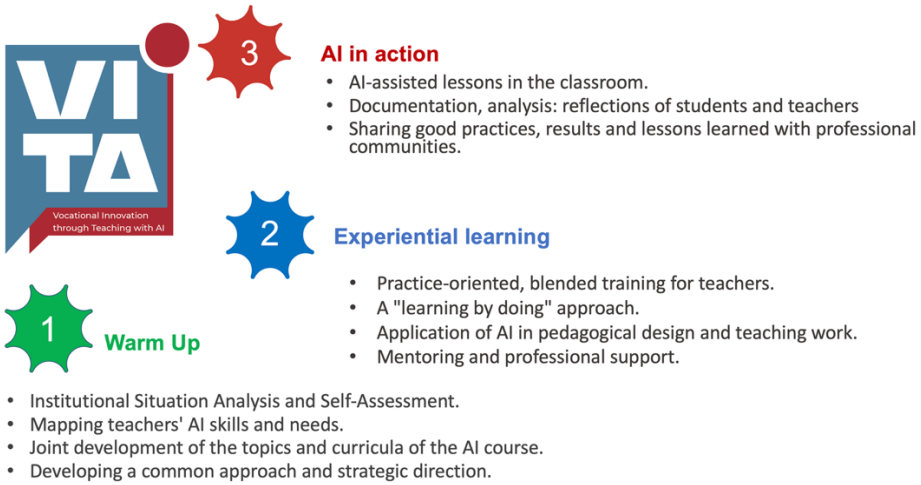
Introduction

Before initiating the curriculum of the "AI-Powered Teaching for VET" course, the partnership first assessed the current level of teachers' AI-related knowledge and skills, as well as their attitudes towards the use of AI in education, through a structured self-evaluation process by using the SELFIE (Self-reflection on Effective Learning by Fostering the use of Innovative Educational technologies), the free tool designed by the EU to help schools embed digital technologies into teaching, learning and assessment.

We applied an extended version of the SELFIE self-evaluation tool, specifically adapted to include AI-related skills and competences. This enhanced framework builds on the original SELFIE approach by integrating elements developed within the Erasmus+ AI-Pioneers project (https://aipioneers.org/), which expands educators' digital competence towards AI literacy, ethical awareness, and practical classroom application.

In parallel, all teaching staff were actively involved in a series of workshops forming the first phase of the VITA three-step model.



These included an introductory workshop (VITA Workshop 1) focusing on the fundamentals of artificial intelligence, its relevance for vocational education, and a second workshop (VITA Workshop 2) aimed at strengthening collaboration with industry partners. The latter provided valuable insights into real labour market needs and ensured that the training approach reflects current workplace practices and expectations.

Together, these activities provided essential input for the design of the training course, ensuring that it is grounded in both teachers' needs and the evolving demands of the labor market.

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1. RESULTS of SELFIE

1.1 The SELFIE activity

The VITA project implements a **three-step model** to align vocational education with the evolving needs of the digital and AI-driven labour market.

The first step is: School-wide Initiation in VET Schools – Warm Up (Step1). One of the first planned activities was: **Conducting self-evaluation (SELFIE) to identify of their present level of knowledge and skill using AI in their teaching practice**.

A survey had been conducted by applying the European SELFIE framework and its supplement, developed in the former Erasmus+ project "AIPioneers" https://aipioneers.org/. The aim was to identify the present level of AI skills and knowledge of teachers and to reveal their attitudes towards using AI tools in classrooms.

1.2 SELFIE results in the 4 partner schools

A total of **94 teachers** from the 4 partner schools participated in the survey.

According to the DigCompEdu framework

- the competency assessment was examined in **6 areas:**
    1. Professional Engagement with AI
    2. Digital Resources with AI
    3. Teaching and Learning with AI
    4. Assessment with AI
    5. Empowering Learners with AI
    6. Facilitating Learners' Digital Competence
- **6 proficiency levels** were distinguished:
    - A1, Newcomer
    - A2, Explorer
    - B1, Integrator
    - B2, Expert
    - C1, Leader
    - C2, Pioneer.

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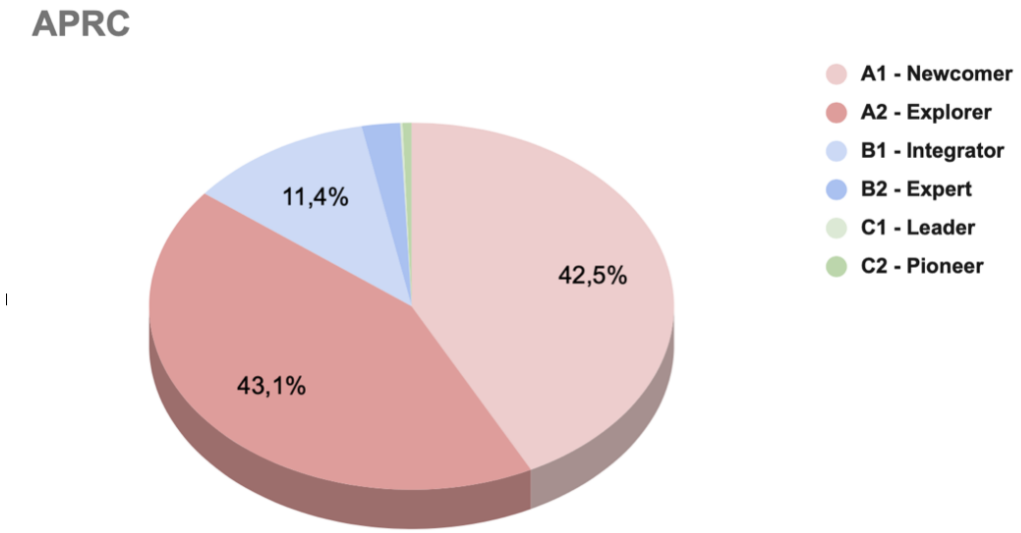
1.2.1 APRC - Alytaus Profesinio Rengimo Centras

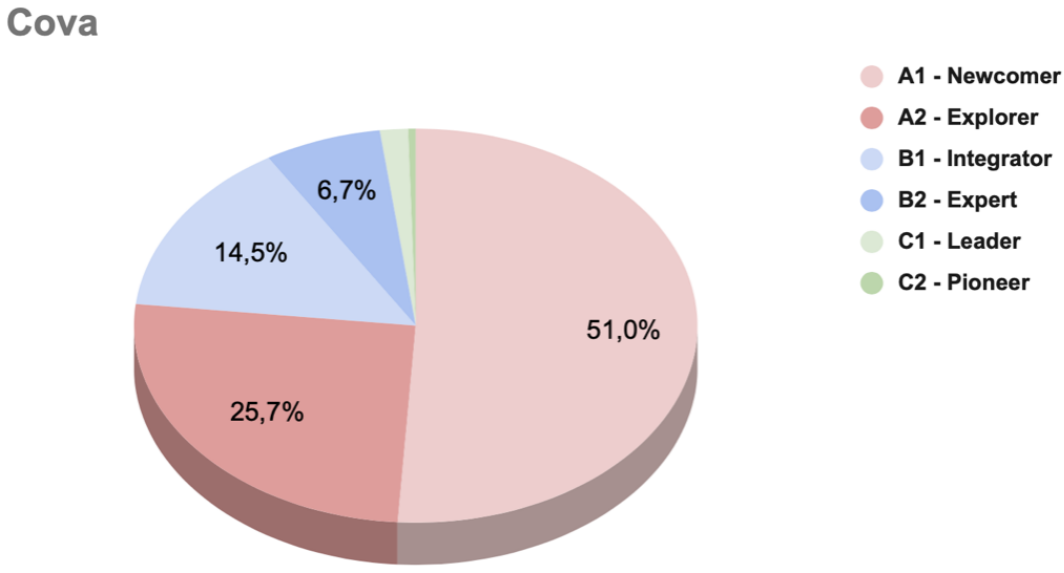
Twenty teachers participated in the **SELFIE** assessment for the **APRC**. Taking the meaning of all items into account, over **85%** of respondents evaluated



their proficiency at the Newcomer (A1) or Explorer (A2) level. In contrast, a mere 14% were identified as Integrators (B1) or Experts (B2), and fewer than **1%** as **Leaders (C1)** or **Pioneers (C2)**.

1.2.2 COVA School

For the **Cova School**, 19 teachers completed the **SELFIE** assessment. Based on the average across all items, approximately **76%** rated themselves as



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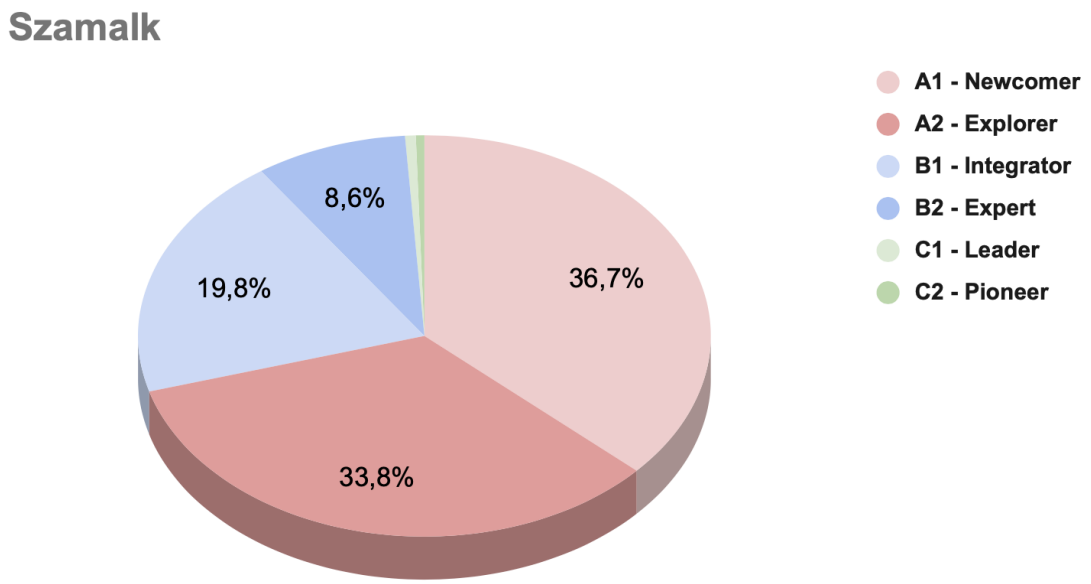
Newcomers (A1) or **Explorers (A2)**. Meanwhile, nearly **21%** identified as **Integrators (B1)** or **Experts (B2)**, and roughly **2%** as **Leaders (C1)** or **Pioneers (C2)**.

1.2.3 SZÁMALK - Salesian Technikum és Szakgimnázium

For **SZÁMALK**, 23 teachers completed the **SELFIE** assessment. Taking the average across all items, over **70%** rated themselves as **Newcomers (A1)**



or **Explorers (A2)**, while just over **28%** identified as **Integrators (B1)** or **Experts (B2)**. Only **1%** reached the level of **Leader (C1)** or **Pioneer (C2)**.

1.2.4 IET - Institut Escola del Treball de Lleida

For **IET**, 19 teachers completed the **SELFIE** assessment. Based on the average across all items, over **68%** rated themselves as **Newcomers (A1)** or **Explorers**

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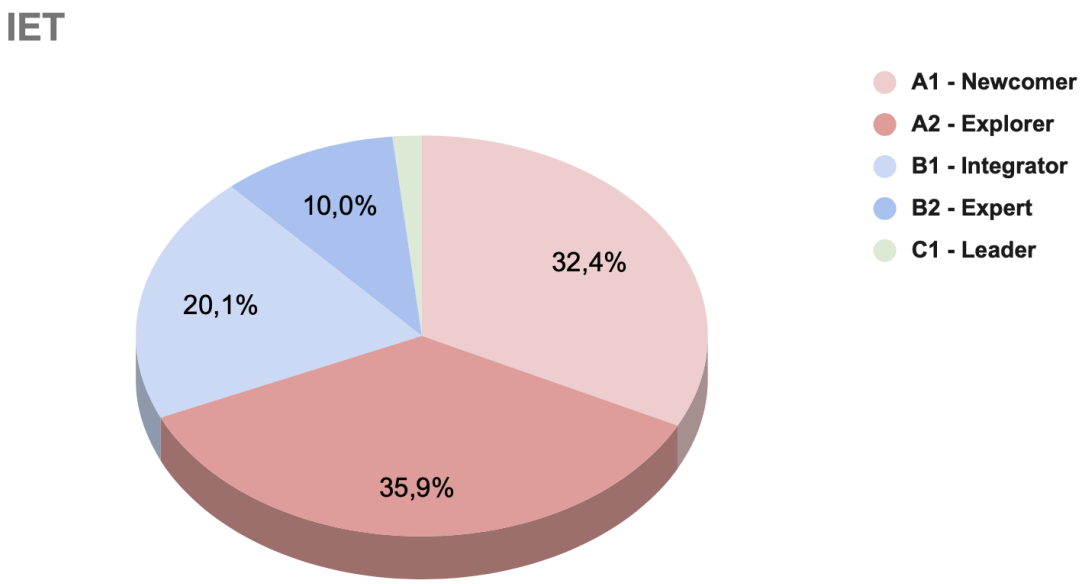

(A2), while **30%** identified as **Integrators (B1)** or **Experts (B2)**, and less than **2%** as **Leaders (C1)** or **Pioneers (C2)**.

1.3 Overall SELFIE results

Although **IET** shows the most advanced profile, with 30% of teachers at the Integrator and Expert levels, the overall results across the four institutions remain **nevertheless quite homogeneous**, showing a clear prevalence of initial proficiency levels (**A1 and A2**) in all cases.

Given the consistency of the profiles, the data from the teachers across the four schools can be aggregated for a collective evaluation of the individual SELFIE items. This consolidated approach is essential for **designing targeted training pathways** that address shared needs and effectively support the development of digital competences across all partner institutions.

1.3.1 Professional engagement with AI

The data show a distribution that is heavily skewed towards the base of the pyramid:

Dominance of Basic Levels (A1–A2): Approximately 64% of teachers fall within the Newcomer (39,37%) and Explorer (24,75%) categories. This indicates that the vast majority use AI only sporadically, remaining at an exploratory or guided-use stage, without yet having integrated it consistently into their professional routines.

Intermediate Band (B1–B2): Around 31,6% are positioned as Integrators (24,52%) or Experts (7.10%). This is a noteworthy figure, as it suggests that nearly one in three teachers has moved beyond the initial stage of

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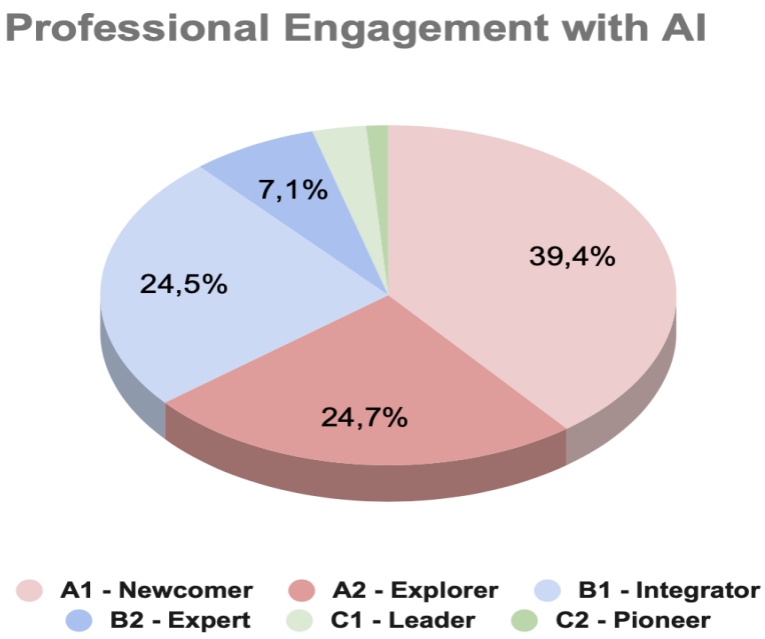
apprehension and is beginning to experiment with AI to manage professional tasks, although the proportion of those doing so with full mastery (B2) remains relatively limited.



Excellence and Leadership (C1–C2): Advanced profiles are marginal, accounting for just over 4% in total. Only 1,24% identify as “Pioneers”, capable of leading innovation or creating new models for the use of AI in schools.

The data on **Professional Engagement with AI** confirms the need for structured training: the concentration of over **64%** of teachers at the **A1/A2** levels indicates that AI is perceived more as a novelty to explore than as a consolidated professional tool. However, the presence of **30%** of intermediate profiles provides an excellent foundation for scaling innovation within the institutions

1.3.2 Digital resources with AI

This area covers the ability to select, create, and manage AI-enhanced digital educational resources. Compared to "Professional Engagement," the distribution is slightly more centered:

- **Entry-Level Range (A1-A2):** Approximately **60,6%** of teachers fall into this category. Notably, the percentage of **Explorers (A2 - 37,32%)** is significantly higher than **Newcomers (A1 - 23,25%)**, suggesting that many teachers have already begun experimenting with AI tools to search for or generate teaching materials.
- **Integration Range (B1-B2): 37,8%** identify as **Integrators (23,26%)** or **Experts (14,57%)**. This figure is higher than in the professional area (31,6%), indicating that content creation (such as AI-generated slides,

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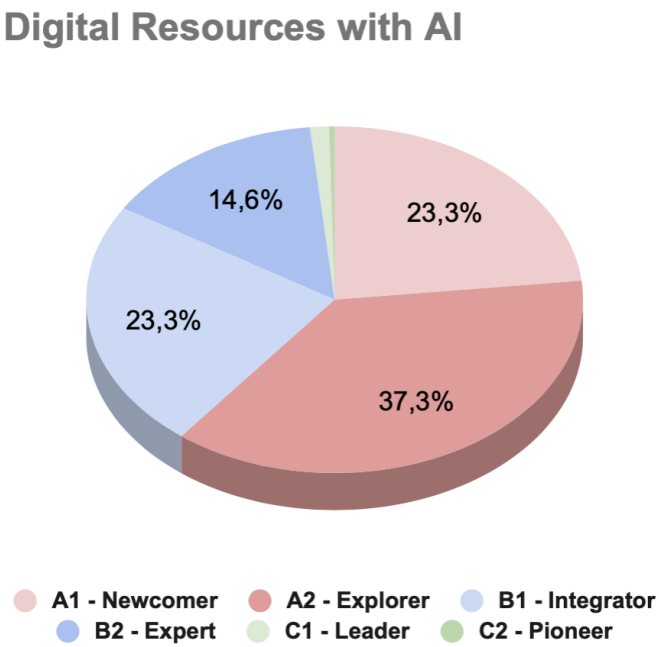
quizzes, or texts) is perceived as a more immediate and accessible application of the technology.

- **Excellence Range (C1-C2):** Advanced levels are nearly non-existent, totaling only **1,6%**.

Critical mastery in managing AI resource repositories or creating complex frameworks for the institution remains extremely rare.

The data on **Digital Resources with AI** shows a promising trend: while 60% of staff are still at the initial levels, there is a strong shift from A1 to A2, indicating an active phase of experimentation. The fact that nearly **38%** of teachers are already operating at an intermediate level (B1/B2) suggests that AI-driven content creation is a key entry point for digital innovation in our schools.

1.3.3 Teaching and learning with AI



This area focuses on the actual integration of AI into classroom practices, student support, and personalized learning. The data shows a more challenging landscape compared to digital resources:

- **Heavy Concentration in Initial Levels (A1-A2):** A staggering **80,28%** of teachers fall into the basic range. This is split almost evenly between **Newcomers (A1 - 39,01%)** and **Explorers (A2 - 41,27%)**, indicating that four out of five teachers have not yet moved toward a structured integration of AI into their teaching.

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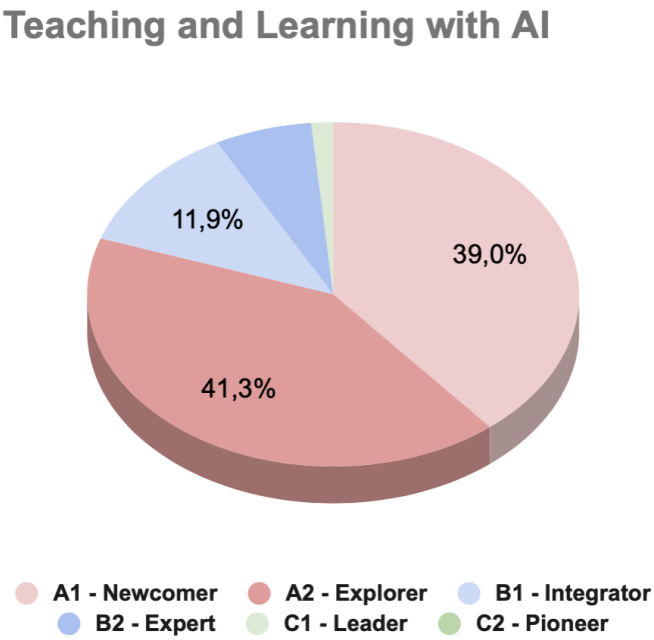
- **Shrinking Intermediate Range (B1-B2):** Only **18,31%** of teachers identify as **Integrators (11,91%)** or **Experts (6,40%)**. This significant drop compared to "Digital Resources" (37.8%) suggests it is far easier for teachers to use AI for lesson preparation than to implement it during active teaching.



- **Lack of Advanced Leadership (C1-C2):** Advanced profiles are minimal (**1,42%** at C1) or entirely absent (**0%** at C2), meaning there are currently no "Pioneers" to lead methodological transformation.

The data for **Teaching and Learning with AI** highlights a significant gap: while teachers are beginning to use AI to create materials, they struggle to integrate it into their classroom methodology. With over **80%** of staff at the **A1/A2** levels, future training must move beyond tool-based tutorials and focus on **AI-driven pedagogical strategies** to help teachers bridge the gap between preparation and active classroom implementation."

1.3.4 Assessment with AI

The data for **Assessment with AI** reveals the most significant gap across all analyzed areas, with a massive concentration of staff at the entry levels:

- **Overwhelming Concentration in Initial Levels (A1-A2):** A combined **88,76%** of teachers are in the basic range. Most notably, **61,72% are Newcomers (A1)**, meaning the absolute majority have not yet experimented with AI for assessment or monitoring purposes.
- **Marginal Intermediate Range (B1-B2):** Only **11,24%** of teachers feel capable of integrating AI into assessment processes (**7,68% Integrators** and **3,56% Experts**). This reflects deep methodological and ethical

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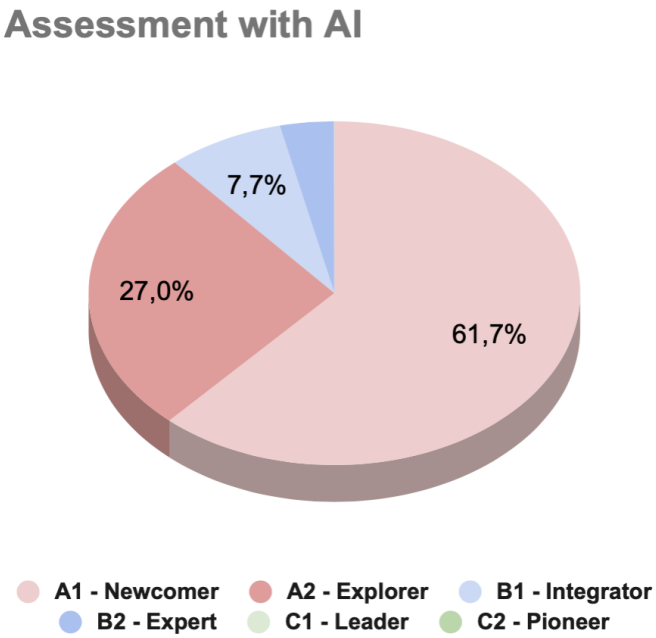
uncertainty regarding how AI can be used to evaluate student skills fairly.



- **Total Absence of Advanced Profiles (C1-C2):** Both **C1 and C2 levels stand at 0.00%**. There is currently no leadership or "Pioneer" profile capable of guiding innovation in learning analytics or automated assessment.

The **Assessment with AI** results indicates a critical area for intervention. With nearly **89%** of staff at the **A1/A2** levels and a total absence of advanced profiles, teachers clearly perceive assessment as the most sensitive and difficult field for AI integration. Training must urgently address not only the technical tools for feedback but also the **ethical implications and reliability** of AI-assisted evaluation.

1.3.5 Empowering learners with AI

The **Empowering Learners** area focuses on using AI to foster inclusion, personalize learning, and encourage active student engagement. The distribution is similar to the "Teaching and Learning" area but shows a slight increase in intermediate levels:

- **Exploration Phase (A1-A2):** Approximately **78,22%** of teachers are at the basic levels. The percentage of **Explorers (A2 - 40,64%)** is higher than **Newcomers (A1 - 37,58%)**, suggesting that many teachers have begun to recognize AI's potential for adapting content to diverse student needs (e.g., instant translation, text simplification, or speech-to-text).

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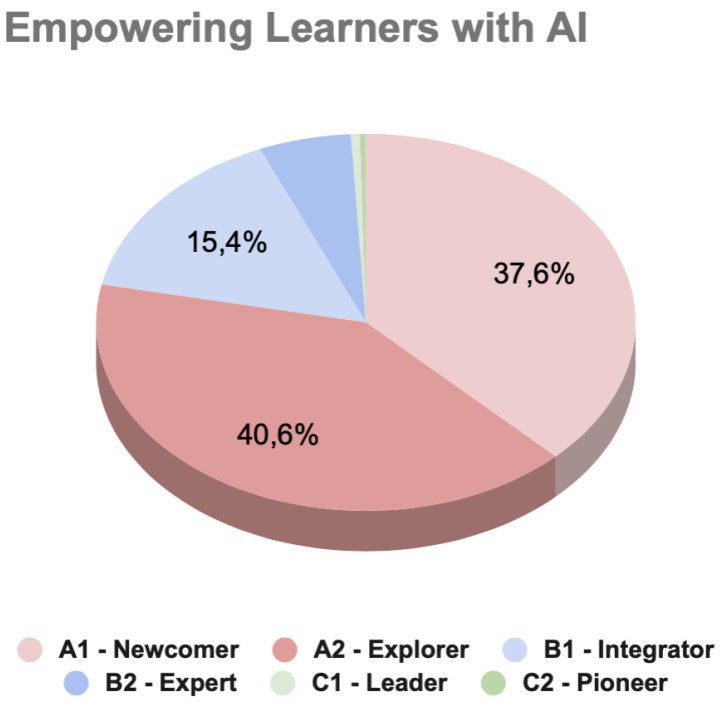
- **Intermediate Range (B1-B2): 20,88%** identify as **Integrators (15,35%)** or **Experts (5,53%)**. While higher than in "Assessment," this remains a minority, indicating that only one in five teachers systematically uses AI to differentiate learning pathways or support students with special educational needs.



- **Symbolic Presence of Excellence (C1-C2):** Advanced profiles are nearly non-existent (**0,54% C1** and **0,36% C2**), highlighting a lack of strategic leadership in using AI for universal accessibility.

Results for **Empowering Learners** show that while nearly **80%** of staff are still in the early stages of adoption, there is a clear interest in using AI for educational equity. The shift toward the **A2 level** indicates a workforce ready to move beyond basic awareness.

Training should now prioritize **AI-driven accessibility and personalized learning strategies** to help teachers transition from mere exploration to meaningful classroom integration.

1.3.6 Facilitating learners' digital competence

This area evaluates the teachers' ability to foster students' own digital and AI-related competences. The data shows a slightly more balanced distribution compared to other areas, yet it remains heavily weighted toward the early stages:

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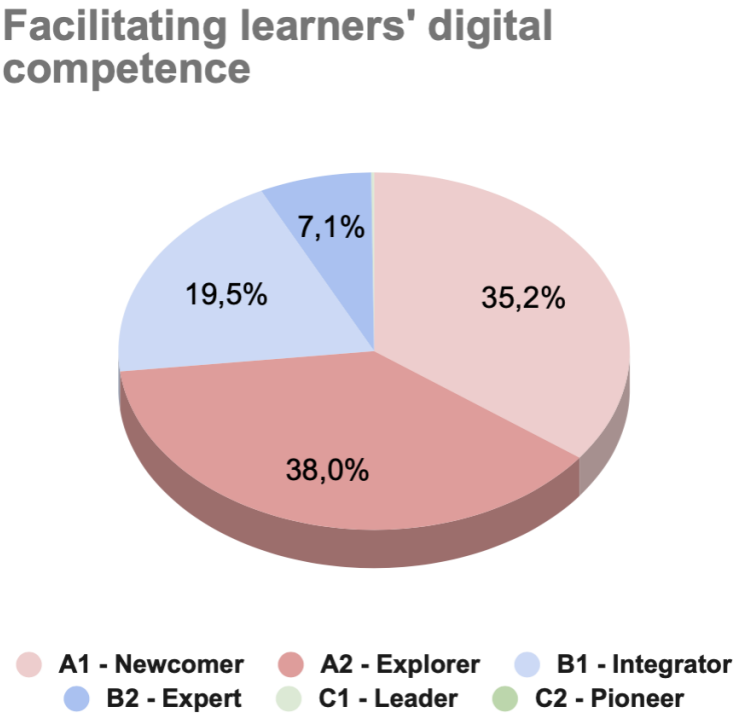
- **Prevalence of Initial Levels (A1-A2):** Approximately **73,19%** of teachers fall into the **Newcomer (35,16%)** and **Explorer (38,03%)** categories. This suggests that the majority of staff are still exploring how to guide students in AI use, acting more as observers than as expert mentors.
- **Growth in the Intermediate Range (B1-B2): 26,63%** identify as **Integrators (19,53%)** or **Experts (7,10%)**. This is a positive sign, indicating that over a quarter of the staff has begun to integrate activities where students actively use AI, fostering their digital autonomy.



- **Lack of Advanced Leadership (C1-C2):** Mastery levels are almost non-existent (**0,18% C1** and **0,00% C2**). Consequently, there is a lack of internal "pioneers" capable of designing innovative curricula focused specifically on students' AI literacy.

The results for **Facilitating Learners' Digital Competence** indicate that while nearly **73%** of teachers are still in the introductory phase, there is a solid core of **26%** already working at an intermediate level. This highlights a strategic opportunity: training should move beyond teacher-centric tools and focus on **student-centered AI literacy**, empowering educators to guide their students toward a critical and creative use of these technologies.

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1.4 General conclusions

The analysis of the aggregate data from the four partner institutions (**APRC, Scuola, SZÁMALK, and IET**) presents an extremely consistent picture and provides valuable insights for the next phase of the project.

1.4.1 Summary of the proficiency profile

Overall, the teaching staff exhibits a distribution of AI-related digital competences that resembles a very broad-based pyramid. Although there are slight instances of excellence (particularly within the **IET** group), the vast majority of teachers are positioned at the **A1 (Newcomer)** and **A2 (Explorer)** levels. This indicates that while there is a strong curiosity and an active phase of experimentation, artificial intelligence has not yet become a structural and widespread competence in daily professional practice.

1.4.2 Strengths and critical areas

- **Strengths:** The **Digital Resources** area shows the most dynamism, with nearly **38%** of teachers already integrating AI to create or select materials. This represents the ideal "entry point" for training.
- **Major Criticalities:** The areas of **Assessment** and **Teaching and Learning** are the weakest. The high number of 'Newcomers' (over 61% in assessment) **could perhaps stem from** a methodological and ethical hesitation that **may hinder** the adoption of AI during crucial moments of feedback and classroom management.

1.4.3 Guidelines for training design

Based on this evidence, the training pathways should be structured along three main lines:

- **Ethical and Practical Literacy:** Aimed at **A1/A2** levels, with the goal of reducing uncertainty and providing immediate use-case scenarios.
- **Methodological Transition:** Aimed at **B1/B2** levels, shifting the focus from simple "content creation" to classroom management and AI-enhanced assessment.
- **Creation of a Mentor Network:** Leveraging the small group of "**Expert**" and "**Leader**" teachers to act as internal facilitators, ensuring the long-term sustainability of innovation.

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2. WORKSHOP RESULTS

The following table details the workshops held.

Country	Partner organization	Workshop	Data	Partecipants
Lithuania	Alytus Vocational Training Center (APRC)	Workshop 1 - Companies	8-9 January 2026	46
		Workshop 2 - Teachers	19 January 2026	15
Italy	Scuola Cova	Workshop 1 - Companies	1 December 2025	12
		Workshop 2 - Teachers	19 January 2026	14
Unghery	SZÁMALK-Szalézi Technikum	Workshop 1 - Companies	10 December 2025	10
		Workshop 2 - Teachers	19 December 2025	12
Spain	Institut Escola del Treball	Workshop 1 - Companies	11 December 2025	20
		Workshop 2 - Docenti	17 December 2025	37

2.1 VITA Workshop 1: Company consultations

The 1st workshop is the first step of the VITA project's school-level consultation process, designed to gather up-to-date insights from companies, sectoral organizations, and labour-market actors about the impact of artificial intelligence (AI) on their operations and workforce needs.

Participants: teachers, school manager, AI mentors, company representatives.

Here is a brief summary of the four workshops held with companies, followed by a general synthesis.

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2.1.1 Synthesis by countries

Workshop 1 – Lithuania (Alytus Vocational Training Centre)

This consultation focused on the **engineering and construction/finishing** sectors. It emerged that AI is primarily used for support functions, such as information retrieval, document management, and administrative tasks, but is not yet integrated into core production processes. Companies see future potential in workflow optimization and require skills such as basic AI literacy, prompt engineering, and critical thinking.

Workshop 1 – Italy (Scuola Cova)

The workshop presented the **Neuroclima** project, involving the Politecnico di Milano and Kernel Studio. AI, specifically Large Language Models (LLMs), is being developed to promote global warming awareness using verified scientific data. Specific tools were identified, such as **LENS** (certified search engine), **BOT** (reliable chatbot), and **LEARN** (educational platform), highlighting the importance of data reliability to counter AI "hallucinations."

Workshop 1 – Spain (Institut Escola del Treball)

Focused on **renewable energy and marketing**, this workshop identified the use of tools like Gemini, ChatGPT, n8n, and Canva for content creation, customer service, and document workflow automation. Required skills include supervising AI outputs, managing automated workflows, and applying data quality and compliance criteria.

Workshop 1 – Hungary (SZÁMALK-Szalézi Technikum és Szakgimnázium)

Discussions covered the **IT and Art** sectors. In IT, tools like Microsoft Copilot are used for security and administration, while in the arts, DaVinci Resolve and Leonardo AI are employed for visual content creation and data analysis. New professional roles are emerging, such as AI solution sales experts and AI security administrators.

2.1.2 General synthesis of the four Workshop1 sessions

Common trends and shared needs emerged from these transnational consultations:

- **State of Adoption:** AI is currently in an early or "support" phase, used mainly to optimize administrative productivity, information research, and content creation, rather than core operational processes.
- **Key Competences:** There is a strong demand for transversal skills, particularly **critical thinking** to evaluate AI outputs, the ability to craft effective prompts (**Prompt Engineering**), and the management of data security and privacy.

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- **Reliability and Ethics:** A central theme is the need to use AI responsibly and ethically, ensuring that decisions are based on certified scientific data to avoid technological errors or "hallucinations."
- **Implications for VET Training:** The results highlight the urgency of aligning vocational curricula with real market needs, integrating sector-specific use cases, and promoting advanced digital literacy.

2.1.3 Selected sectors

The 1st workshop was focused on gathering, thanks to the involvement of company representatives, up-to-date insights from companies about the impact of artificial intelligence (AI) on their operations and workforce needs.

The following table shows the sectors involved in each country.

Partner organization	Country	Selected economic sector
Alytus Vocational Training Center (APRC)	Lithuania	Engineering and construction/finishing sectors
Scuola Cova	Italy	UX/UI design Digital modeling and fabrication (design and production)
SZÁMALK-Szalézi Technikum	Hungary	Information Technology and Art sectors
Institut Escola del Treball	Spain	Renewable energy and marketing sectors

2.2 VITA Workshop 2: Teachers' learning needs for applying AI in teaching practice)

The second workshop aimed to identify teachers' learning needs and preferences for integrating Artificial Intelligence (AI) in their teaching practice.

This workshop is built on two prior activities: the **SELFIE** self-evaluation survey and the **consultation with companies** (workshop 1) and provides input to the curriculum design and content development of the "AI-Powered Teaching for VET" course.

Participants: AI mentors (moderator, facilitator of the works), Teachers and trainers, school managers from the school, School leaders and/or digital coordinators.

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2.2.1 Synthesis by countries

Here is a summary of the four Workshop 2 sessions, focusing on consultations with teachers and school staff for the VITA project, followed by a comprehensive transnational synthesis.

Workshop 2 – Lithuania (Alytus Vocational Training Centre)

The workshop began with the results of the **SELFIE self-assessment**, which showed that most teachers possess a low-to-medium level of AI competence, using tools exploratively for lesson preparation and information research. While there is a strong openness to innovation, the main challenges involve lack of time, fragmented knowledge, and uncertainties regarding ethics and data protection. Teachers prioritized AI applications that increase productivity (material preparation, test design, and formative feedback) to reduce their administrative workload.

Workshop 2 – Italy (Scuola Cova)

In this workshop, practical group activities were conducted to test the limits of AI. Through case studies such as the "Unfaithful Literary Review" or the "Household Chemistry Exercise," teachers experienced how AI can go along with false premises or provide dangerous advice due to a lack of ethical filters. The central goal was to demonstrate AI's tendency toward **"hallucinations"** and confirmation bias. The proposed methodology is based on problem decomposition, structured prompting, and rigorous fact-checking against certified scientific databases to validate outputs.

Workshop 2 – Spain (Institut Escola del Treball)

The workshop revealed that teachers are in an exploratory phase, seeking "small, realistic improvements" in daily practice. Key gaps include critical thinking, prompt engineering, and the use of professional paid tools, which is often limited by costs. Priority training needs include AI for **managing diversity** (creating tailored activities for different learning levels), multimedia content creation, and advanced assessment.

Workshop 2 – Hungary (SZÁMALK-Szalézi Technikum és Szakgimnázium)

The workshop started from the SELFIE analysis, which revealed that the vast majority of teachers are at a Beginner (A1) or Explorer (A2) level. Although they are competent in evaluating digital resources, they show significant weaknesses in integrating AI into pedagogy and personalized assessment. The importance of **Design Thinking** emerged to balance pedagogy and technology, alongside a request for training on advanced models (AGI), cybersecurity, and the ethical use of AI for school assignments.

2.2 General synthesis of the four workshop 2 sessions

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The transnational consultation with teachers highlights the following pillars for the development of the VITA course:

- **Starting Level and Competences:** Most teachers are at an initial competence level. There is a gap between the ability to use AI for professional support and the ability to effectively integrate it into classroom teaching and assessment activities.
- **Training Priorities:** The most pressing need is the use of AI for **productivity and efficiency**. Teachers are looking for tools that reduce administrative burdens and facilitate the preparation of teaching materials, quizzes, and assessment rubrics.
- **Reliability and Ethics:** A recurring theme is the concern over data protection and the reliability of AI-generated content. It is considered essential to train teachers (and students) to recognize biases and technological hallucinations through critical thinking and source verification.
- **Teaching Methodology:** A modular and practical training approach (**blended learning**) is preferred, featuring micro-learning and real-world VET sector case studies, avoiding purely theoretical sessions.
- **Barriers to Adoption:** Lack of time, the cost of "Pro" software versions, and the rapid evolution of tools are the main obstacles identified for the sustainable integration of AI in schools.

2.3 General elements emerged in the workshops

2.3.1 AI Apps and environments mentioned

The sources mention numerous technologies, categorized into general-purpose tools and specific applications:

- **General-Purpose Tools and LLMs:** ChatGPT (OpenAI), Gemini (Google), Microsoft Copilot, Perplexity, NotebookLM and DeepSeek.
- **Content and Media Creation:** Canva for graphics, Leonardo AI and Adobe Firefly for images, DaVinci Resolve 20 for video, and video generators such as Sora and VEO.
- **Automation and Development:** n8n for automated workflows and Action Agents linked to Power Automate.
- **Neuroclima Project Environments (Italy):** LENS (certified search engine), BOT (reliable chatbot), DIALOGUES (moderated forum), LEARN (educational platform), and PLAY (gamification).

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- **Other Apps:** Gamma AI for presentations and Alexa integrated with chatbots.

2.3.2 Highlighted ethical issues

Ethical concerns are central and recurring across all national contexts:

- **Reliability and "Hallucinations":** The tendency of AI to invent information or follow false premises (confirmation bias) is considered a critical risk to scientific and historical accuracy.
- **Bias and Discrimination:** The risk that training data might influence output, producing biased or discriminatory results.
- **Intellectual Property:** Issues related to the copyright of generated material and the need to correctly cite sources.
- **Technological Dependency:** The fear of "AI overreliance," which could reduce the autonomy of thought for both students and teachers.
- **Transparency:** The need for clarity regarding automated decision-making processes, especially in assessments.

2.3.3 Security and safety issues

Security is addressed from both technical and behavioral perspectives:

- **Data Protection and Privacy:** GDPR compliance is the primary concern, along with uncertainty about how platforms use uploaded data for training.
- **Over-sharing:** The risk of unintentionally sharing sensitive corporate or personal data through prompts or AI access to databases.
- **Lack of Safety Filters:** Instances where AI provides dangerous practical advice (e.g., toxic chemical mixtures) due to the absence of robust ethical filters.
- **Academic Integrity:** The risk of plagiarism and the challenge of distinguishing between the legitimate use of AI and a student's original work.

2.3.4 Priority actions for schools

Workshop participants identified several priority actions:

- **Develop Critical Thinking:** Train teachers and students to critically evaluate AI outputs instead of passively accepting them.
- **Sector-Specific Integration:** Align school curricula with actual labor market needs using real-world industrial case studies.

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- **Promote Productivity:** Use AI to reduce the administrative burden on teachers (lesson preparation, quizzes, assessment rubrics).
- **Support for Diversity:** Leverage AI to create personalized learning paths and materials adapted to different skill levels or special needs.

2.3.5 Elements for teacher training and curriculum definition

To define an effective curriculum for the **VITA project** the following formative pillars have emerged:

- **Blended and Modular Methodology:** Training must be flexible, based on micro-learning, and immediately applicable to daily practice.
- **Core Technical Competences:** Include Prompt Engineering, understanding how models work (LLM, ML, AGI), and fact-checking techniques.
- **Transversal Ethics:** Ethical and legal issues should not be an isolated module but systematically integrated into every phase of learning.
- **Design Thinking:** Use this approach to maintain a balance between pedagogy and technology, ensuring that the tool remains at the service of educational goals.
- **Source Validation:** Train teachers to use certified scientific databases to verify AI-generated data.

2.3.6 VITA Modules, topics and micro-learning contents

The first draft of the teacher training program was defined and submitted to the schools for evaluation. Mentors were asked to assess the different items according to this scale:

- 4 - Essentials
- 3 - Very relevant
- 2 - Moderately relevant
- 1 - Slightly relevant
- 0 - Not relevant

As every item was assessed by at least one of the mentors as “Essential”, they are going to be involved in the training content as it was initially planned.

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Module	Topics	Micro-learning contents
Orientation Module – What teachers must understand before starting	1	5
Module 1: Introduction to Artificial Intelligence	4	17
Module 2: AI in economic sectors	2	11
Module 3: AI for supporting students' learning – modern pedagogical integration	3	15
Module 4: AI to Support and Enhance Teaching Practice – Practical Teacher Toolkit	5	18
Module 5: AI in Continuous Professional Development (CPD) of VET Educators	4	13
Total	**19**	**79**

VITA Modules & Micro Learning Contents

Orientation Module – What teachers must understand before starting

- What AI is and is not: debunking misconceptions
- What skills teachers actually need (critical thinking > ICT skills)
- Everyday examples of AI that teachers already use without noticing
- The role of pedagogy vs. technology in AI-powered teaching
- Overview of the 3-step VITA model (school-wide → blended learning → classroom pilots)

1. Introduction to Artificial Intelligence

1.1 Fundamentals of AI & Modern AI Ecosystem

- How AI works today: classical ML → deep learning → generative AI (LLMs, diffusion models)
- The multimodal era: text, image, video, audio, sensor data
- What is an LLM? (illustrated with examples)
- Why AI "hallucinates" and how teachers handle it
- Context windows, memory modules, and what they mean for education

1.2 Key learning paradigms

- Supervised, unsupervised, reinforcement learning – explained through VET-relevant examples
- What is fine-tuning, and why it matters, for sector-specific AI?

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- Agents and automation workflows (new 2025 topic)

1.3 Ethical, legal, and safe use of AI

- Bias, discrimination, data privacy, copyright
- EU AI Act and school responsibilities
- Responsible use guidelines for students and teachers
- "AI overreliance": how to avoid dependency and foster critical thinking

1.4 AI for societal challenges

- AI for green transition, sustainability, assistive technologies, inclusion
- AI in public governance, civic engagement, and democracy

2. AI in economic sectors

2.1 Cross-sectoral overview of how AI transforms professions

VITA partner schools will develop micro-learning contents about the present state of applying artificial intelligence in the economic activities related to the special qualification they deliver vocational education for their students.

Alytaus Profesinio Rengimo Centras, Lithuania

- Engineering
- Construction, finishing

Fondazione Giovanni e Irene Cova, Italy

- UX/UI design
- Digital modeling and fabrication

SZÁMALK-Szalézi Technikum és Szakgimnázium, Hungary

- Information Technology
- Arts and Humanities

Institut Escola del Treball, Spain

- Renewable energy
- Marketing

3. AI for supporting students' learning – modern pedagogical integration

3.1 Personalized and adaptive learning powered by AI

- AI-generated learning paths
- Adaptive assessments
- Multilingual support tools
- AI tutors: their benefits and risks

3.2 Developing transversal skills with AI

- Updated to emphasize active learning:
- Critical thinking: detecting bias, analysing outputs

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- Creativity with generative AI
- Collaboration using AI-supported group tools
- Communication with multimodal AI
- Digital literacy and data literacy
- Emotional intelligence through simulation scenarios

3.3 Inclusion and accessibility

- Assistive technologies
- Speech-to-text and text-to-speech
- AI for learners with special educational needs
- Real-time translation for multilingual classes

4. AI to Support and Enhance Teaching Practice – Practical Teacher Toolkit

Teachers desire support in daily tasks and materials creation; surveys show they lack confidence but are highly motivated to try.

4.1 AI for lesson and content creation

- Creating lesson plans, quizzes, worksheets, case studies
- Designing multimedia content (images, videos, simulations)
- Scriptwriting and storytelling for teaching videos
- Avoiding hallucinations to ensure reliability
- Citing and verifying AI-generated content

4.2 AI-supported formative assessment

- Designing rubrics with AI
- Real-time feedback generation
- AI-assisted portfolio evaluation
- Tools to detect plagiarism vs. legitimate AI use

4.3 Classroom management with AI

- Attendance, behaviour tracking, communication
- Automation of repetitive administrative tasks
- Secure and ethical data handling

4.4 AI as a reflective partner for teachers

- How to ask effective questions (prompting essentials)
- Using ChatGPT or DeepSeek to analyse teaching materials
- Self-reflection through conversational agents

4.5 Multimodal teaching with AI

- Images, presentations, simulations, coding
- Video generation for explaining concepts (Sora, VEO)

5. AI in Continuous Professional Development (CPD) of teachers

5.1 Becoming an AI-assisted professional

- Using LLMs for personalised skill development

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- Building a “teacher knowledge base” with AI (NotebookLM, deep search, memory)
- Learning new subjects faster with AI tutoring

5.2 Collaborative professional learning

- AI-supported teacher networks
- Peer mentoring with AI-generated templates
- Sharing microlearning units and best practices
- Participating in EU communities, DigCompEdu self-assessment

5.3 AI for pedagogical planning

- Aligning learning outcomes with EQF, DigCompEdu, DigComp 2.2
- Designing competence-based VET lessons and projects using AI
- Ensuring alignment with labour market needs identified in WP2 workshops

5.4 Teacher identity and wellbeing in the AI era

- Managing change and techno-stress
- Maintaining professional autonomy
- Ethical boundaries: what to automate, what not to automate

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Project Information

Project Basics

Project acronym: VITA
Project title: Vocational Innovation through Teaching with AI
Project ID: 2025-1-LT01-KA220-VET-000362456
Programme: Erasmus+
Action type: Cooperation Partnerships in Vocational Education and Training
Target group: VET teachers and trainers, VET schools
Beneficiaries: VET students and companies
Partner countries: Lithuania, Hungary, Italy, Spain
Duration: 1 September 2025 - 31 August 2027
Coordinator: Alytaus Profesinio Rengimo Centras, Lithuania

Objectives

The project aims to equip vocational (VET) teachers with the knowledge and skills to effectively integrate artificial intelligence (AI) into their teaching. It seeks to develop a comprehensive, scalable model that supports schools in crafting digital strategies aligned with AI advancements. The goal is to transform VET schools into learning organisations, enhancing their resilience and capacity for adapting to rapid technological changes in the age of AI.
The project will implement a three-step model:

- **STEP 1** – School-wide Initiation in VET Schools – **Warm Up**
- **STEP 2** – Blended AI Course for VET Teachers – **Learning by Doing**
- **STEP 3** – Practical Application and Reflection – **AI in Action**

Project results

- Foundations for "AI-Powered teaching" curriculum for VET.
- AI-Powered Teaching for VET – Curriculum
- Database of micro-learning content and video tutorial on AI.
- AI-enhanced lessons and projects in VET schools
- Micro-credentials for AI Pioneer VET Teachers
- Case studies on AI-enhanced lessons and projects in VET Schools
- Open-source eBook, with best practices of AI-enhanced teaching and learning.

Partners

- iTStudy Hungary Educational and Research Centre for Information and Technology Ltd. (Hungary)
- AICA Associazione Italiana Per L'Informatica e Il Calcolo Automatico (Italy)
- Fondazione Giovanni e Irene Cova (Italy)
- Institut Escola del Treball de Lleida (Spain)
- SZÁMALK-Salesian Post-Secondary Institute (Hungary)

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