# Developing Teacher Competencies through Digital and Blended Learning Initiatives

**POLICY DEVELOPMENT** | **PRACTICAL MEASURE/INITIATIVE** | SLOVENIA

## Timeline

2023 **Implementation** 2024 **Implementation** 2025 **Discontinued**

**ID number 48409**

## Background

In response to evolving educational needs, several initiatives have been launched to enhance teachers' digital competencies and modernise teaching methodologies. The integration of artificial intelligence (AI), blended learning, and digital tools in education is crucial for preparing students for the future. These initiatives focus on training educators, strengthening school strategies, and promoting innovative teaching approaches that align with European and national digital education priorities.

## Objectives

The key objectives of the policy development include:

(a) enhancing teachers' competencies in AI and digital education;
(b) supporting the adoption of blended learning approaches in VET schools;
(c) strengthening schools' strategic capacities for digital transformation;
(d) developing and sharing innovative teaching resources;
(e) establishing self-learning communities among educators.

## Description

Towards achieving these goals, several projects have been developed to support teachers in acquiring the necessary competencies, integrating digital technologies into teaching, and enhancing the overall quality of education.

Artificial Intelligence for Teachers (AI4T) (2021-2024)

The AI4T Erasmus+ K3 project, collaboratively developed by France (coordinator), Slovenia, Italy, Ireland, and Luxembourg, aimed to train teachers and school leaders in AI applications for education. With a focus on school mathematics, science, and English for students aged 15-16, the initiative provided training through common online resources (MOOC and Open Textbook) and national learning pathways (webinars, face-to-face sessions, online platforms). In Slovenia, 269 teachers from 76 general and VET upper secondary schools participated. An independent evaluation, using a randomised controlled trial, assessed the impact on teachers' attitudes and practices, supported by contextual data from school leaders and students. A policy recommendation document was also

developed within the project. In 2021 and 2022, the AI4T project focused on foundational work such as the preparation of training and educational resources and the design of evaluation instruments. Pilot studies on training and evaluation were carried out across all five European countries.

BlendVET/KIPSI – Blended Learning in VET (2021-2024)

Blended learning, combining classroom activities with digital technology, is increasingly essential in vocational education and training (VET). The BlendVET (KIPSI) project, managed by the Institute of the Republic of Slovenia for Vocational Education and Training (CPI) in collaboration with partners from Iceland and Norway, aims to support VET schools in effectively integrating blended learning into their curricula. The project provides professional support to VET providers, develops school strategies for blended learning, and trains teachers to use digital tools like H5P, virtual reality, and educational games.

Digital and Sustainable Teacher (2023-2026)

This initiative aims to equip educators with digital competencies necessary for the evolving educational landscape. The project focuses on integrating digital technologies into teaching practices and promoting sustainability and financial literacy. The training of at least 20 000 ‘digital teachers’ is a primary objective, along with fostering self-learning communities among educators. An international conference in October 2023 gathered over 1 000 educators to discuss digitalisation, sustainability, and financial literacy. Workshops covered various digital teaching methods, including interactive learning, project-based e-learning, and animated film creation.

**2023 Implementation**

Artificial intelligence for teachers (AI4T) (2021-2024)

By late 2022 and early 2023, a large-scale evaluation of the project began, starting with a pre-test questionnaire for teachers.

Following teacher training sessions in Slovenia (February-March 2023), a post-test questionnaire was administered to participating teachers, along with contextual questionnaires for school leaders and students. This was followed by interviews with teachers and school leaders in June and July 2023. Subsequently, data analysis and several dissemination events took place, including an event that brought together teachers from all participating countries to share their experiences.

At the end of 2023 national evaluation reports were prepared in all participating countries, as well as an international report.

BlendVET/KIPSI (2021-2024)

A national conference held in May 2023 in Trbovlje brought together 115 participants, focusing on digital transformation in education. During the event, the results achieved so far were presented, providing insights into Slovenia’s digital transformation strategy and the enhancement of digital competencies in education.

Participants had the opportunity to explore and interact with a range of modern teaching equipment, including motion sensor suits, virtual reality goggles, robotic controls, and industrial robotic arms.

A key highlight of the conference was the roundtable discussion, which focused on developing a pedagogical approach that integrates digital learning technologies systematically into VET teaching.

Digital and sustainable teacher (2023-2026)

The project organised an international conference held from 23 to 24 October 2023, attended by over a thousand teachers and headmasters from all levels of education in Slovenia. The conference aimed to enhance digital competencies and explore key concepts in computing, sustainability, and financial literacy. Its diverse programme

included lectures, workshops, and a roundtable discussion.

Over the two-day event, participants attended 11 lectures, 14 workshops, and engaged with a knowledge marketplace, an interactive event featuring booths and stands where stakeholders exchange good practices and showcase successful examples from the field of vocational education and training). Both national and international lecturers shared their knowledge with the participants. The conference concluded with a round table on an integrated approach to the digital and green transition in education.

In November and December 2023, the project organised four teacher trainings through the Academic and research network of Slovenia (Arnes). Using a digital learning platform provided by Arnes, online classrooms were offered to teachers on topics like ,My digital identity, ,Safe use of internet and devices, and ,Interactive content H5P.

**2024 Implementation**

Artificial intelligence for teachers (AI4T)

In 2024, all project results and deliverables were finalised. The final conference in Luxembourg in January brought together educators, policymakers, and researchers from across Europe to discuss the project’s achievements and explore AI's role in education. The event highlighted key findings from the project and showcased practical AI applications that can enhance teaching and learning. In 2024, updated resources were published, including the AI4T MOOC and an expanded Open Textbook, both adapted to address new AI tools like generative AI. These resources, available in multiple languages, were designed to improve teachers’ knowledge of AI and inform policymakers.

At the end of 2023 and early 2024, policy recommendations for the sustainable and ethical use of AI in education were published, along with national and international evaluation reports. The project deliverables demonstrate a clear commitment to empowering educators, addressing ethical, practical, and pedagogical considerations for integrating AI in education. In this regard, the project results align with the European AI Act, supporting the safe and responsible use of AI in educational contexts.

Blendvet/KIPSI

In March 2024, the hybrid final conference of the KIPSI project entitled ,Innovative, blended, successful, was organised ;in Ljubljana with 171 participants. It was intended for head teachers, school managers, and, of course teachers in vocational educational programmes, as well as other interested participants.

The participants were informed about the results of the project, focusing on innovations in blended learning for VET. The conference featured plenary sessions and workshops, allowing participants to share knowledge and best practices to enhance teaching and learning in the field.

Digital and sustainable teacher

In spring 2024, teachers training sessions continued, covering topics such as personalised learning, ICT in education, learning through play, project-based e-learning, animated film creation, geometric visualization on digital devices, and climate change awareness.

During the first half of the four-year project, over 15 000 educators, teachers, and lecturers from 410 educational institutions participated. The focus was on training multipliers, who acquired new competencies and transferred them to their colleagues.

At the end of October 2024, a second international conference, The Big Bang of AI and Its Effect on Education, Sustainable Development, and Financial Literacy: Where Are We Today and How Do We Move Forward?, gathered over 400 participants. National and international experts discussed AI's role in education, sustainability, finance, and daily life.

A parallel programme featured presentations of best practices and workshops on topics such as digital leadership for head teachers, dynamic geometry applications, and sustainable food production in the context of climate change.

**2025 Discontinued**

Within the framework of the Digital and sustainable teacher two trainings were organised.

Collaborative Robots in Education for Industry 5.0

This training was designed for vocational teachers in the fields of mechatronics, electrical engineering, and mechanical engineering who use the ABB GoFa collaborative robot in their teaching.The programme specifically targeted teachers from 30 vocational education institutions that had acquired the robot through a public call by the Ministry of Education of the Republic of Slovenia.

Participants gained in-depth knowledge of robot programming and operation, as well as experience in applying gamification in education. Through interactive tasks, they developed competencies for working with collaborative robots and acquired skills to address real-world industrial challenges.

Key content areas included the structure, operation and use of the ABB GoFa robot, working with XR technologies, gamification and problem-based challenges, and teamwork in the development of problem-solving exercises.

Creating Digital Content

This training focused on the use of advanced tools for creating digital content, including interactive presentations, posters, infographics, lessons, quizzes, and videos. The course, which was delivered as one-off training, focused on collaborative work, joint document editing, and project and product planning using an infinite whiteboard. It also covered the use of artificial intelligence and the adaptation of multimedia materials to ensure accessibility. Participants exchanged experiences, shared good practices, and jointly developed practical examples applicable across different levels of education.

The project was discontinued in 2025

# Bodies responsible

- Ministry of Education
- Institute of the Republic of Slovenia for Vocational Education and Training (CPI)

# Target group

### Education professionals

Teachers
Trainers
School leaders

### Entities providing VET

VET providers (all kinds)

# Thematic categories

### Modernising VET offer and delivery

Diversifying modes of learning: face-to-face, digital and/or blended learning;

adaptable/flexible training formats

**Teachers, trainers and school leaders competences**

Supporting teachers and trainers for green transition and sustainability

Supporting teachers and trainers for and through digital

# European priorities in VET

**VET Recommendation**

Flexibility and progression opportunities at the core of VET

VET as an attractive choice based on modern and digitalised provision of training and skills

**Osnabrück Declaration**

Establishing a new lifelong learning culture - relevance of continuing VET and digitalisation

# Subsystem

IVET

# Further reading

Digital and sustainable teacher

Blended learning in vocational education and training

AI for teachers

# Related policy developments

2025 **Implementation**

## TeachXR: The use of augmented reality in education

The TeachXR 2024-2026 project supports the research, piloting and deployment of XR technologies—covering virtual, augmented and mixed reality—in primary and upper secondary schools.

SLOVENIA

**Type of development**

Practical measure/Initiative

**Subsystem**

CVET

**Cite as**

Cedefop, & ReferNet. (2026). Developing Teacher Competencies through Digital and Blended Learning Initiatives: Slovenia. In Cedefop, & ReferNet. (2026). *Timeline of VET policies in Europe* (2025 update) [Online tool].

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