AN ERASMUS+PROGRAM – KEY ACTION 2
Cooperation partnerships in school education
2022-1-IT02-KA220-SCH-000087877

Co-funded by the European Union

INNOVATIVE METHODS AND ARTIFICIAL INTELLIGENCE IN MOOC FOR SPECIAL NEEDS TEACHER EDUCATION

FINAL CONFERENCE PROCEEDINGS

🗓️ **WEDNESDAY, MAY 28TH, 2025**
🕒 **14:30 – 17:30**
📌 **ODYSSEA ACADEMY, ATHENS**

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INTRODUCTION

The IA-ME Final Conference brings together the results, tools, and insights developed throughout the project's implementation, showcasing innovative approaches for enhancing inclusive education through digital technologies and artificial intelligence. This publication presents the key outcomes from the IA-ME initiative, which aimed to equip educators with AI-supported methodologies for designing and delivering inclusive, personalized education plans for students with Special Educational Needs (SEN).

The proceedings include a overview of the project methodology, tools such as the IA-CREATE platform and the IA-ME MOOC, as well as practical guidelines and training resources developed to support teachers in diverse educational contexts. This collection of contributions reflects the collaborative efforts of all project partners and highlights the impact of the IA-ME initiative in promoting equity, accessibility, and innovation in education.

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Chapter 1

Overview of the project

The IA-ME project aims to strengthen inclusive education by equipping teachers with AI-supported tools and methodologies for developing personalized education plans (PEPs) for students with Special Educational Needs (SEN).

Its core objectives are to promote equity in education, enhance teacher competence in inclusive digital practices, and leverage artificial intelligence to streamline planning and support processes.

The IA-ME methodology was developed through a structured process:

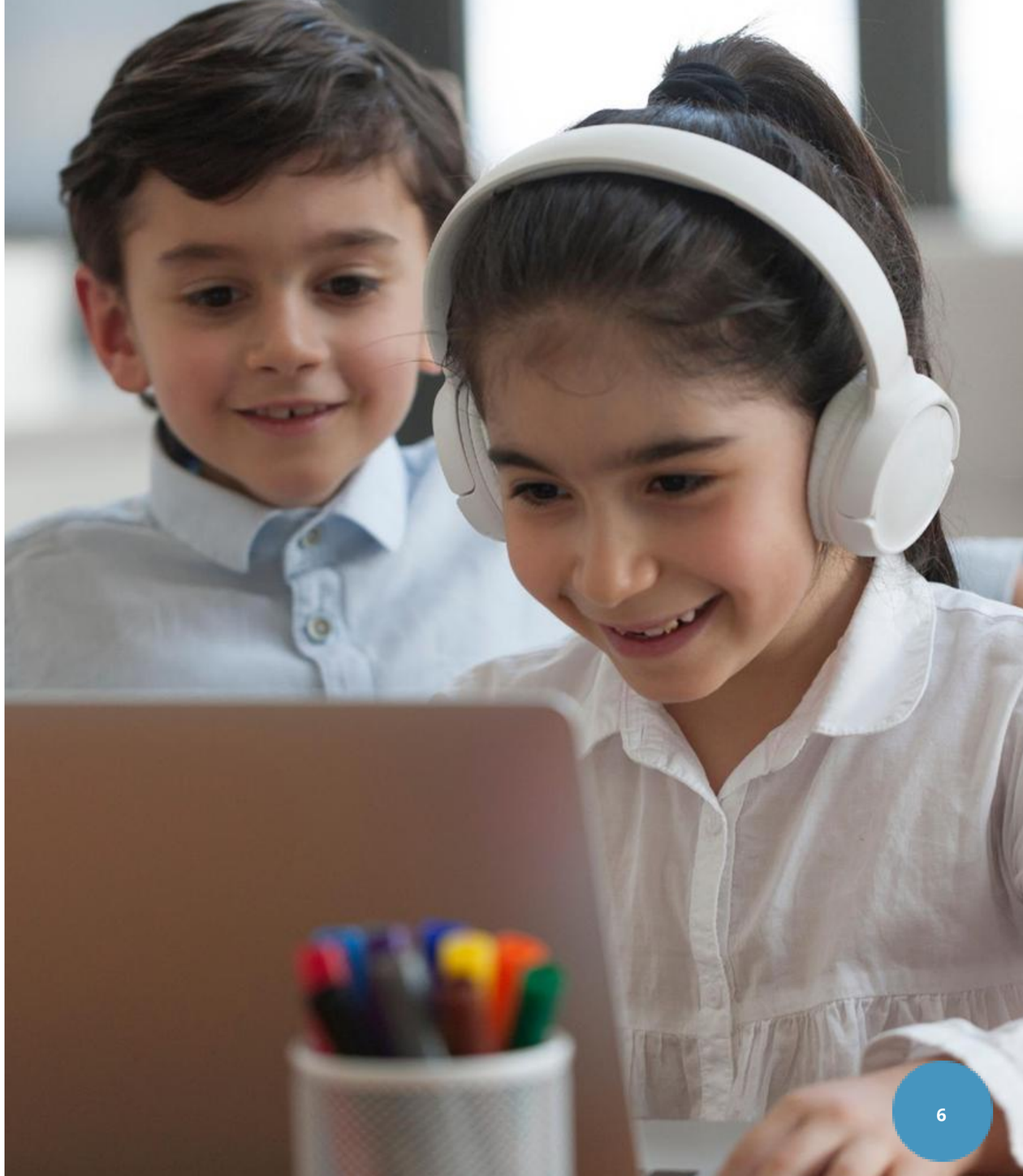
- a Needs Assessment across partner countries to identify teacher and learner challenges;
- development of AI-powered tool (the IA-CREATE Web App) to assist teachers in designing individualized support strategies;
- creation of a MOOC and training resources to prepare educators for implementation;
- Pilot testing and refinement of the methodology through evaluation sessions with primary level teachers across Italy, Greece, Turkey, Hungary, and Spain.

These steps were supported by active dissemination actions throughout the project.

The initial needs assessment, conducted across participating countries, revealed that teachers working with SEN students required practical tools to help them support personalized learning of their pupils, ideas on inclusive strategies they could apply, and efficient ways to document and monitor student progress, especially in digital formats.

Thus, the AI component in the IA-CREATE platform was designed and functions as an assistive tool that supports teachers by suggesting tailored educational strategies, visualizing student profiles, and facilitating sharing of the personalized education plans between educational actors (teachers, school managers, psychologists and family) —while keeping the educator in full control of decision-making.

In parallel, the IA-ME MOOC was developed as a flexible, multilingual training course designed to equip teachers with the knowledge and skills needed to implement inclusive education within formal and informal contexts.Finally, in the evaluation sessions, the teachers stated that the MOOC increased their knowledge on the topics, offered new tools to apply in the classroom and to facilitate student inclusion, and provided innovative content with clear practical application. Overall, they considered that it is useful for day-to-day teaching and is a course they would recommend.



Chapter 2

Guidelines for using ICTs in inclusive education

In today’s rapidly evolving educational landscape, inclusive teaching practices supported by digital innovation have become essential—especially for addressing the diverse needs of students with Special Educational Needs (SEN).The IA-ME Manual, is a resource developed under the Erasmus+ project "Innovative Methods and Artificial Intelligence in MOOC for Special Needs Teacher Education." Aimed at teachers and education practitioners, the manual serves as a comprehensive guide for implementing Information and Communication Technologies (ICT) and Artificial Intelligence (AI) in inclusive education, particularly for students with Special Educational Needs (SEN).

The manual is presented in three structured phases. The first phase maps the legal and pedagogical frameworks surrounding SEN in five European partner countries—Italy, Greece, Hungary, Turkey, and Spain. It explores national definitions of SEN, legal mandates, and the design of Individualized Education Plans (IEPs), underlining the importance of Universal Design for Learning (UDL).

The second phase highlights findings from national focus groups involving educators. These discussions reveal current teaching practices, perceptions of inclusive methods, and the use of digital tools. Teachers emphasized both the benefits and limitations of technology in inclusive settings, underscoring the need for structured guidance and skill development.

The third and final phase offers hands-on strategies, including best practices and concrete guidelines for teachers to effectively integrate ICTs into their classrooms. It features a curated catalogue of inclusive technologies, assessed using UDL criteria and inclusiveness scores, to support personalized, accessible, and equitable learning environments.

Overall, the manual's role is both a theoretical foundation and also a practical toolkit, empowering educators to meet the diverse needs of SEN students through innovation and collaboration.

Chapter 3

IA-CREATE FROM DEVELOPMENT TO IMPACT

The increasing diversity in today's classrooms presents both a challenge and an opportunity for educational systems. As students bring varied backgrounds, abilities, and learning needs, teachers must adopt inclusive and effective strategies to ensure equal access to quality education. In this context, innovative tools that support personalized learning and inclusive practices are essential.

IA-CREATE (Innovative Application – Customized Resources for Educational Achievement and Tailored Experiences) is a digital platform developed within the European project IA-ME. Its main goal is to support teachers in designing personalized educational pathways tailored to each student's unique needs, fostering meaningful and inclusive learning experiences. By leveraging technology, IA-CREATE helps address the growing complexity of educational planning in diverse classrooms.

At the core of IA-CREATE is the CREATE+ questionnaire, built on a robust pedagogical framework combining evidence-based theory with practical teaching approaches. The questionnaire helps teachers assess students' educational needs along two main dimensions: special educational needs and general competencies. Based on the responses, the platform automatically generates personalized educational pathways, offering targeted objectives, teaching strategies, inclusive practices, and recommendations for educational technologies.

To evaluate the platform's usability and effectiveness, primary and secondary school teachers from five partner countries—Italy, Greece, Turkey, Hungary, and Spain—participated in pilot testing. Using the System Usability Scale (SUS), IA-CREATE achieved an average score above 70, reflecting good usability and a positive user experience.

Teachers appreciated the intuitive interface, which made the platform accessible even to those with limited technological skills. Many reported significant time savings in creating personalized plans, as IA-CREATE streamlined the process while maintaining opportunities for customization. They found the educational objectives aligned with traditional approaches, reinforcing the platform's pedagogical validity. Additionally, teachers valued the recommended strategies and technologies, finding them useful for meeting diverse learning needs and creating inclusive learning environments.

Overall, IA-CREATE shows strong potential as a practical tool to enhance personalized and inclusive education, providing teachers with meaningful, evidence-based support to better meet the needs of all students.

Chapter 4

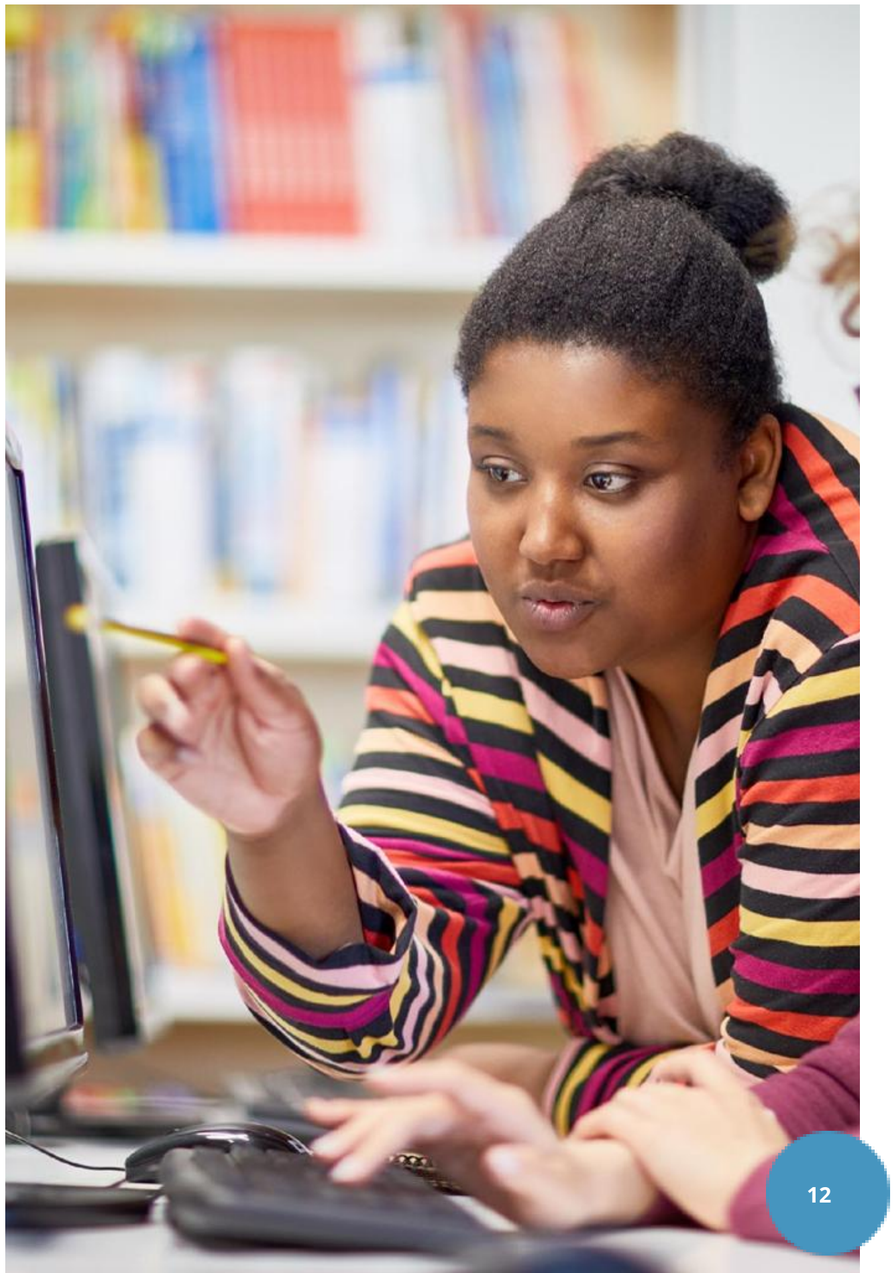
IA-ME Project: MOOC Development and Evaluation

Within the framework of the IA-ME project 1 , Work Package 4 (WP4) focused on the design, development, and evaluation of a Massive Open Online Course (MOOC) aimed at promoting inclusive education. The activities took place from October 2024 to December 2025 and culminated in the release of a structured and multilingual online course.

The MOOC was designed to support educators, such as subject teachers, support teachers, andeducators in general, who face the daily challenge of managing diverse classrooms. Its objectives include strengthening competences in inclusive education, promoting the use of innovative digital tools, and supporting personalised teaching approaches.

Structured in seven thematic modules, each composed of two learning units, the course follows an eight-step pedagogical model combining video lessons, supplementary materials, individual study resources, and self-assessment quizzes. The MOOC offers over 14 hours of learning content and is fully available in six languages.

The course is hosted on the Moodle platform, selected for its flexibility, multilingual support, and certification functionalities. Participants can track their progress through badge acquisition, with a final certificate issued upon completion of all modules. To create continuity within the project ecosystem, the MOOC has been integrated with the IA-Create app, and a dedicated module within the course explores the app’s functionalities. Access to the MOOC is available via the results page on the IA-ME project website.



EVALUATION PLAYED A CRUCIAL ROLE IN ENSURING THE QUALITY AND EFFECTIVENESS OF THE COURSE. FIVE TYPES OF ASSESSMENTS WERE CONDUCTED: PRE/POST KNOWLEDGE EVALUATION, USABILITY TESTING VIA THE SYSTEM USABILITY SCALE 2 (SUS), USER FEEDBACK THROUGH INTERVIEWS, COMPARATIVE ANALYSIS ACROSS PARTNER COUNTRIES, AND INDEPENDENT EXPERT REVIEWS. RESULTS CONFIRMED KNOWLEDGE GAINS, HIGH USABILITY (AVERAGE SUS SCORE: 90.75), AND STRONG OVERALL APPRECIATION. EXTERNAL EXPERTS VALIDATED BOTH THE PEDAGOGICAL AND TECHNICAL QUALITY OF THE MOOC, PRAISING ITS DIVERSE CONTENT FORMATS AND USER-FRIENDLY PLATFORM.

ALTHOUGH THE TARGET OF REACHING 500 PARTICIPANTS HAS NOT YET BEEN ACHIEVED,DISSEMINATION ACTIVITIES ARE ONGOING TO MEET THIS OBJECTIVE. THE IA-ME MOOC REPRESENTS A VALUABLE TOOL FOR PROFESSIONAL DEVELOPMENT IN INCLUSIVE EDUCATION, SUPPORTING EDUCATORS ACROSS EUROPE IN ADOPTING MORE INCLUSIVE AND DIGITALLY ENRICHED TEACHING PRACTICES.

Chapter 5

EU guidelines for the personalization of teaching path with SEN students

In line with the European Union's mission, objectives, commitments and recommendations on inclusive education and equal rights to quality education, IA-ME highly engages to support teachers in the assessment, monitoring, planning of tailored educational plans for SEN students, using an innovative AI-based tool.

The European Union’s strategic framework for inclusive education underscores the importance of personalizing learning pathways for students with Special Educational Needs (SEN), grounded in principles of equity, human rights, and social justice. It is a central goal across Europe, guided by policies fostering inclusive, accessible education.

The European Agency for Special Needs and Inclusive Education (EASNIE) promotes inclusive practices aligned with the EU’s “European Pillar of Social Rights” (2017), particularly Principle 18, which affirms the right to inclusive education. These key initiatives promote differentiated instruction, collaboration among educators, and personalized Education Plans (IEPs).

The European Disability Strategy 2010-2020 (extended to 2030) emphasizes accessible learning environments, assistive digital technologies/EdTech, and adequate teacher training, utilizing tools like speech-to-text and screen readers.

The European Guidelines for Inclusive Education (2014) advocate for flexible curricula, Universal Design for Learning (UDL), and differentiated assessment practices, supported by digital tools such as adaptive learning platforms, and interactive whiteboards, to ensure that diverse learner needs are met. The Digital Education Action Plan (2021–2027) encourages the integration of AI-driven personalized adaptive education systems, accessible digital content, and continuous professional teacher development (training) programs SEN and non-SEN teachers to foster inclusive digital and non-digital learning environments and climate.

International commitments, such as the UN Convention on the Rights of Persons with Disabilities, reinforce inclusive policies and cross-sector collaboration for holistic support. These policies collectively reinforce the EU's commitment to embedding inclusivity within educational systems, emphasizing evidence-based practices, the integration of assistive technologies, and cross-sector cooperation—spanning education, healthcare, and social services—to promote equal educational opportunities and uphold the rights of SEN learners across member states.

Wellbeing and mental health at school Guidelines for policy makers, school leaders, teachers and educators (Directorate-General for Education, Youth, Sport and Culture 2024) advocate for Creating a positive and supportive environment for all learners (including those with permanent or temporary special educational needs and/or disabilities - SEND - for whatever reason).
This document particularly highlights that the school considers the inclusive education, engagement, and sense of belonging of students with SEND to be equally important as for non-SEND students.

Overall, these strategies leverage innovative tools and inclusive practices to ensure equal educational opportunities, emphasizing the integration of digital technologies and tailored approaches to meet the diverse needs of SEN learners.

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