



PREVENTING AND FIGHTING EARLY LEAVING
FROM EDUCATION & TRAINING WITH AI

stAI

Act before it happens: Preventing and fighting Early Leaving
from Education and Training with Artificial Intelligence

Mapping the main risk factors of ELET

T2.4 Recommendations about the most effective intervention strategies - including the use
of AI technology - to be adopted to prevent and combat ELET

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Co-funded by
the European Union

PROJECT INFORMATION

Project acronym:

stAI

Project title: Act before It Happens: Preventing and Fighting Early Leaving from Education and Training with Artificial Intelligence

Project N°:2023-1-IS01-KA220-SCH-000157308

Sub-programme or KA:

KA220-SCH - Cooperation Partnerships in School Education

Website: www.stai-edu.eu

Consortium:



SCHOOL OF EDUCATION



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Summary

This handbook provides comprehensive, evidence-based guidance for preventing and combating Early Leaving from Education and Training (ELET). It serves as a practical resource for educators, policymakers, technologists, researchers, and AI developers, offering strategies to identify, intervene, and support at-risk students effectively and ethically. The handbook bridges the gap between predictive AI insights and real-world educational practices, helping stakeholders integrate AI responsibly into school systems while ensuring that interventions are ethical and culturally sensitive. It emphasises data protection and transparency in compliance with relevant regulations.

Traditional methods such as tracking attendance, academic performance, and behavioural indicators remain crucial for identifying students at risk of leaving education early. However, the integration of AI-powered tools adds a new layer of precision by enabling the analysis of large datasets to uncover subtle patterns that might otherwise go unnoticed. Predictive models can identify early warning signs, allowing for more timely and targeted interventions.

The handbook presents a structured approach for integrating AI into education, emphasising alignment with existing frameworks and goals. It recommends starting with a needs assessment, involving stakeholders, and ensuring adequate infrastructure and data management. Educators should be trained to use AI insights responsibly, supported by transparent communication with students and parents. Ethical implementation is essential, along with continuous monitoring to prevent bias. Ultimately, AI should enhance, not replace, teachers' professional judgment.

The handbook aligns with European ethical standards, including the EU AI Act and the Ethics Guidelines for Trustworthy Artificial Intelligence, emphasizing the principles of human oversight, technical robustness, privacy, transparency, fairness, societal well-being, and accountability. It calls for the design of AI systems that respect autonomy, protect sensitive data, and promote equity and inclusion.

The handbook calls for a collective effort among educators, policymakers, and technology developers to address ELET through a balanced combination of traditional and AI-driven strategies. Policymakers must invest in infrastructure and ethical frameworks, educators should receive continuous professional trainings to use AI effectively, and developers must prioritise transparency and fairness in system design.