AI4T

AI FOR TEACHERS

AI4T, a pioneering project for AI in education: Background, implementation and results

Co-funded by the Erasmus+ Programme of the European Union

le cnam Cnesco

23 May, 2024

The AI4T project

Why?

- Support secondary school teachers in the use of AI in the classroom.
- Create a professional learning pathway that promotes the meaningful use of AI resources in the classroom.
- Conduct an independent evaluation of the professional learning pathway to guide public policies

For whom ?

Teachers of **mathematics**, **science**, and **modern languages** with classes of students aged 15-17.

What?

From **November 2022 to June 2023**, a total of **1,005 teachers from 322 schools** in **five countries** participated in the AI4T large scale experimentation, which included a MOOC, an open textbook, webinars and face-to-face sessions.

Co-funded by the Erasmus+ Programme of the European Union

le cnam Cnesco

AI4T AI FOR TEACHERS

The evaluation

The evaluation findings shed light on:

- the state of teachers' knowledge, perceptions and use of AI in five countries at the beginning of the experiment
- the impact of providing professional learning pathways to teachers on their knowledge, perceptions and use of AI in five countries
- the factors influencing the successes or failures of the intervention and the adjustments that could be made based on teachers' and school leaders' insights

Co-funded by the Erasmus+ Programme of the European Union

le cnam Cnesco

AI4T AI FOR TEACHERS

The evaluation method

- A randomized controlled trial: comparison between a group of teachers taking part in the professional learning pathway and a control group
- A variety of evaluation instruments: surveys, interviews, digital traces
- A theoretical framework and quantifiable outcomes based on existing research on digital technologies, AI and professional learning

Co-funded by the Erasmus+ Programme of the European Union

Sample

		France	Ireland	Italy	Luxembourg	Slovenia	Total
Number of teachers		180	14	275	10	257	**736**
Percentage of teachers per subject	*Math*	55%	50%	31.6%	30%	44.3%	**42.1%**
	Modern language	40.6%	43%	35.6%	50%	35.8%	**37.2%**
	Other	4.4%	7%	32.8%	20%	19.9%	**20.7%**

Particularity: volunteer teachers

Co-funded by the Erasmus+ Programme of the European Union

le cnam Cnesco

AI4T AI FOR TEACHERS

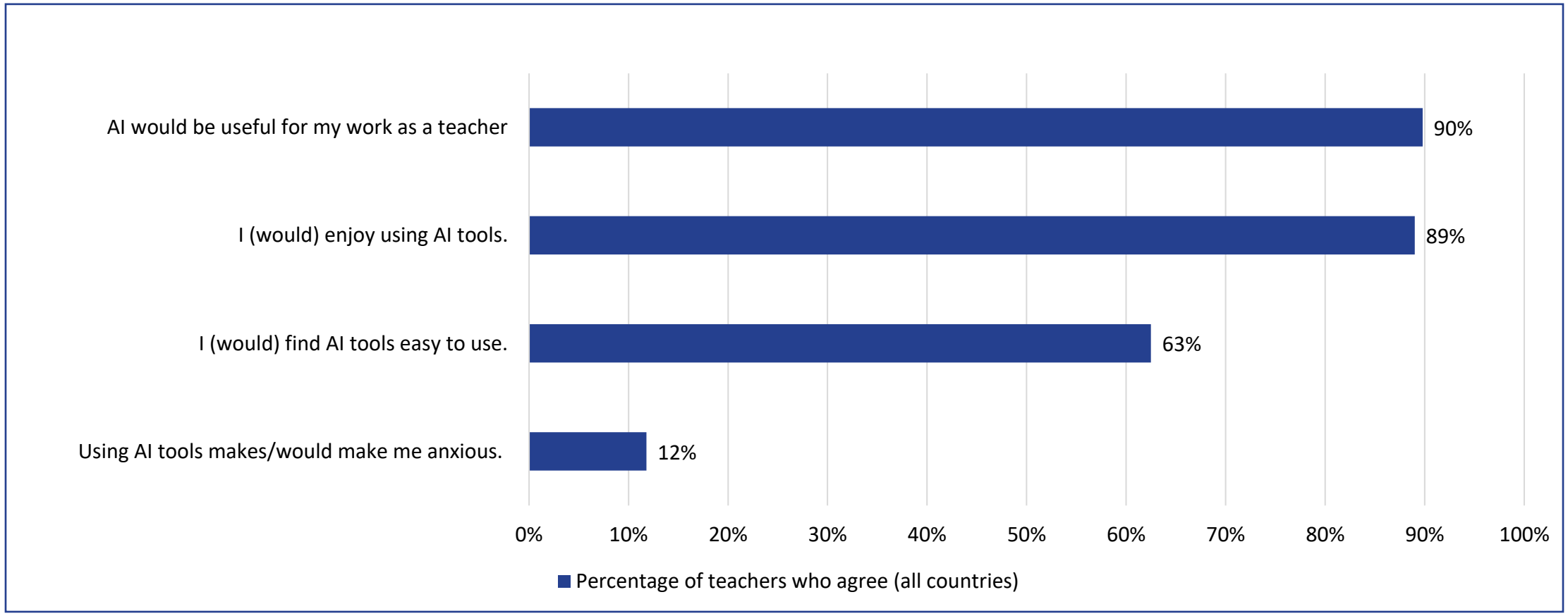
Teachers’ pre-experiment perceptions, knowledge and use of AI

Co-funded by the Erasmus+ Programme of the European Union

le cnam Cnesco

AI4T AI FOR TEACHERS

Teachers' pre-experiment perceptions of AI

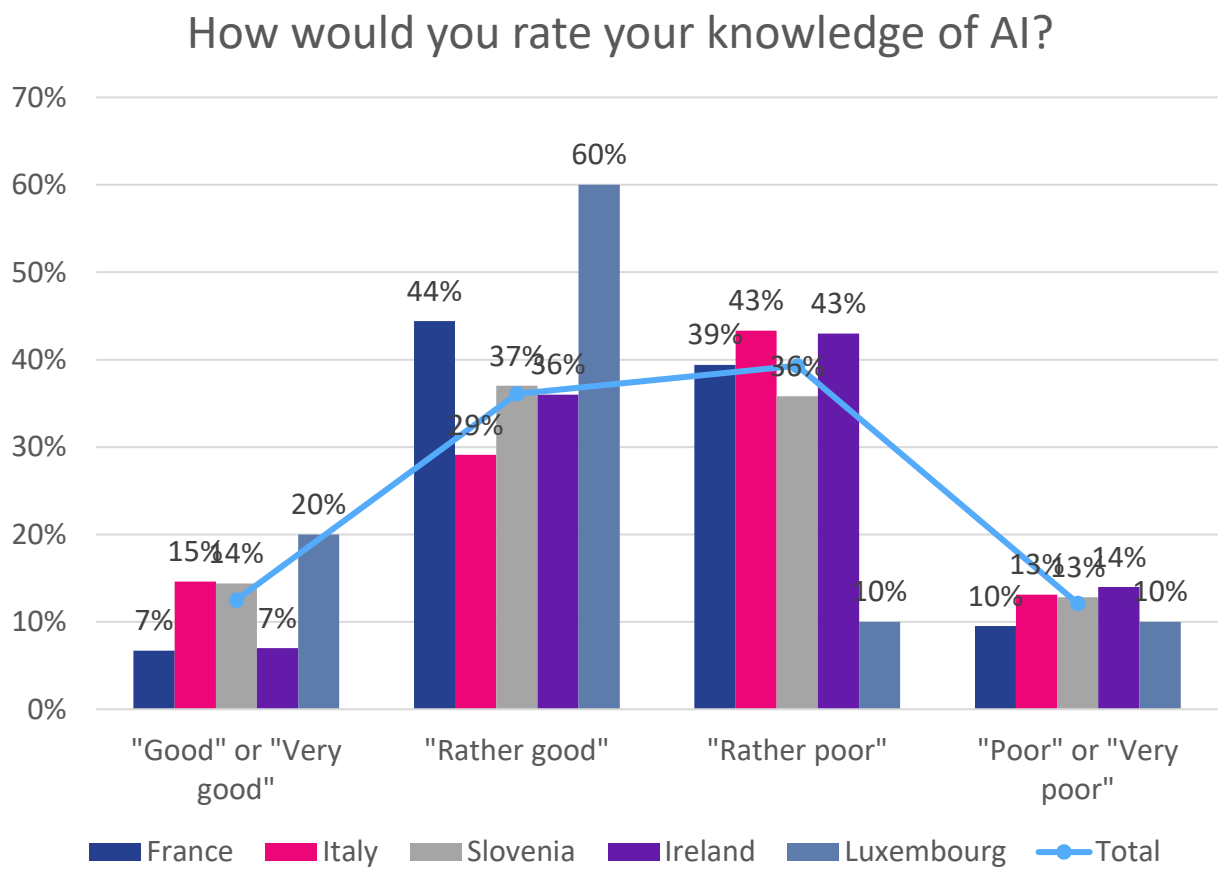


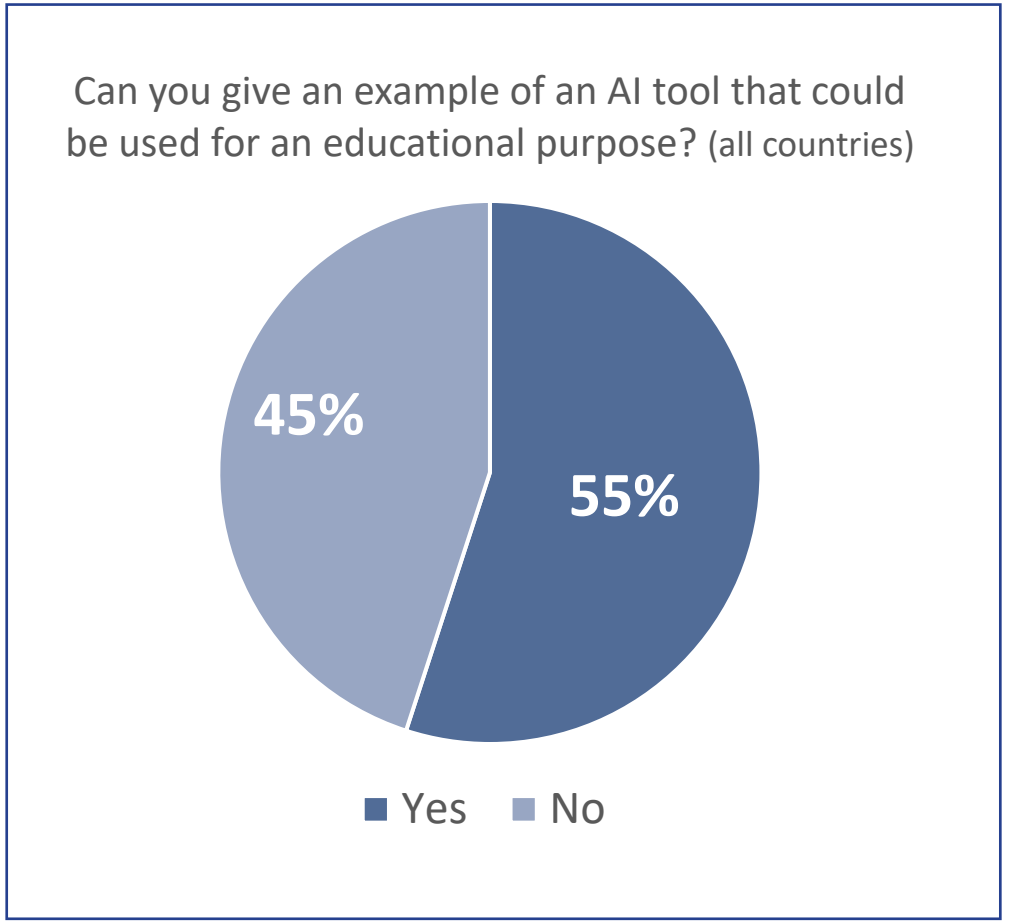
Co-funded by the Erasmus+ Programme of the European Union

le cnam Cnesco

AI4T AI FOR TEACHERS

Teachers' pre-experiment knowledge of AI



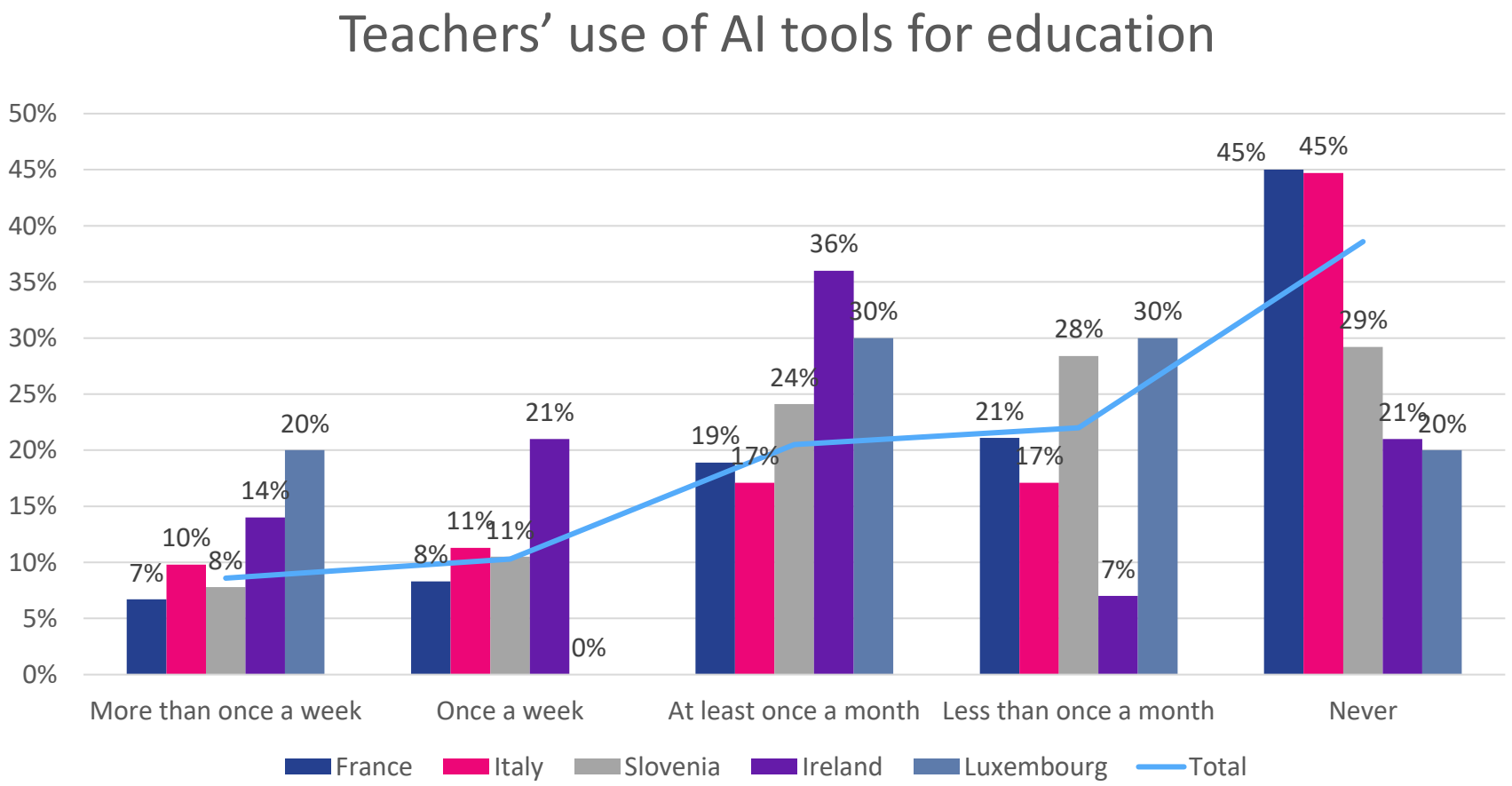


Co-funded by the Erasmus+ Programme of the European Union

le cnam Cnesco

AI4T AI FOR TEACHERS

Teachers' pre-experiment use of AI



33% of Slovenian math teachers used Photomath and 51% asked their students to use it

58% of language teachers used machine translators (all countries)

Co-funded by the Erasmus+ Programme of the European Union

le cnam Cnesco

AI4T AI FOR TEACHERS

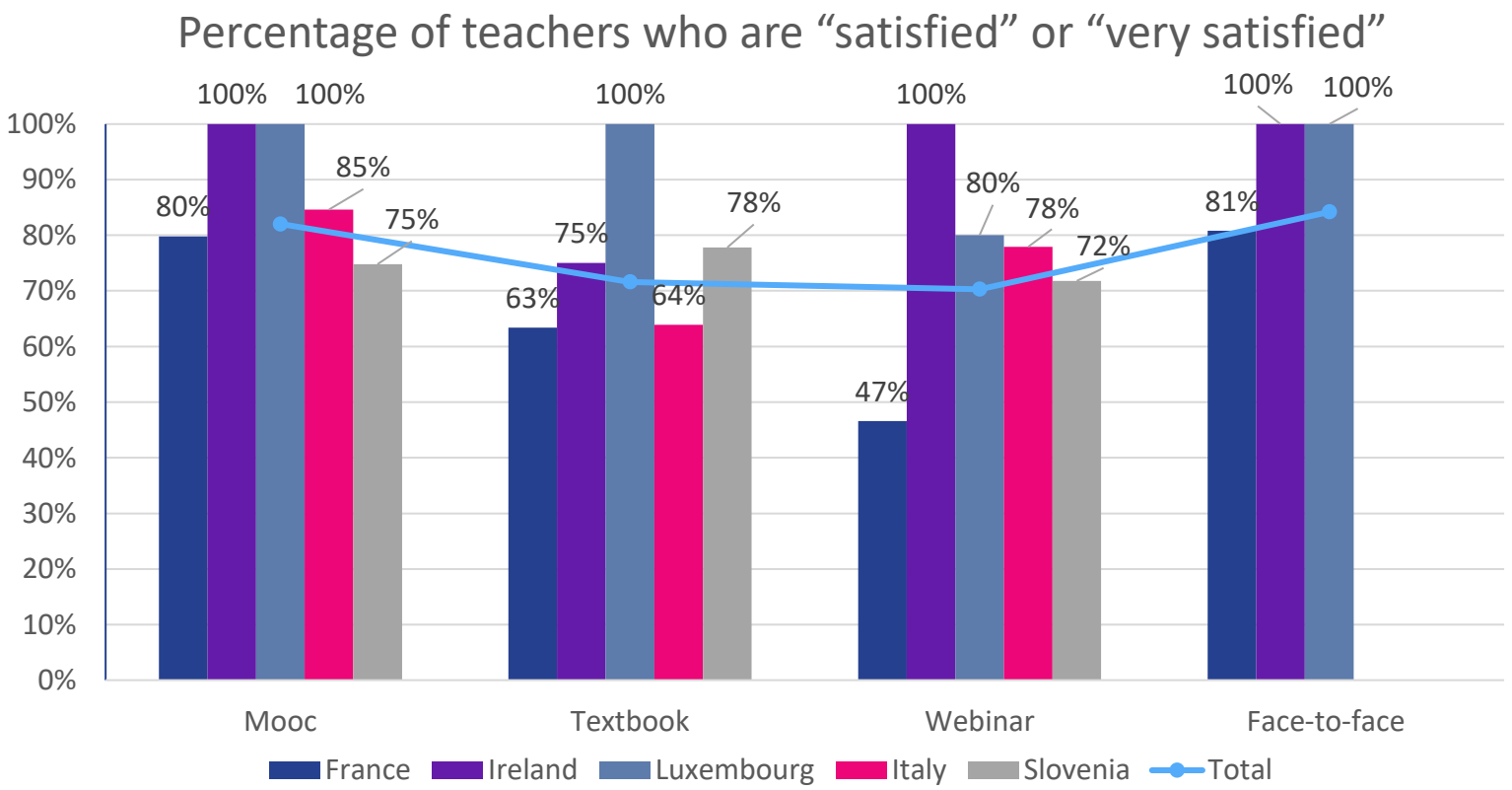
Evaluation of the professional learning pathways

Co-funded by the Erasmus+ Programme of the European Union

le cnam Cnesco

AI4T AI FOR TEACHERS

Satisfaction with the intervention



Reasons why teachers were satisfied:

Quality of content
Quality of pedagogical team
Peer-to-peer interactions
Blended-learning (and interactive webinars in Italy)

Co-funded by the Erasmus+ Programme of the European Union

Impact of the intervention on teachers' knowledge of AI

Countries*	Self-assessment of knowledge of AI	Knowledge of how AI works	Familiarity with AI technologies	Identification of AI tools as AI
France	↗	n.s*	↗	↗
Italy	↗	↗	↗	↗
Slovenia	↗	↗	↗	↗

"I learned a lot. What AI is, how it works, how to use it. I've also had a glimpse of the future – where education is going."

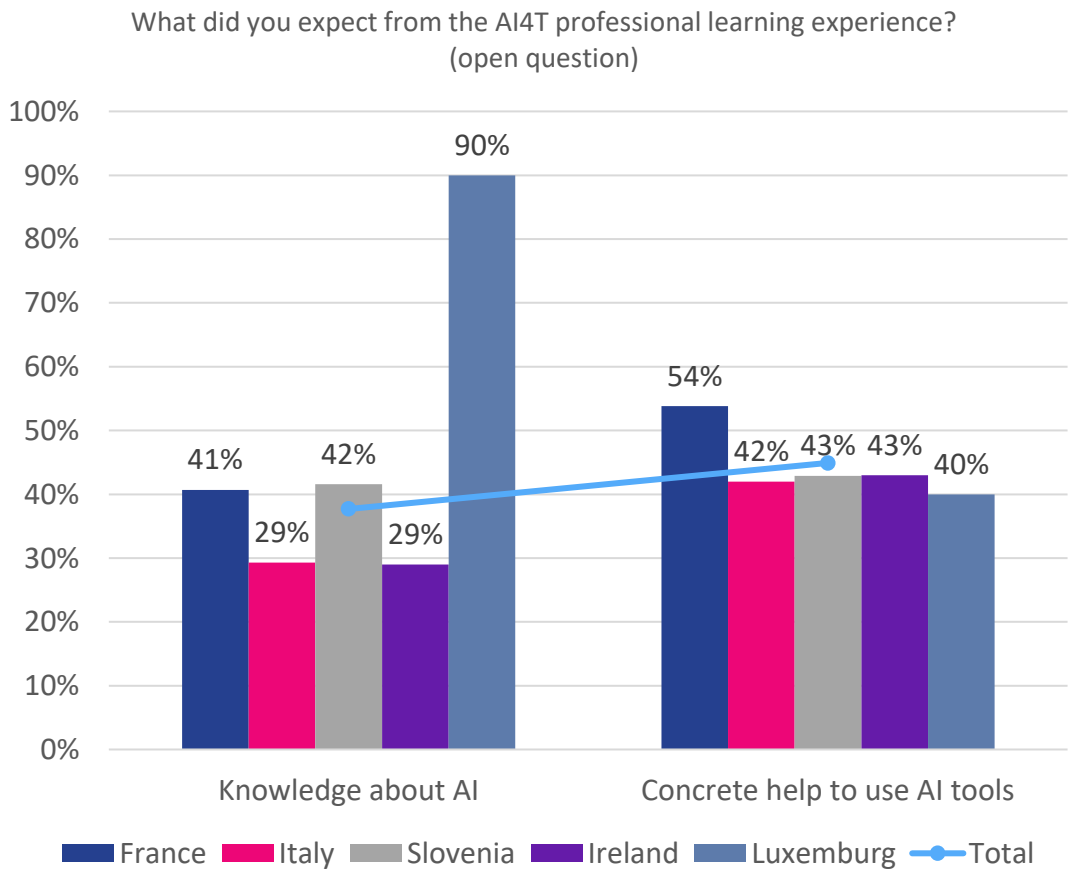
*In Ireland and Luxemburg, similar trends were observed on all indicators.
*n.s: non-significant

Co-funded by the Erasmus+ Programme of the European Union

le cnam Cnesco

AI4T AI FOR TEACHERS

A demand for more practicality



"I expected more concrete situations from the classroom. How to apply this in a concrete situation. Not so much the theoretical part, although I know we need to know that too. But I would have liked to have been told: in the second year, when dealing with vectors, we can do this and that with the help of AI."

Co-funded by the Erasmus+ Programme of the European Union

le cnam Cnesco

AI4T AI FOR TEACHERS

Impact of the intervention on teachers' use of AI

	Use of AI	Frequent use of AI	Intention to use AI	Use of Kwyk	Use of Vittasciences
French teachers (all)	n.s	n.s	n.s	n.s	n.s
high self-efficacy with technology	n.s	n.s	n.s	↗	↗
low self-efficacy with technology	n.s	n.s	n.s	n.s	n.s
Italian teachers (all)	↗	n.s.	n.s.		
high self-efficacy with technology	↗	n.s	n.s		
low self-efficacy with technology	↗	n.s	n.s		
Slovenian teachers (all)	n.s	n.s	↗		
high self-efficacy with technology	n.s	n.s	n.s		
low self-efficacy with technology	↗	n.s	↗		

Co-funded by the Erasmus+ Programme of the European Union

le cnam Cnesco

AI4T AI FOR TEACHERS

Main barriers for the use of AI

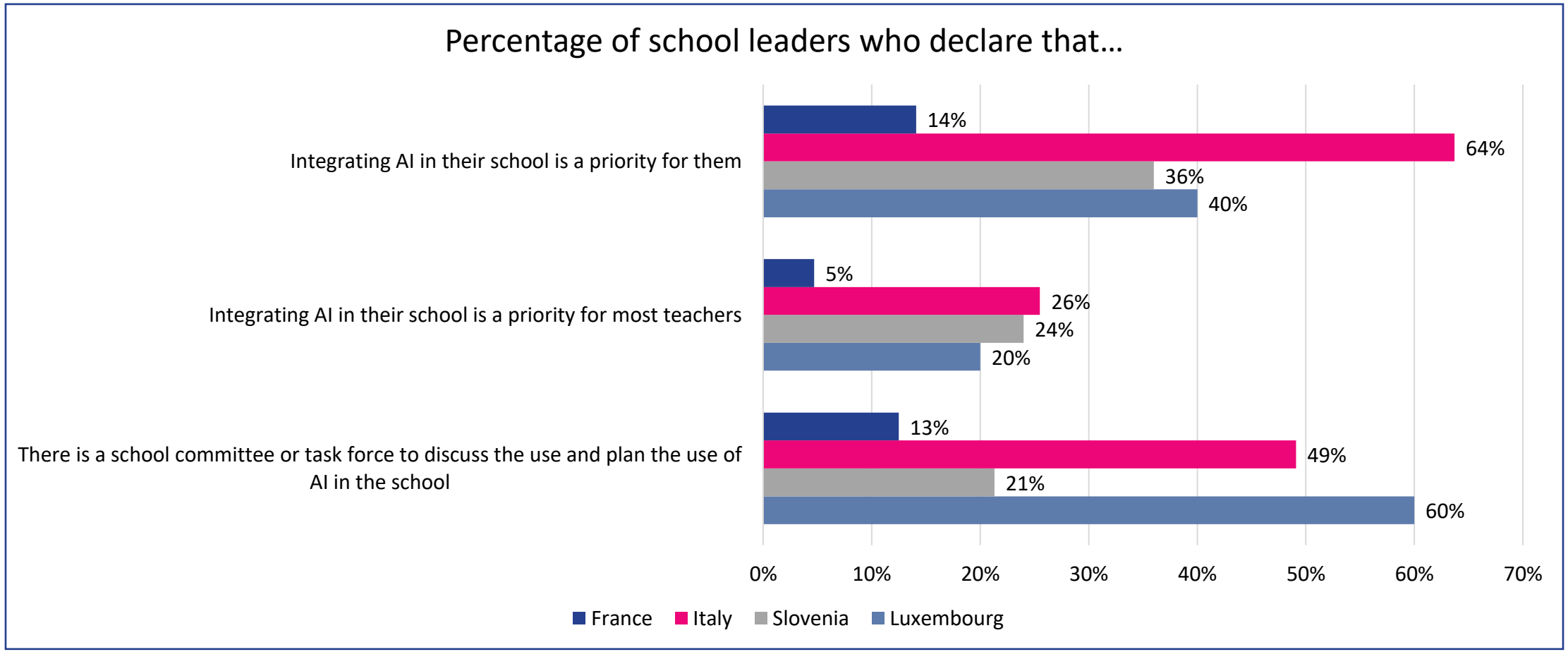
Access to AI tools is complicated by:

- Licence fees
- Non-compliance with GDPR and/or directives from administrative authorities prohibiting the use of specific tools
- Tools not tailored to specific school types or grade levels

“We talked about ChatGPT, things like that, but it's a bit delicate to use it. We haven't really discovered a tool that we can use well, authorized by everyone, I believe.”

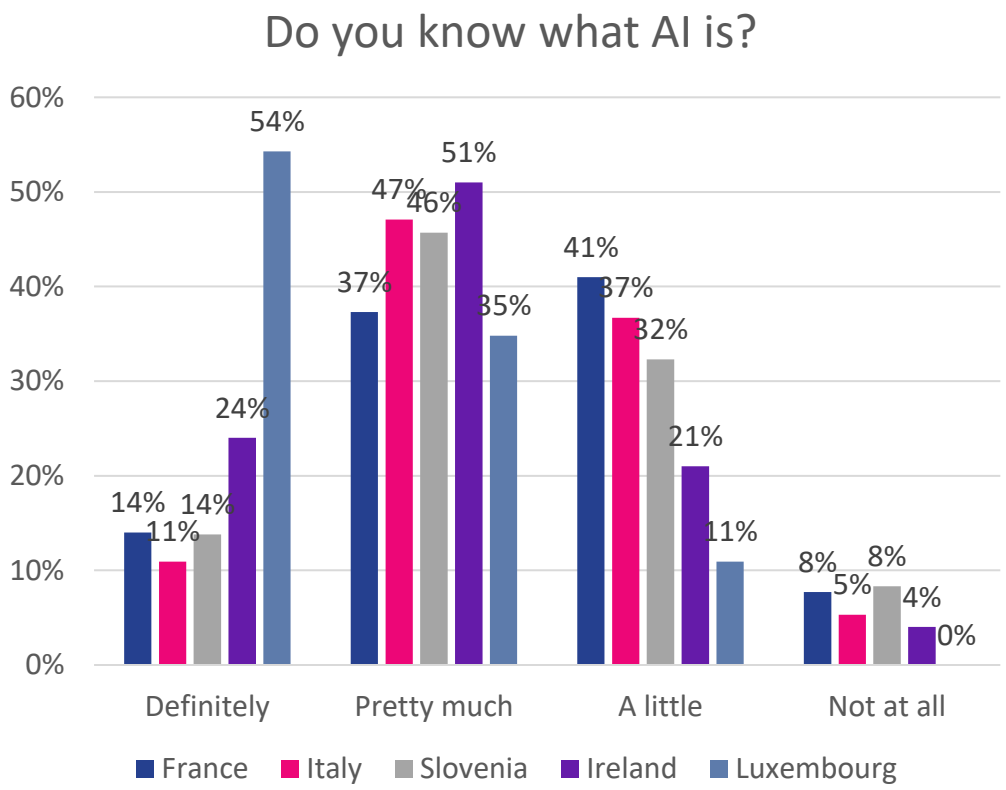
Co-funded by the Erasmus+ Programme of the European Union

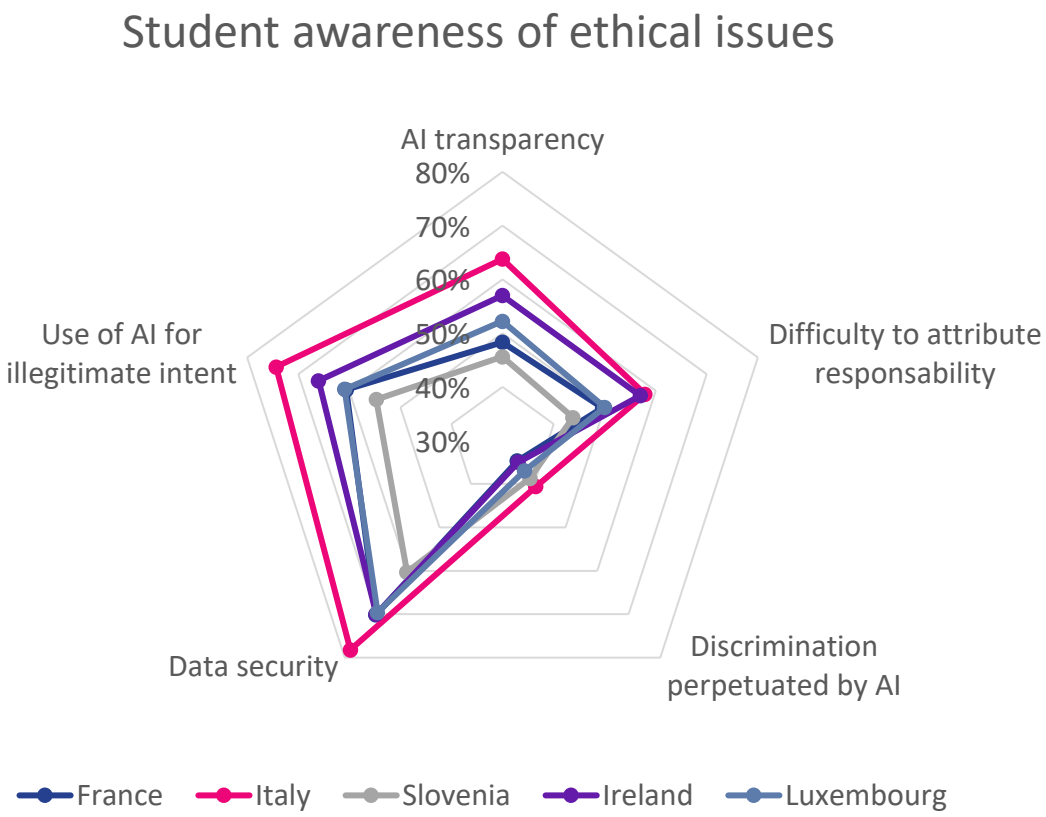
AI integration in the schools



Co-funded by the Erasmus+ Programme of the European Union

What about students?





Co-funded by the Erasmus+ Programme of the European Union

le cnam Cnesco

AI4T AI FOR TEACHERS

Summary

Teachers' pre-experiment perceptions, knowledge and use of AI

- Positive attitude towards AI for education
- Moderate knowledge of AI
- Limited use of AI tools for education

Impact study

- Generally no impact on teachers' perceptions of AI
- Significant impact on teachers' knowledge of AI
- Limited impact on AI use

Feedback from participants

- High level of satisfaction with each part of the professional learning pathways
- Demand for more practical aspects
- Limited access to AI tools

Co-funded by the Erasmus+ Programme of the European Union

le cnam Cnesco

AI4T AI FOR TEACHERS

AI4T

AI FOR TEACHERS

THANK YOU!

Co-funded by the Erasmus+ Programme of the European Union

le cnam Cnesco