Evaluating a European digital platform to promote adolescent mental health in schools: preliminary results from France

Rencontres de Santé publique France

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Sorbonne Public Health Institute
Research for better decisions

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The IMPROVA project

- European Union's Horizon Europe Research and Innovation Program Grant Agreement No 101080934
- April 2023 – March 2027



Identify high-risk groups and factors that influence mental well-being



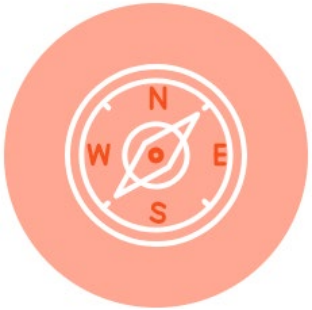
Co-create a socio-culturally sensitive eHealth platform for schools



Evaluate the IMPROVA platform in 4 European countries



Increase awareness and reduce stigma around mental health in schools.

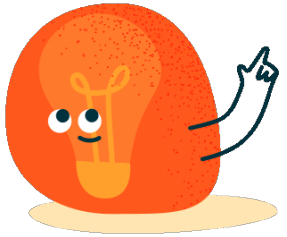


Develop a methodology and guidance for integrating IMPROVA into mental health policy across Europe.

The IMPROVA project

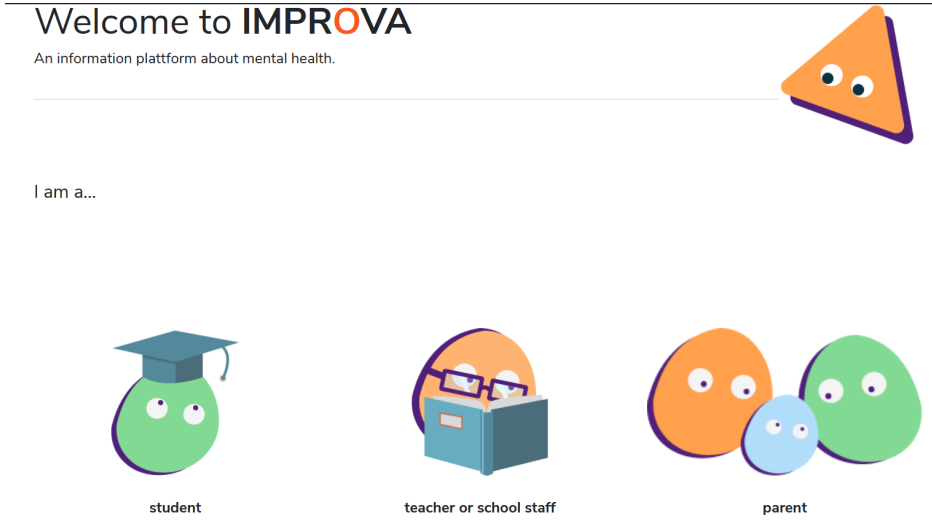
- 13 institutions – 7 countries

The IMPROVA digital platform

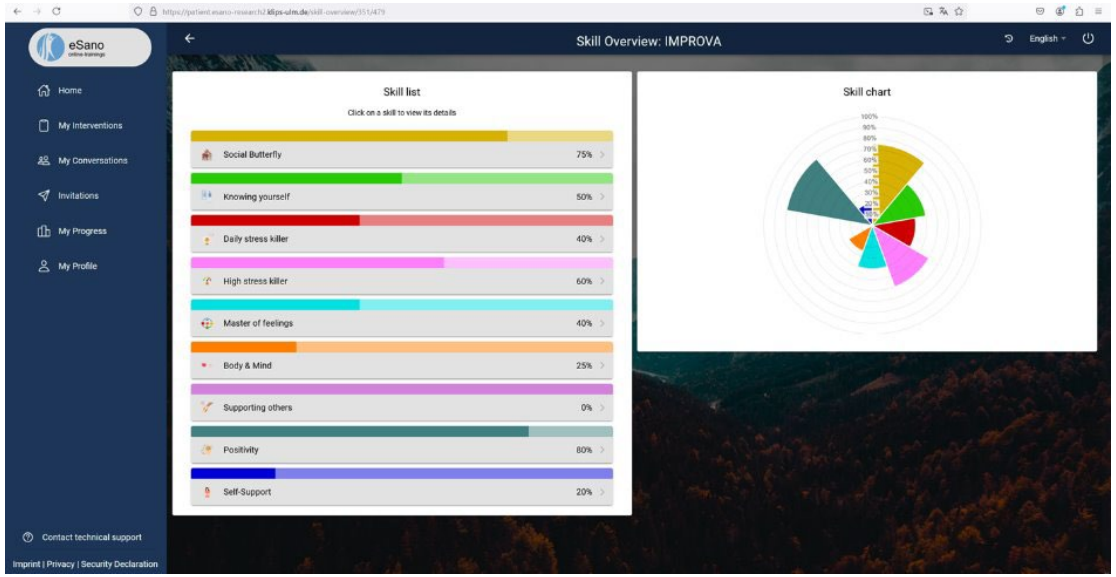


- Co-created with adolescents, parents, school staff and experts
- France, Germany, Romania & Spain

Website (open access)



Module platform (eSano, restricted access)



20 student modules, 7 school staff modules
8 tutoring sessions

The IMPROVA trial

- Evaluate the effectiveness, costs, implementation and social return on investment of the IMPROVA digital platform
- France, Germany, Romania & Spain

Real-world settings for enhanced generalizability

Schools as randomization units

- 1:1 ratio
- no cross-country pairing

"A two-arm parallel group pragmatic cluster randomized controlled trial with an intervention and a wait-list control groups"

Intervention vs Control group, followed over the same period of time

- Access to the platform(website + self-training modules)
- Access granted upon baseline questionnaire completion

Access granted in September 2025



Lima et al., BMJ Open, 2025

The IMPROVA trial – The French case

- Setting: académies de Créteil & Versailles
  - School year 2024-2025
  - 2 lower secondary schools (“collèges”); 5 high schools (“lycées”)
- Participants:
  - All pupils from Year 8 (13-14 yo) and higher, their parents, all school staff
- Data collection:
  - 3 quantitative self-administered online questionnaires
    - 2 in-classroom surveys: baseline (Nov 2024 - Jan 2025), post-intervention (May - June 2025
    - 1 survey “on their own”: mid-intervention, March - April 2025
  - eSano usage data collected through the platform

The IMPROVA trial – the French case

3,259 eligible students

↳ *383 refusals and absences*

2,876 included students

↳ *943 lost to follow-up*

1,933 students with baseline & post-intervention data

↳ *300 lower secondary school students**

1,633 high school students

**No lower secondary schools in the control group*

	Control group	Intervention group
Gender		
Girls	593 (58.4 %)	331 (53.6 %)
Boys	404 (39.8 %)	277 (44.9 %)
Other	19 (1.9 %)	9 (1.5 %)
Level		
Year 11 ("seconde")	411 (40.5 %)	234 (37.9 %)
Year 12 ("première")	257 (25.3 %)	184 (29.8 %)
Year 13 ("terminale")	348 (34.3 %)	199 (32.3 %)
Family affluence		
Low	122 (12.0 %)	80 (13.0 %)
Medium	380 (37.4 %)	226 (36.6 %)
High	412 (40.6 %)	259 (42.0 %)
Missing	102 (10.0 %)	52 (8.4 %)
Students' birth country		
France	953 (93.8 %)	561 (90.9 %)
Others	52 (5.1 %)	51 (8.3 %)
Do not wish to answer	6 (0.6 %)	2 (0.3 %)
Missing	5 (0.5 %)	3 (0.5 %)
Any chronic disease	315 (31.0 %)	174 (28.2 %)

The IMPROVA trial – the French case

- Statistical analyses
  - « Average treatment effect » (ATE) method
    - Aim: similar sociodemographic characteristics distribution in both groups
    - Inverse Probability Weighting (IPW) to balance : gender, parents' country of birth, language spoken at home, and number of siblings
  - Standardization of each mental health scale
  - Linear regression model
    - Change between baseline and post-intervention
    - Comparison of control an intervention groups
    - Stratification by gender

The IMPROVA trial – the French case

	Intervention group (vs control)	
	Girls	Boys
Depressive symptoms (PHQ8)	-0.11 [-0.24, 0.02]	0.02 [-0.11, 0.16]
Anxiety symptoms (GAD-7)	**-0.18 [-0.31, -0.04]**	0.03 [-0.10, 0.17]
Health-related quality of life (KIDSCREEN)	-0.05 [-0.18, 0.07]	-0.07 [-0.22, 0.08]
Overall mental health (SDQ)	0.01 [-0.12, 0.14]	0.08 [-0.08, 0.23]
Pro-social behaviour (SDQ pro social score)	-0.01 [-0.13, 0.11]	-0.14 [-0.32, 0.03]

- *Linear regression - Beta [95% CI]*

Anxiety symptoms: Slight improvement in the GAD-7 score between baseline and post-intervention in the intervention group

What is next?

- Anxiety results
  - GAD-7 in clinically relevant categories
  - Mediation by platform use? By some specific modules?

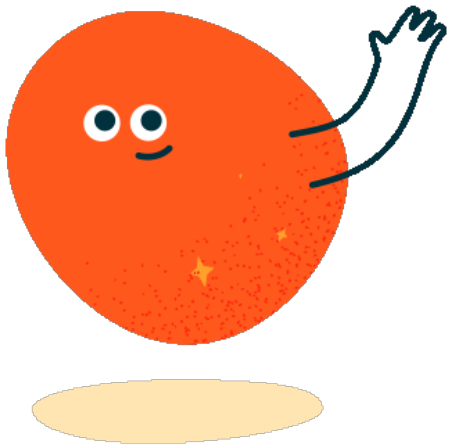
- Platform use:
  - Who were the adolescents using the platform?
  - How they used the platform? Which modules?

Some pictures…









… And over to you, Felix !



Policy translations & sustainability

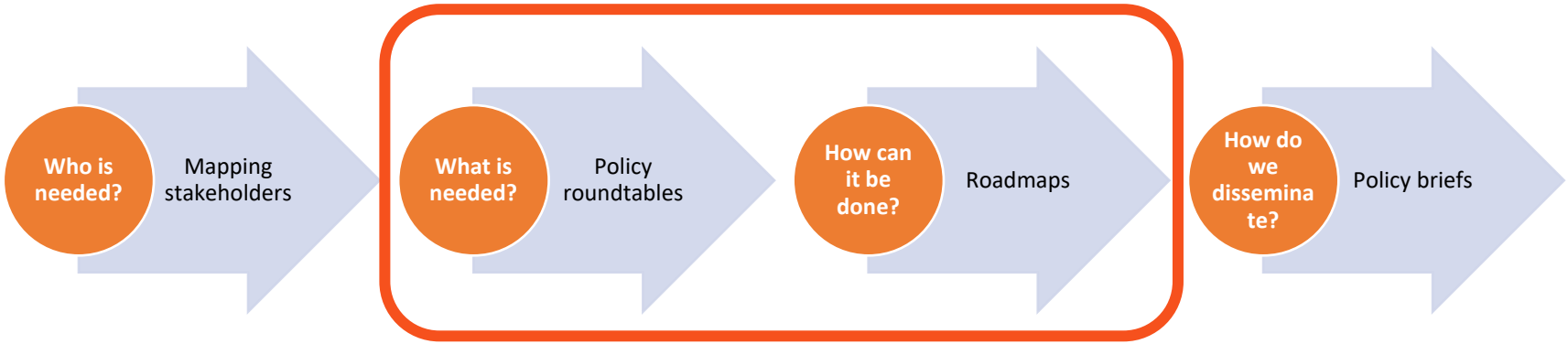
Keeping IMPROVA alive

Felix Bolinski – Trimbos-instituut

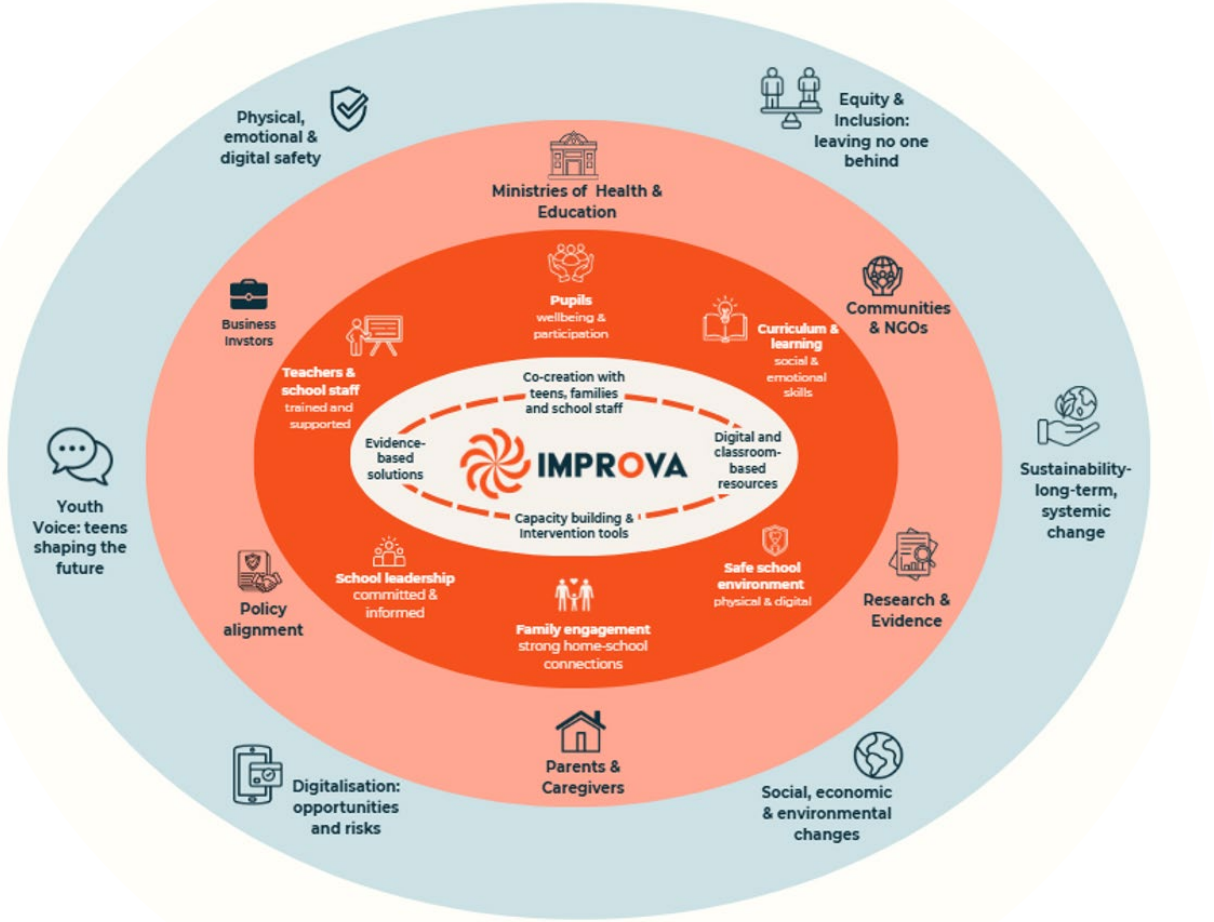
IMPROVA

What happens after March 2026?





IMPROVA ecosystem



What is needed?

Policy roundtables



"A user-friendly, secure, and visually appealing mental-health platform that is tailored to individual needs and encourages daily engagement. "

FRANCE

OWNERSHIP OF THE PLATFORM IS TAKEN OVER

- The government has a major role in ownership but may work together with a private partner
- A partnership with a research institute like INSERM provides the scientific basis
- School staff are given a certificate when they complete modules
- The platform can be used as a guide for the mandatory mental health protocol in schools
- Ownership by the government occurs because it positively influences school performance
- There is a dedicated person at the government level with a permanent contract who is responsible for IT exists

SUSTAINABLE FUNDING IS SECURED

- Funding is received from a private institution
- The possibility of shifting resources from Ministry of Education to Ministry of Health is explored
- Costs per month/annually for different components are made clear
- Education of teachers needs is taken into account

The platform is engaging, motivating and tailored

- The platform uses a points-based system; gamification
- The platform uses a well-being frame, rather than mental health
- There has a broad range of topics on the platform, not just 'illnesses'
- The platform sends daily reminders and notifications
- The content is tailored to adolescents' needs, e.g. parental divorce
- The platform is valuable with under an hour of use per week.

The platform is accessible and easy to use

- The platform is accessible on any device (smartphone, computer, tablet)
- Onboarding questions are limited
- Sign-up is optional- and a welcome meeting shouldn't be obligatory
- The design of the app is simple, with a colourful interface
- Explanatory videos and tutorials are used to encourage

The platform allows for peer and social support

- The platform encourages chatting and sharing experiences with peers
- In-app presentations are delivered by teens, rather than adults

The platform and mental health should be promoted

- The platform is advertised on the school Instagram
- Posters with QR-codes around school link to the platform are available
- Events are organised to share the platform
- Influencers showcase the platform and talk about mental health
- Awareness campaigns regarding mental health are organised
- Teachers can share content across groups without accounts

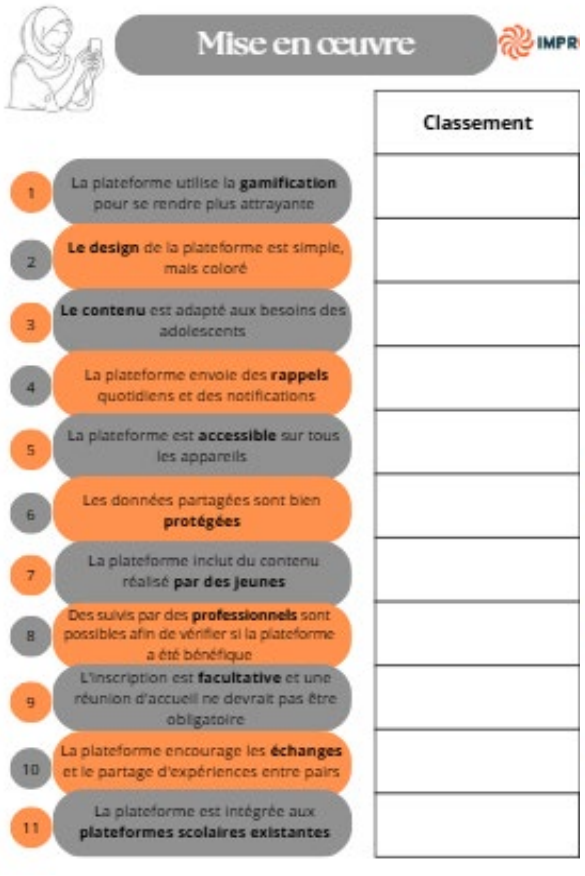
The platform is professional, and partners with support staff

- The data shared is well protected
- There is an IMPROVA ambassador at school
- The platform is integrated into existing systems.
- Follow ups by professionals are possible to know if the platform was beneficial

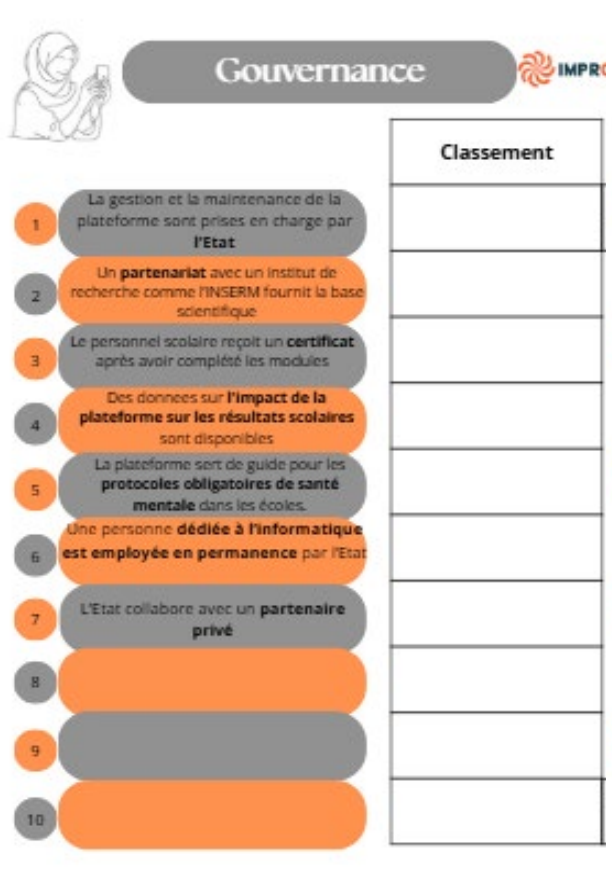


What is needed?

Policy roundtables









How can it be done?

Roadmaps

"A dedicated mental health platform that is user-friendly, secure and engaging, tailored to individual needs and encouraging daily use."



FRANCE

OWNERSHIP

Partnership with a research institute such as INSERM.

- **HOW:** Present the project to the Ministry of Higher Education and Research. Involve UNESCO and parent associations from the outset.
- **WHO:** INSERM; Ministry of Higher Education and Research
- **WHEN:** To be addressed concurrently (implementation dissemination and funding).

FINANCING

The monthly and annual costs of the different expenditure items are clearly defined.

- **HOW:** Povide a detailed explanation to support decision-making by DGESCO/DGS. Forecast costs in the long term and specify the funding requests, from whom, and under what conditions. Consider integrating the project into a broader scientific initiative. Prepare a benchmark summary using results from other countries.
- **WHO:**
- **WHEN:** Take the electoral context into account. Do not wait too long: Mental health is a national priority, so move forward as soon as the proposal is robust and well supported.

IMPLEMENTATION

The platform is integrated into existing school platforms.
Young people are involved in content creation.

- **HOW:** Identify the right stakeholders. Submit a formal request at DGESCO level through the project lead. Submit requests in parallel to DGESCO and DGS.
- **WHO:** Central administration (Health and National Education). Regional and departmental councils. Digital Education Directorate (DNE), subject to ministry approval.
- **WHEN:** In the future, after the project: once the budget has been clearly defined and the scientific results have been communicated.

DISSEMINATION

Instagram accounts of schools and Pronote.
Students recommend the platform to their friends.

- **HOW:** Awareness campaigns to encourage peer-to-peer promotion.
- **WHO:** At the level of each school (Headteacher / principal). Student life council (CVL). Trusted professionals / designated contact persons.
- **WHEN:** Final step following approval by the authorities.

Overall conclusions

What helps?

- Strong **youth involvement** and co-creation
- **Integration** into existing systems and structures
- **Partnerships** and shared ownership models
- Clear **evidence base** and demonstrated effectiveness
- Strong privacy and **data protection** measures
- Multiple **funding** sources
- Use of **existing communication** streams
- **Peer-to-peer promotion** and youth ambassadors
- Professional support and **training**
- Accessible, inclusive, and **user-friendly design**

What doesn't?

- **Unclear ownership** and governance structures
- Limited capacity and **competing priorities** among professionals
- Lack of **evidence** to support decision-making
- **Digital inequality** and access barriers
- Risk of content becoming **outdated** or irrelevant
- Complexity of **coordinating** multiple stakeholders
- **Stigma** surrounding mental health

Take away messages

- Youth should not be underestimated
  - They are actively shaping the intervention and implementation
- Ownership is hard to translate
  - And may differ across contexts
- Sustainability on paper is different in practice



Merci!



IMPROVA

SJD
Sant Joan de Déu
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Inserm
La science pour la santé
From science to health

Deusto
Universidad de Deusto
Deustuko Unibertsitatea
University of Deusto

Trimbos instituut
Netherlands Institute of Mental Health and Addiction

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Policy briefs (still to come)



Catchy (well translated!) title

Context and importance: why here, why now?!

Evidence that highlights the value in a easy to digest way

Recommendations on how this can be done and the role they (and others) need to play

IMPROVA