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**KnowCyber**

# **SHIELD**: Transforming Cybersecurity Education Through AI, Storytelling and Gamification

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Alex

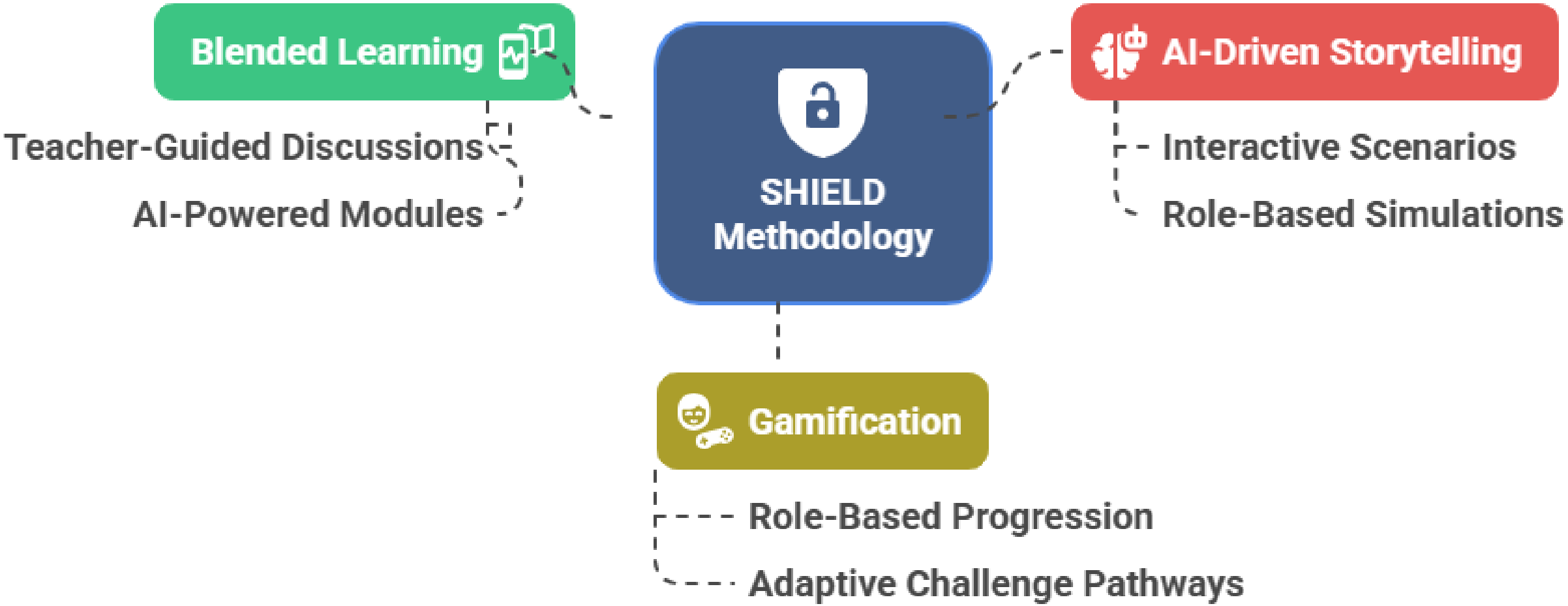
“Cybersecurity is just rules, and very abtract ones. It’s boring.”

# Challenges in

Irina, teacher from a primary school

“I know I should teach them online safety, but I don’t know how to make them care.”

# Transforming cybersecurity education into adventure

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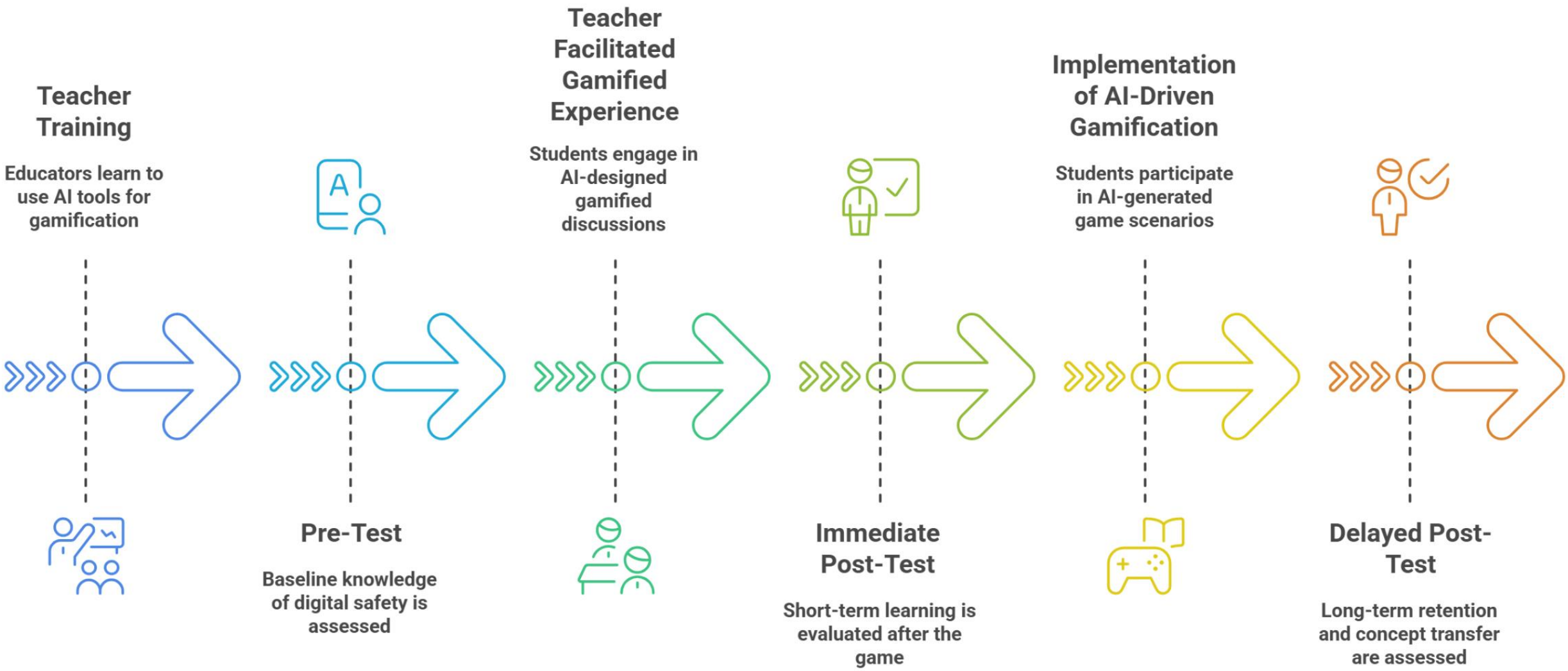
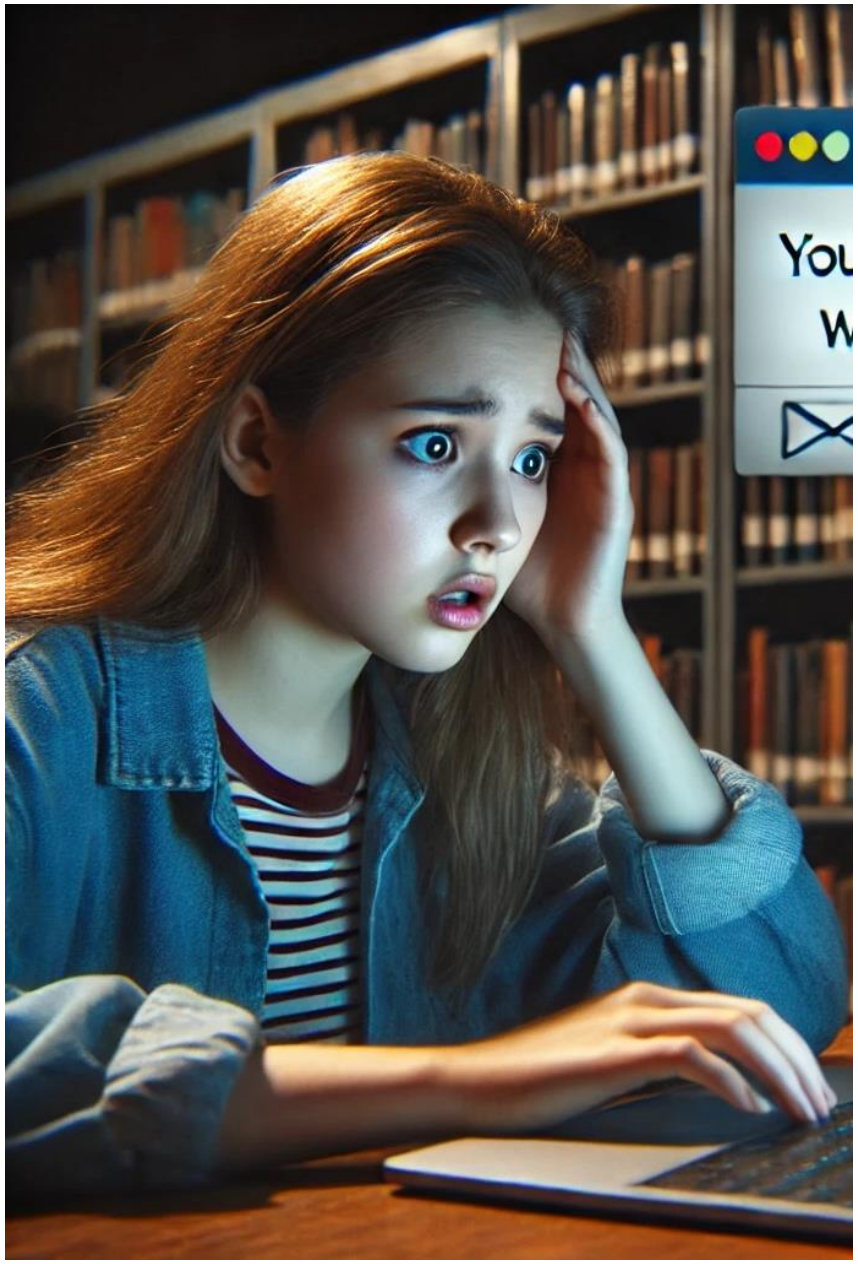
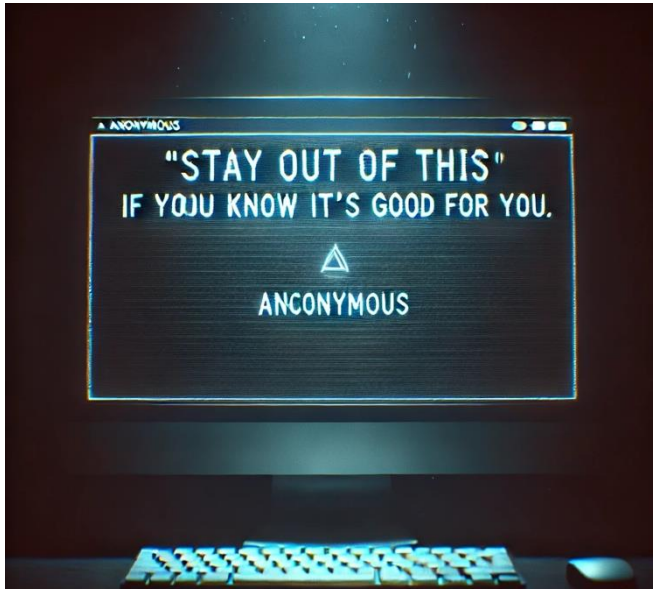
# EduGame-AI Framework



Anonymous
Do you see what's happening?
If you don't solve this.
things will only get worse."




"STAY OUT OF THIS"
IF YOJU KNOW IT'S GOOD FOR YOU.
ANCONYMOUS

# Digital Escape room

# Impact:
# Students learned more, remembered more, and cared more

Enhanced student engagement through interactive and gamified learning.

Improved student understanding of cyber safety and responsible online behavior

Sustained knowledge acquisition, confirmed by testing and feedback.

Increased teacher capacity for digital and cybersecurity education.

More confident teachers during cybersecurity education

Schools recognized alignment with educational priorities

Alex

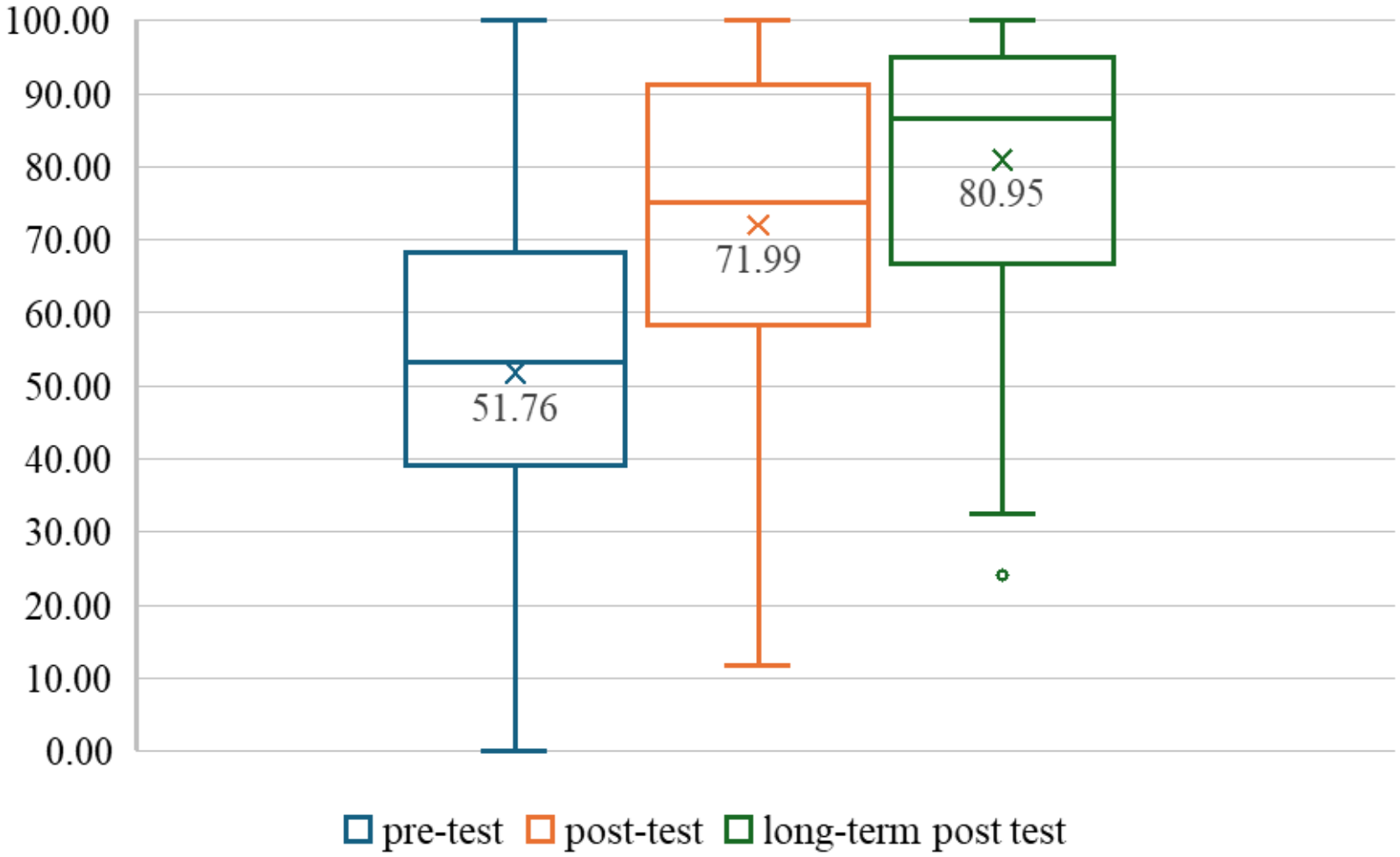
“The story made it **easier to understand** what cyberbullying really looks like. It helped me know **what to do when** I see it happening.”

Irina

“The storytelling and gamified lessons made a huge difference. Students were **excited**, **motivated**, and actually **discussed real-life cyberbullying experiences** during class.”

# Results:

# Numbers are telling the same!




| Test Comparison | p-value | Cohen's d | Pearson Correlation (r) |
|---|---|---|---|
| **Pre-test vs Post-test** | $6.92 \times 10^{-34}$ | 1.03 (large) | 0.47 |
| **Post-test vs Long-term Post-test** | $2.63 \times 10^{-16}$ | 0.46 (moderate) | 0.70 |

# Legacy:
# A scalable methodology and a growing community of practice

A **SHIELD workshop model** integrating storytelling, AI, and games

**40+ trained teachers** equipped to create gamified cybersecurity activities

**More than 2300 students** participated in SHIELD workshops and improved their cybersecurity knowledge and skills

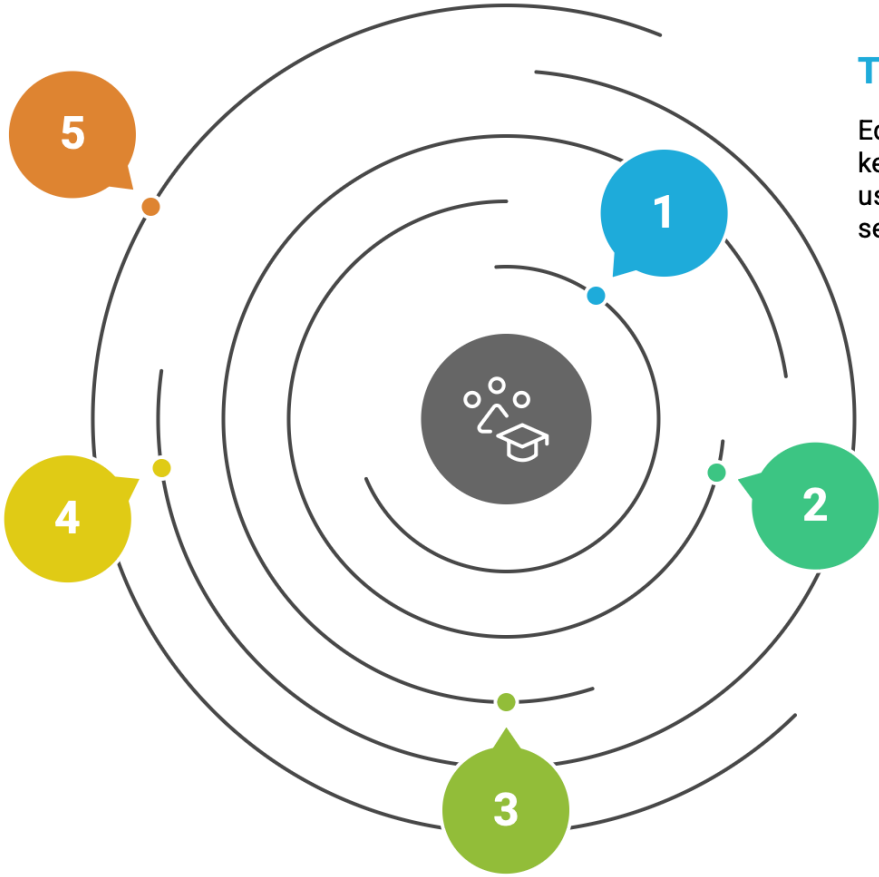
**Over 30 gamified activities** created and shared

**A collection of digital educational resources** published online

**A teacher community** capable of sustaining the model

# SHIELD is not ending — it’s evolving

## SHIELD's way forward




### Funding and Support

Utilizing EU and regional initiatives for growth, one application already submitted

### Scalability and Flexibility

Promoting SHIELD as adaptable models for different topics of interest to society

### Teacher Networks

Educational Resources are kept being developed and used in primary and secundary schools

### Research, Publications and Presentations

Two keynotes at international conferences, three conference papers, 3 presentations at community meet-ups, one journal publication pending, podcasts, webinars, and still going strong...

### SHIELD Expansion

Extending the methodology to more educational schools, including more challenges and levels

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# Thank you!

Together, we can make
digital learning
safe, engaging, and empowering

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