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CicloHackathon: Engaging Students in Circular Economy Education Through a Hackathon-Based Approach

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INTRODUCTION

The CicloSchools project aims to develop students' & teachers' competencies in sustainability and CE education.

One of the project's activities is using Hackathon methodology.

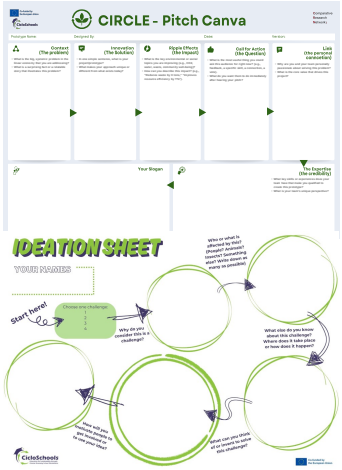
***A hackathon** is an intensive, collaborative event where participants work in teams to develop creative & innovative solutions to real-world challenges within a limited time.*

HACKATHON ACTIVITIES & PARTICIPANTS

- Secondary school students
- Min. two-days
- Workshops for skills building
- Challenges & ideation
- Development of prototypes

The CicloHackathon aims to:

- Promote active learning
- Develop collaboration & communication skills
- Foster creativity & problem-solving
- Encourage students to think about sustainability & community change



ABSTRACT:

The CicloHackathon approach demonstrates how school-based hackathons can transform circular economy (CE) and sustainability concepts into hands-on learning experiences. Using a challenge-based methodology, students identify CE-related issues in their schools or communities and collaboratively develop practical solutions. Through a structured two-day programme, students engage in workshops on CE principles, innovation, design thinking, and digital tools, supported by teachers and external experts. By combining experiential learning, technology, and community engagement, the CicloHackathon promoted environmental awareness, digital competencies, and entrepreneurial mindsets.

Key words: Circular Economy, School Hackathons, Challenge-Based Learning

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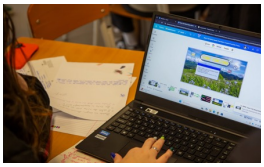
RESULTS



DISCUSSION & CONCLUSIONS

The CicloHackathon provides a replicable and scalable model for integrating CE education into school contexts.

Combining experiential learning, digital technologies, and community engagement promotes active participation and student agency (Lara & Lockwood, 2016).

The approach aligns with Education for Sustainable Development by encouraging systems thinking, innovation, and civic responsibility.

Requires further research to better understand its educational impact.

REFERENCES

Lara, M., & Lockwood, K. (2016). Hackathons as community-based learning: A case study. *TechTrends, 60(5)*, 486-495.