

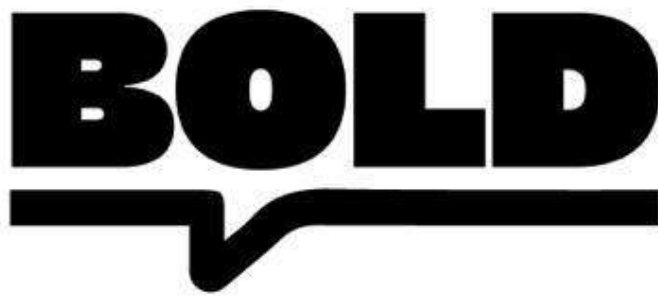


Building on
Linguistic and
Cultural Diversity



Report on Hackathon results

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Web2Learn



Building on
Linguistic and
Cultural Diversity

Report on Hackathon results

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BOLD: Building on Linguistic and Cultural
Diversity for social action within and
beyond European universities

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Keyword list:	Hackathon, innovation, university student, linguistic and cultural challenges
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Consortium

The consortium governing the project is adequately representing a wide range of expertise, as 5 Higher Education Institutions (University of Hamburg, Autonomous University of Madrid, Aix Marseille University, University of Aveiro, Groningen University) join hands with a web education specialist (Web2Learn). This mix of knowledge, skills, experiences and networks guarantees a layered approach toward a diverse range of stakeholders.

	Name	Short Name	Country
1	University of Hamburg	UH	Germany
2	Web2Learn	W2L	Greece
3	Autonomous University of Madrid	UAM	Spain
4	University of Aveiro	UAVR	Portugal
5	Groningen University	RUG	Netherlands
6	University of Aix Marseille	AMU	France



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Revision History

Version	Date	Revised by	Reason
V0.1	14/11/2025	Stefania Oikonomou	Internal review

Statement of originality:

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

Disclaimer:



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List of Abbreviations

The following table presents the acronyms used in the deliverable in alphabetical order.

Abbreviations	Description
D	Deliverable
WP	Work package



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Executive Summary

This report presents a comprehensive overview of the BOLD Hackathon event and its results. The 3-day hackathon Challenge brought together students from universities across Europe to collaboratively address social challenges around linguistic and cultural diversity. The report outlines the objectives and the framework of the Challenge, the participating teams, and the timeline of the organised activities. Moreover, it showcases images from the online event, and concludes with an annex detailing the thoughtful solutions generated by the teams. This report is Deliverable 8 of the WP4A6 activity of the EU-funded BOLD project.

About BOLD project

The BOLD project—Building on Linguistic and Cultural Diversity for Social Action within and beyond European Universities—is an Erasmus+ initiative focused on transforming initial teacher education through social activism and civic engagement. It brings together student teachers to work collaboratively on social action projects within informal and non-formal educational contexts, blending professional skill development with hands-on experience in addressing real societal needs. BOLD is rooted in the belief that higher education should serve as a catalyst for positive societal transformation, nurturing both active citizenship and cross-cultural awareness among emerging educators. By bridging the gap between teacher training and practical social engagement, BOLD aims to prepare educators to be agents of change in building inclusive, participatory communities.



1. Introduction

As part of Work Package 4, Activity 6 (WP4A6), a 3-day Hackathon was organised to engage university students from and outside the BOLD consortium in addressing contemporary challenges related to linguistic and cultural injustices and inequalities. The activity was designed to promote inclusive innovation, peer collaboration, and creative problem-solving in line with the objectives of the BOLD project, which aims to advance digital education through equity-oriented and participatory approaches.

The BOLD hackathon Challenge was part of the pan-European initiative DigiEduHack 2025, which supports collective experimentation and knowledge sharing among students, educators, and researchers across and beyond Europe. Within this framework, the event encouraged participants to co-develop innovative digital solutions that respond to real-world social challenges. Teams were composed of students from diverse academic backgrounds who worked collaboratively to conceptualise, design, and prototype their solutions under the guidance of mentors and facilitators from academia.

The challenge theme was jointly defined through the Student Sprint (WP4A4) held on 10 November, where participating university students elaborated key areas of linguistic and cultural inequity in educational contexts. Drawing on these insights, the Hackathon invited participants to explore inclusive digital strategies that foster intercultural understanding, equitable access to learning, and linguistic diversity in education.

Throughout the three days, participants engaged in structured co-creation sessions, mentorship exchanges, and peer feedback activities leading up to a final plenary session, during which teams presented and discussed their solutions. The event facilitated knowledge transfer between students and experts, while also promoting the values of cooperation, openness, and social responsibility.

Overall, the Hackathon provided a dynamic learning environment that combined creative experimentation with research-based reflection, demonstrating the potential of collaborative design approaches to address issues of linguistic and cultural justice in digital education.

2. DigiEduHack Initiative

DigiEduHack is a vibrant, pan-European grassroots initiative dedicated to driving innovation, collaboration, and creativity in digital education. The competition brings together participants from diverse backgrounds—whether coding experts or novices, educators or newcomers—with the shared goal of developing innovative solutions to current and future challenges in digital learning. Aligned with the European Commission's Digital Education Action Plan 2021-2027, DigiEduHack harnesses the collective expertise and enthusiasm of its community to foster positive change, making digital education more inclusive, effective, and adaptable to evolving needs.



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Since its inception, DigiEduHack has expanded significantly, with multiple editions that feature numerous local and online events coordinated by hosts worldwide. Participants engage in intense, solution-focused hackathons, working collaboratively to address pressing educational challenges using digital tools and methodologies. The competition timeline starts with host and participant registrations, followed by preparatory webinars and local hacking days throughout early November. Winning solutions are evaluated by a steering group, with finalists advancing to a global voting phase and culminating in a high-profile awards ceremony, celebrating the best ideas that can shape the future of learning in the digital age. This comprehensive format supports a dynamic ecosystem of innovation, learning, and community-building in digital education.

The BOLD Hackathon was part of the DigiEduHack 2025 and the challenge theme was: University Students Tackling Linguistic & Cultural Injustices in Education

Website link to the theme: <https://digieduhack.com/challenges/university-students-tackling-linguistic-cultural-injustices-in-education>



Printscreen 1 from the DigiEduHack 2025 website

University Students Tackling Linguistic & Cultural Injustices in Education

In today's increasingly multicultural and multilingual societies, collaboration, solidarity, and social cohesion are more vital than ever. Education should be a shared space for co-learning, where diverse voices come together to break down barriers and challenge biases linked to language and culture. Yet, linguistic and cultural injustices continue to shape educational experiences, marginalising certain communities and limiting inclusion.

Printscreen 2 from the DigiEduHack 2025 website



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3. Hackathon teams

The table below presents the topics and the teams that participated in the 3-day hackathon Challenge during which each team addressed a specific topic under the guidance of a mentor.

Topic	Team name	Mentor	Team members
Increased cultural representation in education	Diversity	Rika Rompopoulou Assistant Professor of Department of Turkish Studies and Modern Asian Studies, National and Kapodistrian University of Athens	• Yener Bora Yoldas • Nairi Chatzatourian
Supporting integration of refugee students in academia	ConnectED	Lyudmila Kruhlenko Associate Professor of Department of Translation and Interpretation, Pryazovskyi State Technical University	• Marko Lakhmatov • Kyrylo Yeromenko • Mariia Chertkova • Illia Zaitsev • Marharyta Bakalo • Andrii Logachov
Valorising local or indigenous languages in education	Communicate local, think global	Lisa-Marie Brinkmann Research assistant University of Hamburg	• Anastasia Kokkali • Sofia Silva

4. Timeline of the Hackathon event

The preparatory stage of the Hackathon began on November 10 with the Sprint event where university students from the BOLD consortium presented their social action projects in an open forum. This session also included brainstorming breakout rooms where participants collaboratively shaped the challenge themes for the Hackathon, setting the stage for the subsequent Hackathon days.

On November 10, 11 and 12, the BOLD Hackathon unfolded as a dynamic, 3-day collaborative challenge. On November 10, university students brainstormed on possible challenges to be addressed and elaborated key areas of linguistic and cultural inequity in educational contexts. During the 1-hour introductory online session that took place on November 11, student teams

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were formed for working on the topics that were elaborated in the previous day (Sprint event). Each team was supported by a mentor. After the introductory session, each team worked intensively to tackle the challenge of its topic that was relevant to real-world issues related to linguistic and cultural injustices and inequalities. Supported by mentors, teams engaged in brainstorming, co-creation, and developed actionable ideas. The Hackathon culminated in a final plenary session that took place on November 12, midday, where they pitched their solutions. The final solutions were presented by the team representative and the jury decided on the winning team of the Hackathon.

Jury members

1. Katerina Zourou, Managing Director at Web2Learn
2. Stefania Oikonomou, Research Collaborator at Web2Learn
3. Prof. Dr. Silvia Melo-Pfeifer, Faculty of Education, University of Hamburg, Coordinator of the BOLD project

Winning team: Connected

5. Images from the online event



1 Hackathon, Day 1



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Teams' topics

Topic 1: Increased cultural representation in education

Topic 2: Supporting integration of refugee students in academia

Topic 3: Valorising local or indigenous languages in education

Plan

- Pitching session
- Evaluation session by the jury
- Announcement of the winning team



2 Hackathon Day 2

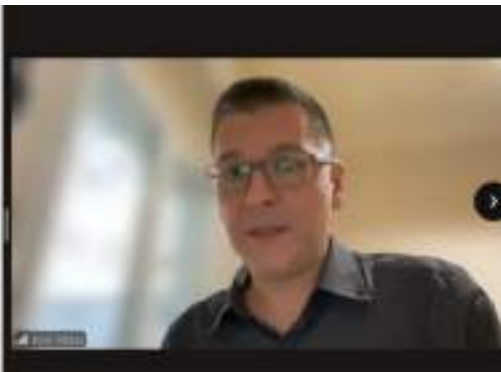
01 **Increased cultural representation in education**

To bring the diversity towards the majority group in order to encourage to be seen and to feel safe

Many students from diverse cultural and linguistic backgrounds feel unsafe in classrooms

How can the students show their diversity in order to create a safe environment in the class?





3 Team representative presents the solution

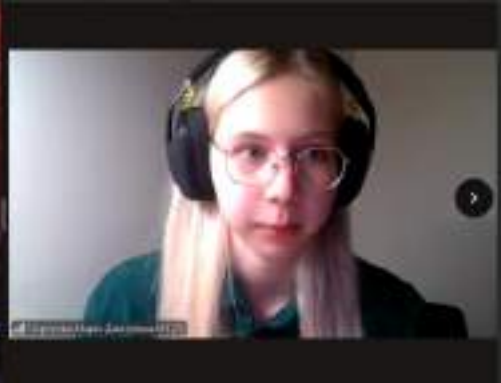
DIGI EDU HACK 2025

SUPPORTING INTEGRATION OF REFUGEE STUDENTS IN ACADEMIA

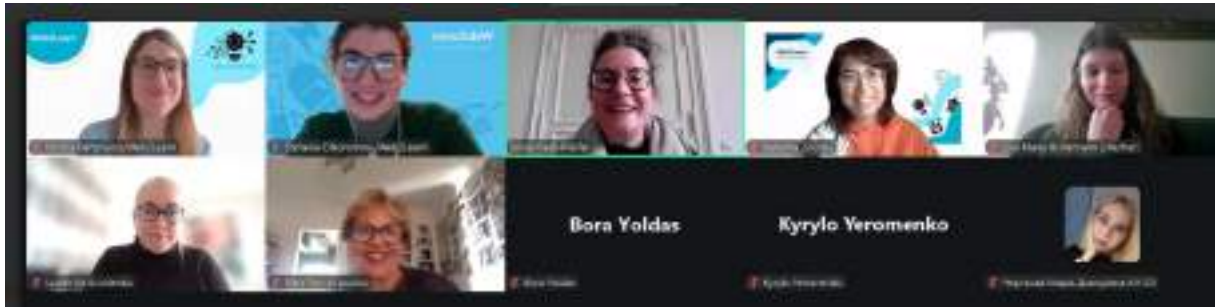
Marlia Chertkova

Computer Science Student at the Plovdivski Univ. Technical University

DigiHack 2025 Organizing Partner



4 Team representative presents the solution



5 Hackathon Closing

Participants' consent for image taking and use of visual material was obtained prior to the official launch of the event. Before any photographs or recordings were made, participants were informed about the purpose of the image collection and the intended use of the material within the context of the Erasmus+ project dissemination and reporting activities. Oral consent was explicitly requested and voluntarily provided by the participants before the start of the event.

6. Acknowledgements

This report was produced as part of Work Package 4 of the EU-funded project BOLD: "Building on Linguistic and Cultural Diversity for social action within and beyond European universities", <https://boldproject.eu/>, Project number: 2022-1-DE01-KA220-HED-000086001). The authors of this report would like to thank all BOLD partner organisations for their support in the organisation of the Hackathon, all participants and all mentors in the Hackathon.

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7. Annex

The annex contains the teams presentations during the pitching session.



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12/11/2025

Diversity

Nairi Chatzatourian

Yener Bora Yoldaş



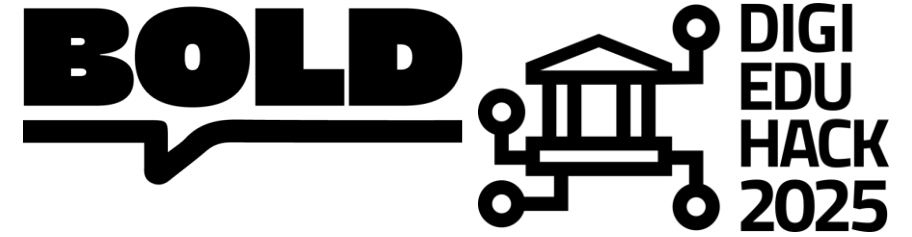
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01 Increased cultural representation in education

To bring the minority towards the majority group in order to encourage
to be seen and to feel safe



Many students from diverse cultural and linguistic backgrounds feel
unseen in classrooms

How can the students show their diversity in order to create a safe
environment in the class?

DIGIEDUHACK SOLUTION CANVAS

Title of the solution: **Breaking the norms**

Team name: **Diversity**

Describe it in a tweet:

Increasing the cultural representation in educational research leads to improved academic performance and a more positive self-image for students from diverse backgrounds.



Challenge addressed: **Minority versus majority**

Challenge category **Multilingualism in Education**

Solution description:

The educators should be able to take the initiatives to address the existence of the diversity by the help of the technology in the classrooms.

Create a **digital educational platform** that:

- Integrates *multicultural content* (stories, examples, art, and languages) into lessons.
- Encourages *teachers and students* to co-create local cultural content and share it globally.
- Encourages teachers to increase the awareness of all the students

Context:

Many students from diverse cultural and linguistic backgrounds **do not see their identities represented** in the content, examples, or perspectives used in education.

This lack of representation contributes to **lower engagement, weaker self-esteem, and persistent achievement gaps**, especially among minority and migrant students.

Our challenge is to **increase cultural visibility and inclusion** in digital education by ensuring that **every learner can see their own culture, language, and experience reflected** in the materials they use.

We aim to make education not only digitally accessible but also **culturally equitable, empathetic, and empowering** for all.

Target group:

Everybody involved in educational community:

- students,
- teachers,
- school, institution,
- community

Impact:

Inclusive Learning: Ensures every student's culture and language are visible and valued in digital education.

Empowered Teachers: Provides ready-to-use multicultural tools that make lessons more engaging and relevant.

Bridging Gaps: Reduces cultural and linguistic barriers, promoting equality and mutual understanding.

Improved Outcomes: Increases student motivation, participation, and overall achievement.

Long-term Change: Builds an educational culture of empathy, diversity, and global citizenship.

Innovativeness:

Using a digital educational platform to encourage the kids even from the early age to be more open-minded and aware to the diversity

Using the technology in the right and respectful way

Innovative Vision: Combines technology, pedagogy, and cultural studies to create a **living global classroom** where every learner's background enriches the learning experience.

Transferability :

Globally Adaptable: The platform can be used in any country or educational system to promote **multilingual and multicultural learning**.

Flexible Content Model: Teachers can adapt materials to reflect **local cultures, languages, and traditions**, making it relevant across contexts.

Sustainability

Long-term: Develop a **global digital community of practice** where teachers and students continuously co-create and share multicultural materials.

Sustainable Growth: Open-source model and multilingual interface will allow **local adaptation and low-cost scalability**.

End Goal: Ensure that cultural representation becomes a **core element of digital education worldwide**, not an exception.

Team work:

it was a perfect collaboration opportunity and amazing experience

It would be a pleasure to work again in the future





BOLD

THANK
YOU!





BOLD

12.11.25

SUPPORTING INTEGRATION OF REFUGEE STUDENTS IN ACADEMIA

Mariia Chertkova

Computer Science Student at
the Pryazovskyi State Technical
University



DigiEduHack 2025 Organising Partner

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TEAM ConnectED



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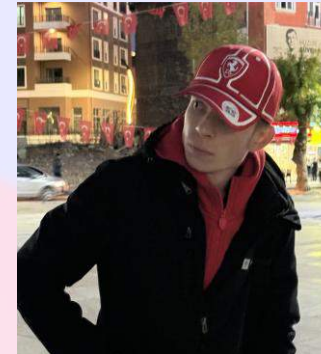
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KEY ISSUES

Main barriers refugee students face in academic integration



Language proficiency

- The main barrier at the outset.

Academic language gap

- Everyday language is easier to learn, while academic language with complex terms is harder to master.

Lack of translated resources

- Study materials are available in a limited number of languages.
- There are no approved translations of many field-specific terms.

Bureaucratic challenges

- Complicated procedures for document submission and visa applications.
- Inaccurate assessment of refugees' knowledge due to differences between education systems.
- Prejudiced attitudes toward education systems in refugees' home countries.

Social and psychological difficulties

- Social isolation caused by cultural differences.
- Psychological trauma of various kinds.
- Stress and anxiety.



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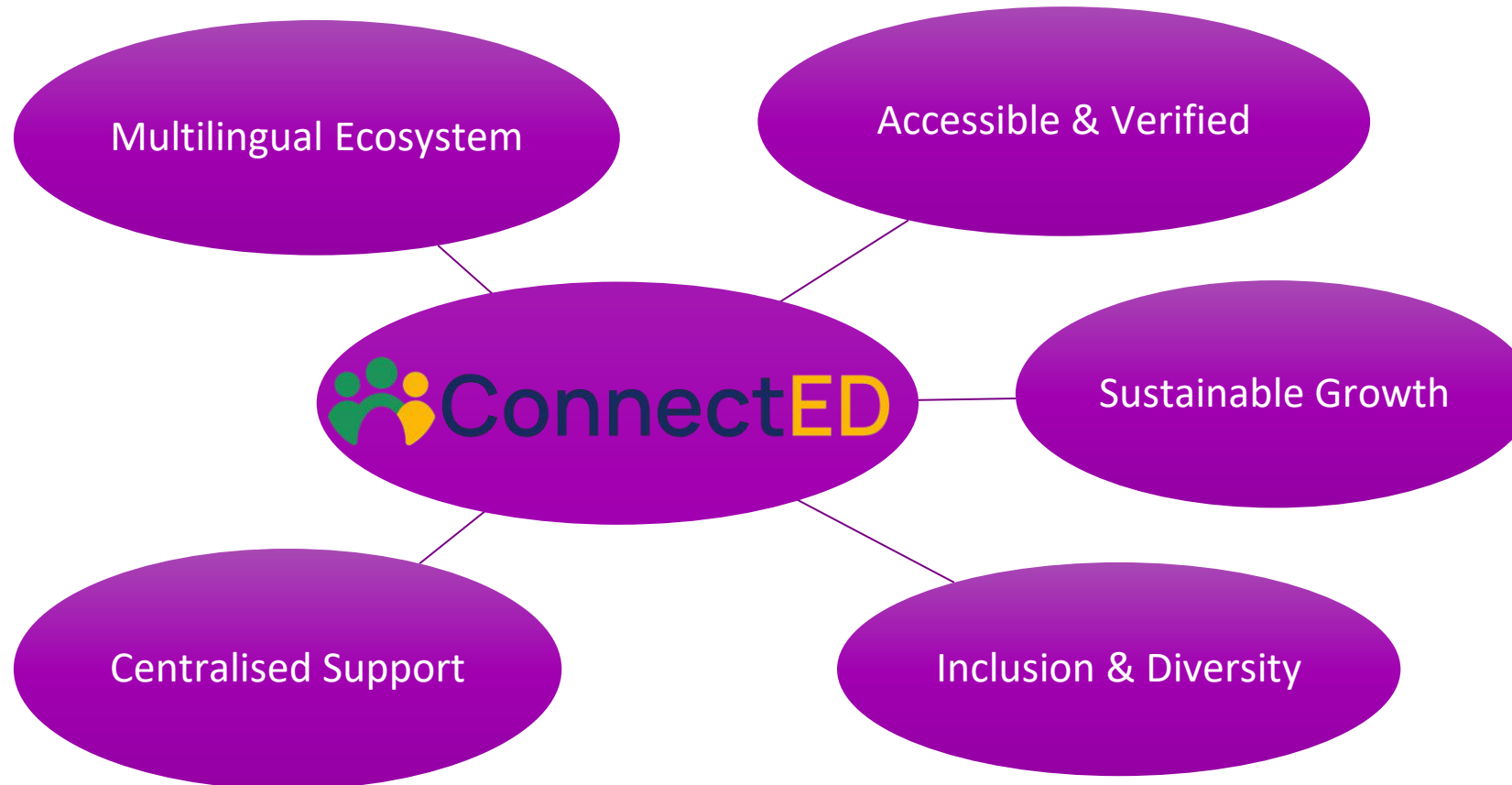


WHAT WE PROPOSE

ConnectED Platform



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University





INFORMATION SUPPORT SOLUTIONS

Providing multilingual resources for both academic learning and bureaucratic processes



Multilingual Language Learning Materials

Approved Multilingual Terminology Dictionaries

Specific Admission Requirements

Q&A Community Space

Helps overcome language barriers and ensures consistent understanding of academic terms across languages.

Reduces bureaucratic confusion by providing clear, multilingual guidelines for application and enrolment.

Fills information gaps and allows students to get verified answers to practical and academic questions.



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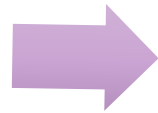
THREE-LEVEL MENTORSHIP MODEL

Building strong partnerships with local organisations and volunteers



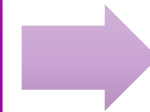
Preparatory Language Course

- Would help students overcome language barriers and adapt to academic study *by engaging existing local organisations through the platform.*



Personal Mentorship

- Each student is paired with a mentor – either a former refugee who has already integrated or a local **volunteer** student – to provide academic and social support.



Psychological Support

- Professional psychological assistance available when needed to ensure emotional stability and successful adaptation *by engaging existing local organisations through the platform.*

ConnectED Platform Prototype

Visual outline of the platform's main features.





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**We sincerely thank you for
your attention!**



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12/11/2025

Communicate local, think
global



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01 VALORISING LOCAL & INDIGENOUS LANGUAGES



Challenge: Integration of sign languages

- whole-school approach to integrate sign languages
- Sign languages are present in most contexts as a linguistic and cultural minority

DIGIEDUHACK SOLUTION CANVAS

Team: Communicate local, think global

Title of the solution: whole-school approach to integrate sign languages

Challenge category: Linguistic & Cultural Injustices in Education

Challenge addressed: Valorising local and Indigenous languages

Describe it in a tweet:

This is your sign. There are more than 1 million sign users in the EU, let's create together a more inclusive society through a whole-school approach on a micro-, meso-, and macrolevel. #SignLanguage #DigiEduHack



Solution description:

A whole-school approach on a micro-, meso-, and macrolevel:

- *Micro: Incorporation of materials that bring awareness and promote sign language in schools*
- *Meso: Create visual and multimodal strategies for the integration of sign languages in the linguistic landscapes of digital environments, school, and public spaces*
- *Macro: Mapping political, health, digital, cultural, and educational institutions*

Indicator: statistics on the incorporation of materials (increased use of materials and offers of courses), statistics on the display of sign language, assessing the inclusivity of a country (in its policies)

Benefits for the Deaf and Hard-of-Hearing community: improvement of quality of life because of the access to health and education; political opinions can help their inclusion

Context:

Problem: Underrepresentation of sign language in countries; lack of communication between the Deaf and Hard-of-Hearing community and the hearing community; missing alignment of human rights in the classroom, the school, the environment, and the institutions.

Challenge: Lack of inclusivity and awareness towards the Deaf and Hard-of-Hearing community

Target group:

Everyone! ...especially the Deaf and Hard-of-Hearing community

This solution affects everyone when offering sign language courses and being in constant contact of learning the sign language and expand the communication with other people.

Special benefits for the Deaf and Hard-of-Hearing community: improvement of quality of life because of the access to health and education; political opinions can help their inclusion.

Impact:

What is the impact of your solution? How do you measure it?

Impact: achieve a more inclusive society that aligns more with the declaration of human rights.

Measurement: Offering courses of sign language at the age of 15 and onwards; have an increase of at least 10% of people that learn a sign language on an A2 level or more; have a 100% of people who attend inclusive schools that teach both Deaf students and non-Deaf students; a 100% of the Deaf people being able to navigate in their surrounding; a 60% of non-Deaf people being in contact with sign language; mandatory requirements for buildings and institutions.

Innovativeness:

A focus on several contexts and levels where achievements can be made.

Transferability :

While dependent on the resources, changes can be made.

Some of the solutions can be applied to other languages (foreign languages, minority languages, migrant languages, ...).

At least some level can be transferred.

Sustainability:

Gradual implementation.

Changes can be seen in the mid-term in the inclusivity of the linguistic landscape or the number of students taking sign language courses.

In the long term, the aim is to not treat Deaf and Hard-of-Hearing people as a minority.

Team work:

Small group offering ideas, completing ideas, and understanding different contexts.





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THANK
YOU!

