

# **HEDforALL – Holistic Approach to Higher Education for All**

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#### Newsletter No. 6

# **HEDforALL Final Newsletter – Advancing Accessibility in Higher Education Together**

Welcome to the **sixth and final edition of the HEDforALL project newsletter**, a publication dedicated to fostering accessibility and inclusion in higher education. Over the past three years, HEDforALL has worked to develop accessible educational materials, refine inclusive teaching practices, and assess the impact of accessibility initiatives across different learning environments. As we conclude this important journey, we want to celebrate our achievements, express our gratitude, and invite you to help sustain the project's outcomes.

In this edition, we highlight key project developments, including the evaluation of educational materials by Students with Disabilities (RES4 - D4.1), the pilot implementation of accessible distance education courses (RES5 - D5.1), the Guide for Distance Education Programs (RES5 - D5.2), and the launch of the online repository of accessible educational materials (RES6). Each of these outcomes represents a step forward in making higher education more inclusive and accessible.

We are also pleased to feature an exclusive interview with **Dr. José María Fernández Gil from the University of Alicante**, who shares insights on digital accessibility and the challenges of creating an inclusive digital learning experience. Additionally, we look back at the **multiplier event in Thessaloniki, Greece**, where project partners, educators, and stakeholders gathered to discuss advancements in accessibility and explore ways to extend the project's impact beyond its official timeline.

Although the HEDforALL project formally concludes, its mission does not. The resources, tools, and insights developed through this initiative are designed to be **sustainable and widely applicable**. We invite you–educators, researchers, institutions, and accessibility advocates—to actively engage with the project's outcomes. Whether by integrating accessible materials into your courses, contributing new resources to the repository, or promoting inclusive teaching practices, your involvement is crucial in ensuring that higher education remains open and equitable for all.

The **HEDforALL** repository will remain available, offering a growing collection of accessible educational materials. We encourage you to explore it, share your feedback, and help expand its reach. Let's continue working together to foster accessibility and inclusion in education.

Thank you for being part of this journey. While this marks the end of the project, it is only the beginning of its lasting impact. Let's ensure that the principles of inclusive education continue to shape learning environments for years to come.

The **HEDforALL project** is funded by the European Commission under the Erasmus+ Programme, Key Action "Partnerships for cooperation and exchanges of practices," within the "Cooperation partnerships in higher education" action type. The project spans 36 months, running from February 1, 2022, to January 31, 2025.

# RES4 (D4.1): Evaluation of educational materials by Students with Disabilities

The Project Result 4 (RES4) report within the HEDforALL initiative focuses on assessing the effectiveness and accessibility of educational materials developed for Students with Disabilities (SwD) in higher education. This evaluation is crucial for ensuring that digital and physical learning resources meet the diverse needs of SwD, including those with visual, hearing, mobility impairments, and specific learning disabilities.

Expanding on the work initiated in RES3, which focused on the development and adaptation of accessible materials, RES4 seeks to evaluate these resources through direct engagement with SwD. The study examines their usability, accessibility, and pedagogical impact while identifying barriers that may hinder their effectiveness. To gather comprehensive insights, the evaluation relies on qualitative and quantitative feedback, ensuring that future improvements are informed by students' real experiences.

The methodology follows a structured approach, involving user studies tailored to different impairment types, experimental procedures testing various accessible formats such as EPUB, DAISY, PDF, and MS Word, and usability testing to measure efficiency and assistance needs. Additionally, semi-structured interviews and questionnaires capture students' perceptions and recommendations.

The findings reveal a range of strengths and limitations across different formats. Digital textbooks in MS Word and EPUB received positive feedback for their structured navigation, though DAISY remained less familiar. Tactile and audio-tactile materials proved valuable for students with visual impairments but required prior training to be fully effective. The accessibility of mathematical and scientific content remained a significant challenge, particularly in the representation of complex formulas and graphics. Meanwhile, the integration of subtitles and audio descriptions in multimedia content was identified as a crucial factor in improving accessibility.

Based on these insights, the report emphasizes the need for further training on assistive technologies to empower SwD in navigating educational materials more effectively. Institutional policies on inclusive education should be strengthened, ensuring that accessibility features evolve in response to user feedback. Additionally, educators are encouraged to adopt best practices in material development, fostering a learning environment that is both inclusive and adaptable to diverse student needs. Through these recommendations, RES4 aims to contribute to the continuous improvement of accessible education within higher learning institutions.

Read the RES4 (D4.1): Evaluation of educational materials by Students with Disabilities.

# RES5 (D5.1): Pilot implementation of accessible distance education courses – Assessment of the quality of the pilot courses and the results of the educational process

The RES5 (D5.1) report examines the pilot implementation of accessible distance education courses designed for Students with Disabilities (SwD) in higher education. Conducted by the University of Alicante and the University of Macedonia, the courses aimed to assess the effectiveness of online learning environments in providing inclusive and high-quality education.

The study explored how accessibility measures, including universal design principles, influenced student engagement and learning outcomes. Both institutions structured their courses to accommodate diverse needs, integrating synchronous and asynchronous formats, accessible materials, and digital tools designed to enhance usability. Despite these efforts, students encountered certain challenges, particularly in navigating complex content such as mathematical formulas and visual materials.

Feedback from participants highlighted the benefits of flexibility and accessibility, with many students expressing satisfaction with the structure and clarity of the courses. However, they also emphasized the need for greater interactivity, improved assistive technology support, and more adaptable learning resources. Educators involved in the pilot courses recognized the value of these initiatives but acknowledged the difficulty of fully eliminating accessibility barriers.

The findings suggest that future iterations of these courses should prioritize a more dynamic and interactive approach, refining course formats to balance content volume with usability. Strengthening assistive technology integration and fostering a more engaging learning environment will be essential in advancing inclusive education within the HEDforALL project.

➤ Read the RES5 (D5.1): Pilot implementation of accessible distance education courses – Assessment of the guality of the pilot courses and the results of the educational process.

## **RES5 (D5.2): Guide for Distance Education Programs**

The RES5 (D5.2) report provides a comprehensive guide for designing accessible distance education programs within the HEDforALL initiative. It outlines essential principles and best practices to ensure inclusivity, addressing the needs of Students with Disabilities (SwD) in higher education.

The guide emphasizes the importance of universal design for learning, ensuring that digital platforms and educational materials are accessible to all students. It explores key aspects such as content structuring, clear learning objectives, and the use of accessible digital documents in formats like Word, PowerPoint, and PDF. The document also highlights the role of multimedia learning, assistive technologies, and strategies for evaluating course effectiveness in an inclusive framework.

Legal and ethical considerations are discussed in detail, focusing on compliance with international accessibility standards, including the Web Content Accessibility Guidelines (WCAG) and European directives on digital accessibility. Additionally, the report provides insights into the integration of accessible platforms and videoconferencing tools, assessing widely used Learning Management Systems (LMS) like Moodle, Blackboard, and Google Classroom.

To ensure effective implementation, the guide recommends structured training for educators, improved course design strategies, and ongoing evaluation based on student feedback. By adopting these principles, higher education institutions can create inclusive digital learning environments that promote equal opportunities for all learners.

➤ Read the <u>RES5 (D5.2): Guide for Distance Education Programs</u>.

# RES6: Implementation of an online repository of accessible educational materials

The RES6 (D6.1) report focuses on the development and implementation of an online repository of accessible educational materials within the HEDforALL project. This initiative ensures that higher education institutions can provide students with disabilities (SwD) with an organized and easily accessible collection of learning resources in various formats, supporting inclusivity and long-term accessibility.

The repository was designed through a structured process, beginning with defining system requirements, followed by system design, development, and testing. It supports a range of accessible materials, including

PDFs, DAISY, EPUB, and multimedia content with captions and transcripts. To ensure usability, the platform integrates assistive technologies, allowing compatibility with screen readers and text-to-speech software.

Following its development, the repository was tested and refined based on user feedback, ensuring compliance with international accessibility standards such as WCAG 2.1. The final stage involved uploading over 200 accessible resources, including textbooks, presentations, mathematical content, and multimedia materials. The repository is structured with advanced search and metadata tagging features, facilitating seamless navigation for educators, students, and accessibility advisors.

To maintain long-term sustainability, a maintenance and improvement strategy was implemented, ensuring continuous updates, content expansion, and compliance with evolving accessibility standards. The RES6 repository provides a scalable, user-friendly solution to enhance inclusive education in higher education institutions.

- > Read the RES6: Online repository of accessible educational materials (report).
- Navigate through the <u>Online repository of accessible educational materials</u>.

# Meet the HEDforALL Project Partners: University of Alicante



**Dr. José María Fernández Gil** holds a degree in Computer Engineering and a Master's in Web Application and Services Development from the University of Alicante. He specializes in digital accessibility and application development. Since 2009, he has worked at the University of Alicante, where he currently leads the Digital Accessibility Unit. In this role, he ensures compliance with EU Regulation 2016/2102 on the accessibility of websites and mobile applications, develops accessible solutions, and provides training on digital accessibility, inclusive education, and the creation of accessible digital content for administrative, teaching, and research staff. To date, he

has taught over 30 courses to more than 800 students.

He has participated in international projects related to accessibility, including SWING, MUSE, INDOEDU4ALL, PACES, and ACCESS. His contributions have included advising on the acquisition of accessible technology and assistive devices, as well as delivering accessibility training across Europe, Africa, Asia, and the Americas.

At the University of Alicante, he developed **Students Support** on the UACloud Online Campus platform, which manages curricular adaptations for students with disabilities. He also created the **Employment Center Platform**, where students can register for activities, request guidance appointments, and apply for job opportunities.

In 2015, he was awarded the **Telefónica Chair Award** for the best Human Language Technology application for his work on an **Online Braille Mathematical Editor**.

# Three questions to José María Fernández Gil

#### What is your role in the HEDforALL project?

"As the Head of Digital Accessibility at the University of Alicante, I have shared my expertise, built over more than 15 years, in the use of accessible technologies for students with disabilities. I have also provided insights into the accessibility requirements that must be met by websites, Word documents, PDFs, PowerPoint presentations, and other digital and audiovisual materials. Additionally, I have contributed to research aimed at identifying the optimal conditions for accessible online courses, ensuring that all students, regardless of their abilities, feel included and can fully engage in the learning process."

#### Why is accessibility in higher education so important?

"Accessibility is not just important—it is essential. If the teaching and learning process is not accessible or fails to meet minimum accessibility standards, the quality of education is significantly compromised. Some students

may be unable to access the content, while others may struggle to perceive it. For instance, if a visually impaired student encounters images without alternative text, their access to critical information is restricted. Similarly, if a platform or its materials are confusing or have usability issues, they become difficult to navigate. Most critically, if the platform or content is not compatible with the assistive technologies used by students with disabilities, their ability to participate fully in the course is severely hindered."

#### How is the HEDforALL project contributing to improving accessibility?

"The HEDforALL project underscores the importance of accessible education and, through its research, has provided recommendations for higher education institutions to implement meaningful improvements. It has also explored and analyzed the preferences of students with disabilities regarding different content formats, such as Braille, Word documents, PowerPoint presentations, e-books, and more.

These findings have led to the development of guidelines, repositories, and reports that serve as valuable resources for higher education institutions, including the University of Alicante. Thanks to these guidelines, we are implementing—or planning to implement—new strategies and improvements that will benefit all students, fostering a truly inclusive educational environment."

## Multiplier Event in Greece - Thessaloniki, October 31, 2024

On **October 31, 2024**, a **Multiplier Event** was held at the University of Macedonia regarding accessibility in Distance Education for Higher Education Students with Disabilities.

#### **Key Highlights:**

#### Presentations

- Project Coordinator, Prof. Konstantinos Papadopoulos, opened the event with an overview of the HEDforALL project, highlighting its objectives and key outcomes.
- Subsequent sessions, delivered by Prof. Papadopoulos and accessibility experts Isaraj
  Lisander and Aikaterini Gkatzola, focused on accessible material development. The
  presentations emphasized methods and best practices to meet the needs of Higher Education
  Students with Disabilities.

#### Scenarios and examples

 Hands-on experiences included examples of accessible materials and realistic scenarios showcasing how these materials could be used effectively in Distance Education environments. Participants explored tailored solutions to address challenges in accessibility.

#### Panel Discussions, Questions & Answers

- An interactive panel discussion fostered a collaborative exchange of ideas, focusing on the role of technology in supporting Students with Disabilities, the needs and challenges in developing accessible materials.
- Interactive discussions highlighted the need for integrating assistive technologies in Distance Education.

The Multiplier Event at the University of Macedonia served as an opportunity to advance discussions on accessibility in Higher Education. Showcasing innovative methodologies and fostering collaboration among stakeholders, the event underscored the importance of inclusive education for Students with Disabilities. With attendees joining both in person and remotely, the event fostered engagement among participants, creating a collaborative platform to discuss innovative solutions for inclusive education.

The event was conducted in a hybrid format, with 74 remote participants and 24 attending in person. Attendees included teaching staff from primary, secondary, and higher education, accessibility service providers, and policymakers. Feedback from participants was highly positive, appreciating the event's value and expressing interest in similar initiatives in the future.

> Read the full report on the <u>project website</u>.

# **Project Partners**

There are three partner organizations from four EU countries working together inside the HEDforALL project. All of them bring a different perspective to the project according to their profile.



<u>University of Macedonia</u> (Greece) COORDINATOR



**University of Alicante (Spain)** 



National Research Council of Italy
Institute for Educational Technology (CNR-ITD) (Italy)

#### **Contact:**

## **Project Coordinator**

Prof. Konstantinos Papadopoulos

University of Macedonia, Department of Educational and Social Policy 156 Egnatia Str., GR-540 36 Thessaloniki, Greece

https://www.uom.gr/en/kpapado



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