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All Sustainable: An Innovation Project for Developing Sustainable Citizenship Competencies in People with Disabilities

Authorship

This article has been collaboratively developed by the ALL SUSTAINABLE Consortium, consisting of the following partner organizations: Cercioeiras (Portugal), Amica (Spain), INESC-ID (Portugal), COPAVA (Spain), AIAS Bologna (Italy), and Aldo-Cet (Romania).

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Abstract

The *All Sustainable* project represents an innovative initiative that combines the development of sustainability competencies with the use of digital tools for people with disabilities. This article details the design and implementation of an educational program that includes a digital game and specific training resources aimed at trainers and learners. It analyzes the co-creation process of the project, the results obtained during the training and validation phases, and its impact on various stakeholders: people with disabilities, professionals, and families. Finally, the article reflects on the future possibilities for applying the program in the field of education and disability.

Introduction

Sustainable development has become a cornerstone of global educational policies. The United Nations' 2030 Agenda, with its Sustainable Development Goals (SDGs), emphasizes the importance of education for empowering citizens and its role in building a more sustainable future. However, one of the significant challenges of this agenda is ensuring that all individuals, including those with disabilities, can actively participate in developing sustainable citizenship.

The All Sustainable project, co-financed by the European Union's Erasmus+ program, addresses this challenge by creating an accessible educational program that promotes competencies in sustainable citizenship using innovative methodologies such as educational digital games. The consortium responsible for the project is made up of six partner organizations from four European countries: Cercioeiras (Portugal), Amica (Spain), INESC-ID (Portugal), COPAVA (Spain), AIAS Bologna (Italy), and Aldo-Cet (Romania).



Project Objectives

The main objective of All Sustainable is to empower people with disabilities by acquiring competencies in sustainability and active citizenship. These competencies include the ability to understand the impacts of human behavior on the environment and society and to make responsible decisions in daily life situations to create a more equitable and sustainable future.

To achieve this, the project develops two main educational tools: an accessible digital game and a training kit for trainers, providing an inclusive and participatory approach to sustainability education.

Co-creation Methodology

One of the key aspects of All Sustainable is its co-creation approach. The active participation of people with disabilities in developing the digital game and training materials has been crucial in ensuring the accessibility and relevance of the content. During the design phases, project partners conducted co-creation workshops with more than 130 people with disabilities in Portugal, Spain, Italy, and Romania. These workshops provided valuable feedback and suggestions that were incorporated into the final development of the tools.

The co-creation approach was based on participatory methodologies, where those testing the final product not only provided ideas and feedback but also played an active role in validating the materials and the game. This ensured the resources were tailored to their cognitive, physical, and social needs, creating a product suitable for all individuals.

Description of the Educational Digital Game

The All Sustainable digital educational game is an accessible tool that can be used on computers (PC), mobile devices (smartphones, and tablets). The game is designed to promote the acquisition of competencies in active and sustainable citizenship, addressing topics such as the Sustainable Development Goals (SDGs), personal independence, and the impact of daily actions on the environment and community.

The game is organized into several missions that players must complete across different scenarios. Through these missions, players learn key concepts about sustainability, civic participation, and independent living, while solving problems related to making sustainable decisions in their daily lives. The game content is inclusive and adapts to different competency levels and cognitive abilities.

Resources for Trainers and Students

The training kit for trainers consists of resources organized into six thematic modules. These resources provide the necessary tools to implement the educational program in various contexts and to support people with disabilities who have more intensive support needs.

The modules include:

- **Cognitive capacities and types of support:** Strategies for supporting people with disabilities in their learning about sustainability.
- **Sustainability and the SDGs:** Resources for teaching the basic concepts of sustainability and their relevance in daily life.
- **Independent living and sustainability:** How to apply sustainability principles in the context of independent living.
- **Educational digital games:** Methodologies for using the All Sustainable game in teaching competencies.
- **Competency assessment:** Tools for measuring the acquisition of sustainable citizenship competencies.
- **Guidelines for exploiting the game:** How to integrate the use of the game in various educational and social environments.

Additionally, a set of accessible training materials for participants has been designed, organized into five topics that explain key concepts of active citizenship, sustainability, and the use of digital games for educational purposes.

Training and Validation Phases

The training phase for trainers was an essential step to ensure the proper implementation of the program. The entities involved in creating this project conducted several training sessions where professionals from the education and disability fields acquired competencies on how to use the game and training materials in their daily practice.

After training the trainers, the validation phase took place, during which pre-test and post-test groups were conducted to evaluate the program's impact on participants. Significant advances were observed in the knowledge and attitudes of people with disabilities toward sustainability and active citizenship. Participants, in particular, gained a better understanding of sustainability concepts beyond the environment, applying them to their daily lives and independent living contexts.

Testimonials and Results in People with Disabilities, Families, and Professionals

The results obtained during the project's validation phases were encouraging, highlighted by people with disabilities, their families, and professionals involved.

One participant with a disability stated: "This game has taught me what I can do for the planet. Now I understand that small actions like recycling or saving water are important. I feel more prepared to make responsible decisions."

A trainer who participated in the process commented: "The digital game is an excellent tool for explaining abstract concepts in a very accessible way. I've seen how participants become more motivated and engaged in learning through the game."

Families also highlighted the project's impact on their loved ones' daily lives. A family member of one participant said: "My son is now more aware of his surroundings and how his actions can have an impact. He has started recycling at home and is very interested in learning more about sustainability."

Impact and Future Application Possibilities

The All Sustainable project has proven to be an effective tool for developing sustainability competencies and active citizenship among people with disabilities. The results obtained so far indicate that the use of accessible digital tools, such as educational games, can be a valuable strategy for promoting inclusion and empowerment in this population group.

In the future, the program is expected to expand to other socio-educational contexts, both in formal and non-formal education. The consortium partners are committed to seeking additional funding to continue implementing the program in new settings and to keep updating and improving the training materials and digital game.

Moreover, opportunities are being explored to integrate the use of All Sustainable in the environmental outreach activities of organizations like Amica, with a special focus on schools and other organizations in the disability sector.

Reflection on Educational Digital Games

The use of digital games in education is gaining traction as an effective methodology for fostering active learning and participant motivation. In the case of people with disabilities, digital games can offer an accessible and adaptable platform that respects different learning paces and cognitive styles.

In the context of sustainability education, digital games can transform the way complex concepts are taught, providing a more interactive and engaging learning experience. However, it is essential to ensure that these games are accessible and designed in collaboration with end-users, as demonstrated by the co-creation approach of All Sustainable.



<https://all-sustainable.inesc-id.pt/es/home-es/>

Free and open access to the digital educational game and the training kit.



www.facebook.com/ALLSustainable



[all_sustainable](https://www.instagram.com/all_sustainable)

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