

An illustration featuring two stylized human figures. The figure on the left is standing, wearing a purple long-sleeved shirt and teal overalls, with one hand raised. The figure on the right is sitting on a large yellow sphere, wearing a teal long-sleeved shirt and purple overalls, also with one hand raised. The background is white with various colorful geometric shapes: a blue arc, a pink diamond, a yellow circle, a pink plus sign, a blue square with white lines, and a pink arc. The title text is overlaid on a dark red banner at the bottom of the illustration.

Universal Design Principles in Digital Learning for students with disabilities (SUCCESS)

Promising Practice

Implemented by:

Poznan Supercomputing and Networking Centre (PSNC)

Where:

Poland

Status:

Started in March 2021

Summary:

The SUCCESS project was designed to support teachers and caregivers working remotely with students by providing guidelines for the implementation of Universal Design for Learning (UDL) principles in digital learning for students with disabilities.

Overview

Poznan Supercomputing and Networking Centre (PSNC) was established in 1993 as a Polish Academy of Sciences research laboratory. PSNC is a member of GÉANT (a fundamental element of Europe's e-infrastructure, delivering the pan-European GÉANT network for scientific excellence, research, education and innovation). PSNC actively participates in the design and development of high-speed interconnects, fibre-based research and education networks, allowing PSNC today to be a vital member of the pan-European GÉANT optical network connecting 34 countries through 39 national networks (NRENs).

Description

Following UDL principles when designing educational materials for students, regardless of their needs

When the COVID-19 pandemic forced most European countries to impose confinements during the winter/spring of 2020, schools were forced to close, providing only remote teaching. The consequences on students who require additional support in their educational process – especially students with disabilities – were severe due to the inadequacy of pedagogical models for distance learning and the lack of preparation of school staff.

The main aim of SUCCESS was to support teachers and caregivers working with students during lockdowns when digital tools and distance learning were the only media available for attending classes and interacting with peers. Considering different characteristics and conditions, adopting the UDL principles helped all teachers improve the quality of educational materials created ex-novo for digital learning.

The SUCCESS platform is considered an innovative practice as it enhanced the open-source, EC-recommended Up2U platform, focusing on accessibility for users with special educational needs and disabilities. The guidelines and self-paced online courses summarize much-needed knowledge regarding creating accessible educational content in remote and face-to-face teaching.

Cooperation

A consortium of six institutions from five countries, including universities, a research centre and an NGO, implemented the SUCCESS project between 2021 and 2023.

UDL principles

The main focal point of the project was to raise awareness of the necessity of adhering to the UDL principles while designing training materials for students, regardless of their disability or special education needs. The project partners wanted to provide concrete and easy-to-follow guidelines for the content designers and examples of UDL principles in practice.

Self-training for teachers

The teachers could also self-train on those practices using the project's Massive Online Open Course (MOOC). Additionally, the project provided an accessible, ready-to-use e-learning platform with tools facilitating exclusively remote learning and teaching.

Objectives

The initiative's primary objective was to increase awareness about the importance of following UDL principles when designing educational materials for students, regardless of their disability or special education requirements. To achieve this, the project partners developed user-friendly guidelines for content creators and demonstrated practical examples of implementing UDL principles. The teachers were also provided with a MOOC to train themselves on these practices. Furthermore, the project aimed to provide an accessible e-learning platform with tools that enable remote learning and teaching.

The target groups are teachers (including special education teachers), parents, caregivers, therapists of students with special educational needs and disabilities, and indirectly, the previously mentioned students.

The project aimed to achieve:

- Greater availability and more exchange opportunities of Open Educational Resources (OER) among European universities and institutions devoted to teaching/training/ supporting disadvantaged people, starting from those belonging to the project's target groups.

- Improved integration between online and traditional education activities and informal education.
- A change of attitude by educators and stakeholders, particularly regarding online training activities.

Outcomes and impact

User-friendly guidelines on adhering to the UDL principles for educational content designers

The SUCCESS project produced six concrete intellectual outputs. Analysis and a scoping review of the challenges and needs of students with disabilities during pandemic online learning, guidelines for implementing UDL principles in digital learning for students with disabilities, e-learning platform to realise demonstrative courses, implementation of a Virtual Information Center and a Self-Paced Online Course based on three demonstrative units covering some clusters of needs emerged

Showcase of an accessible learning platform

Another output was an e-learning platform to realize demonstrative courses, implementation of a Virtual Information Centre (a kind of repository where information and resources can be shared among involved stakeholders in creating a supranational community dealing with students with disabilities concerning digital education), and a Self-Paced Online Course based on three demonstrative units covering some clusters of needs emerged.

Materials and outcomes were tested, reviewed and improved based on real users' feedback with different categories of disabilities

During each project phase, numerous people from six countries were involved in the activities. Only in the initial survey did more than 500 people take part. All in all, the consortium engaged around 1000 teachers, caregivers and therapists during the project. Additionally, the courses and materials created were integrated into multiple course syllabuses of partner institutions, ensuring continual support for our target groups.

Challenges

Low level of digital competencies among teachers

As part of the comprehensive self-paced online course, the programme designed a module to educate participants about the learning platform and its various features. The team also created a demonstrative course that provides clear and practical examples of actions, materials and methods that teachers can use effectively. Additionally, the programme offered online support through forums and email, ensuring that participants received the help they need to make the most of their learning experience.

Teachers with experience creating digital content may need to see the project's website and platform valid

The project has furnished numerous resources, intricate tools and a Virtual Information Centre. This centre is a repository where information and resources can be disseminated among stakeholders. The primary objective was to establish a supranational community that caters to students with disabilities and digital education, enabling even more seasoned participants to derive benefits from it. In Poland, supplementary workshops were organized on the digital accessibility of websites and web applications and insights on UDL for educators and teachers.

Selecting special educational needs to be addressed by the project and the lack of capacity to address all of them

The project has addressed clusters of special needs (for instance, automatic reading of texts on the screen) shared for several categories of students who require accommodations, not exclusively those recognized by law as "students with disabilities".

Insights

Involving representatives of the target groups can be very beneficial for the project or initiative. By engaging them early on, valuable insights into their needs and expectations are discovered, which can help to tailor the approach to meet their requirements better. Moreover, by listening to beneficiaries' feedback, potential issues can be identified and addressed before they become significant problems.

Next steps

The project results will be used during work on subsequent projects by all the partners - both at the stage of defining assumptions and requirements and creating specific results, such as content creation or infrastructure development. Moreover, university partners have integrated the project's intellectual outputs into several course syllabuses for future school teachers.

Learn more

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To learn more about SUCCESS, visit:
<https://success4all.eu/>

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