

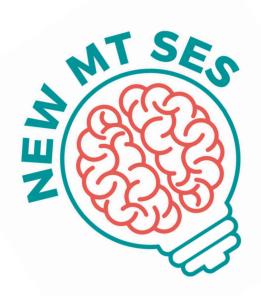
# Erasmus+

Arricchisce la vita, apre la mente.

Co-funded by the European Union

# GUIDE LINES ABOUT NEW METHODS AND TECHNOLOGIES FOR THE POST PANDEMIC SCHOOL EDUCATION SYSTEM TO COUNTER LEARNING OBSTACLES

ERASMUS+ KA210-2023-2025















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### **PREFACE**

These Guidelines are the educational product of the Erasmus KA210 project, a small-scale partnership involving strategic cooperation between three schools—Italian, Spanish, and Turkish—supported by two vocational training institutions, one Portuguese and the other German.

The project focused on defining, disseminating, and integrating best practices and digital methods applied to traditional teaching, with a particular focus on teaching students with learning disabilities and enhancing the digital and language skills of teachers to promote digital transition and inclusion.

Teachers discussed the use of platforms such as Canva, Kahoot, Wordwall, and the artificial intelligence Chat GPT, exploring their potential and limitations and identifying ways to apply them to traditional teaching.

This publication, therefore, provides a pedagogical contribution in English and Italian, accessible online to teachers of different educational levels, and collects examples of the use of these platforms. The goal is to disseminate best practices for teaching/learning practices that combine traditional methods with digital, technological, and innovative ones, with a particular focus on students with learning disabilities (difficulties concentrating or paying attention, issues with language development, or issues processing visual and auditory information). The intent is to provide teachers with a knowledge tool to increase the use of digital applications for a more inclusive and digital education, while also serving as a manual for strengthening digital and linguistic skills.







### **CHAPTER 1**

The project "New Methods and Technologies for the post pandemic School Education System to counter learning obstacles"

The project "New Methods and Technologies for the Post-Pandemic School Education System to Counter Learning Obstacles" was selected for funding under the Erasmus Plus Program for small-scale partnerships KA210 in November 2023 and concluded in July 2025.

The partnership consisted of the lead school, Istituto comprensivo Arturo Toscanini in Aprilia (Italy), two other schools, CEIP Los Morales in Malaga (Spain), Borsa İstanbul Mehmet Akif Ersoy based in Ankara (Turkey), and two vocational training institutions, Previform - Laboratório, Formação, Higiene e Segurança do Trabalho, in Ponte de Lima (Portugal) and Xient GmbH in the city of Cologne (Germany).

The project was born from a careful analysis of the educational context during the Covid pandemic, particularly at the pedagogical and educational levels. The Italian school system encountered numerous difficulties with the introduction of distance learning (DAD) and integrated digital learning (DDI). Despite the strengthening of digital and technological facilities in schools, unfortunately, problems persist, such as a lack of training and teachers' poor technological and linguistic skills, including in addressing learning disabilities.

From these needs, the proposal aimed to promote strategic cooperation between schools of different nationalities and professional training institutions in order to:

- discuss innovative methodologies at the European and international level that can be adopted in teaching and in teacher and student training;
- seek common best practices that integrate traditional teaching methods with technological/digital ones;
- focus on methods and tools for teaching and including students with learning disabilities.

The project was structured into two modules, each with the same implementation methodology in terms of the type of activity but with two different themes.

• The **first module**, called **INTEGRATED METHODS FOR TEACHING** (from 01/01/2024 to 06/30/2024), focused on the analysis and integration of new digital teaching methods in order to update the education system from a European perspective.





The project involved the implementation of the training and practice program in Portugal at the Previform Institute for 12 teachers (4 from each school). They were tasked with acquiring new digital teaching methods, enhancing their skills, and disseminating the knowledge acquired within their schools upon their return. The course focused on the use of the "Design thinking" method as an active learning method, with the results being reported through the creation of quizzes and reels on the CANVA platform.

• The **second module**, entitled **TECHNOLOGICAL TOOLS FOR LEARNING OBSTACLES** (July 2024 to May 2025), focused on the acquisition of innovative methods and technologies for treating learning disabilities, through comparison, analysis, and training activities at the Xient GmbH Institute in Germany. This module also involved 12 teachers (different from the other module) with the same tasks and responsibilities. The course included a general analysis of several applications that can be used to teach students with learning disabilities, specifically Kahoot, Worldwall, and Chat GPT.

The project concluded with a final mobility visit to Italy for representatives from each partner and the implementation of a results dissemination program, resulting in this publication.

Regarding the methodology for both modules, a fixed format of activities was applied, comprising three phases: TECH LAB, TRAINING LAB, and DISSEMINATION.

• The TECH LAB is a set of activities aimed at analyzing the context and identifying suitable training strategies for achieving the objectives and applications to be used in teaching. Specifically, it involved the creation of a questionnaire and its administration to the teaching staff at each school in the partnership, to understand the state of the art regarding the use of technologies applied to teaching (in the case of Module 1) and those applied to teaching students with learning disabilities (Module 2). The questionnaires quantitatively and qualitatively investigated the digital tools and applications present at each school, the ways in which these tools were used and their integration with teaching, the teachers' level of interest and usability of these technologies, and their technological skills.

The collected data was then processed and presented in graphs to understand how to implement the TRAINING LAB activities in Portugal and Germany, determine which training courses to implement to address the shortcomings identified by the surveys, and







plan workshop and roundtable activities.

The project included two roundtables: the first before or during the monitoring phase to review the monitoring strategy and standardize it across Europe; the second roundtable to analyze the survey results and unanimously decide on the type of training program to undertake in the subsequent phase of the TRAINING LAB.

- The TRAINING LAB included a five-day mobility program for 12 teachers, in three teacher groups of four teachers per school. The first module was held in Ponte de Lima with partner Previform, and the second in Cologne with partner Xient. During this period, training activities were conducted, such as refresher courses on the use of digital platforms and methods to integrate into teaching, accompanied by workshops and roundtables for cultural and pedagogical exchange and to define the dissemination activities to be implemented at each institution upon the return from mobility.
- The **DISSEMINATION PHASE** is the set of activities carried out by the Teacher Groups upon their return from mobility to disseminate the methods, skills, and experiences acquired to their colleagues through peer-to-peer communication. Specifically, the dissemination activities for both modules were: two workshops for teachers, one job shadowing session for teachers and students, and a conference to promote and publicize the project to the entire community.

The objectives underlying the proposal were:

- Promote the digital transition of educational institutions through cooperation, the exchange of skills, and experiences between schools at different levels (primary and secondary).
- Knowledge and integration of teaching/learning practices that combine traditional methods with digital, technological, and innovative ones;
- Promote the development of methodologies and tools for students with learning disabilities, which involve difficulties in concentration or attention, language development, or processing visual and auditory information.
- Creation of a European learning and teaching space to strengthen the online education system.
- Strengthen the linguistic and technological skills of staff at participating institutions.







### **CHAPTER 2**

### Design Thinking & CANVA MODULE 1 METHODS INTEGRATED TO TEACHING

### 2.1 Design Thinking active learning methodologies

In the first module, the 12 teachers participated in the course developed by partner and training provider Previform and led by instructor Marta Pedreida.

The course focused on the Design Thinking process applied to teaching and the use of short videos such as Reels or Quizzes, created with the CANVA platform, to convey the results of this process.

Design Thinking is distinguished as an ACTIVE LEARNING METHODOLOGY and promotes creativity, a user-oriented approach, and interdisciplinary collaboration, which encourages the development of practical skills and the effective resolution of complex problems.

For these reasons, it is a methodology that can be applied to school teaching, as it engages students in the learning process through discussion, problem-solving, and reflection, rather than passively receiving information. Learning occurs through teamwork and peer interaction, improving communication and social skills. Students are encouraged to interact with the material through various activities, fostering deeper understanding and improved retention.

It is a method that improves comprehension and critical thinking, promoting active and creative learning in students, and encouraging collaboration and experimentation.

In the classroom, students are taught the Design Thinking process through its five main phases:

• **EMPATHIZE**, meaning understanding and identifying the user's needs, motivations, and challenges through research and observation.

The class is divided into working groups, and each group identifies a question, challenge, or problem that they must transform into an opportunity. The problem is analyzed, the data collection method is defined, and the target audience is identified.

Information can be gathered through interviews or online research, and all relevant data can be recorded in a schematic format (one or two words) on colored post-it notes, which are grouped by theme or similarity.





- **<u>DEFINE</u>**, meaning clearly articulating the problem based on the insights gathered during the empathy phase.
  - In this step, it's essential for everyone to share their perceptions and notes from the previous phase; it's time to transform stories and the information gathered into problem-solving ideas. To facilitate understanding, students should be encouraged to group the information gathered into similar themes as in the previous phase, perhaps using colored post-its, and then proceed to create a concept map.
- <u>IDEATE</u>, meaning brainstorming and generating a wide range of potential solutions to the defined problem.
  - This phase encourages students to be creative, reflective, and problem-solving. They work on the concept map to find a solution, refining the most promising ideas.
  - Finally, after appropriate evaluation, the best solution is voted on to move to the next phase.
- **PROTOTYPE**, or creating tangible representations of ideas to test and refine them using the CANVA platform.
  - After identifying the solution to the initial problem through the Design Thinking methodology, we move on to creating the prototype, specifically creating an Instagram Reels (instructions on page 12), a short video format that allows users to create and share video content. It's one of the most popular formats today, especially among young people, for entertainment or to showcase their creativity.
  - The Reels can be shared on social media or simply to connect school content to students' leisure experiences.
  - At the end of the prototyping phase, further validation is conducted to verify the feasibility of the solution, obtaining feedback from teachers and the public involved in the research (if applicable). Subsequently, students can discuss the problem collaboratively, always with the goal of enhancing the experience and learning.
- <u>TESTING</u>, the final phase, involves evaluating prototypes with users to gather feedback and identify areas for improvement. In this case, evaluation involves publishing the project itself, quizzes, or reels, on social media platforms or websites, and evaluating the success of the content and graphics, as seen in terms of views.

The goal of this process, therefore, is to solve problems, satisfy needs, and achieve specific goals through thoughtful design. It takes into account the usability, aesthetics, and functionality of what we convey, and user experience plays a central role in the Design Thinking process because it is a







human-centered methodology. It requires the use of creative techniques and methods, and understanding the right questions is a prerequisite for action.

### 2.2 CANVA, general functions

Canva is an online graphic design platform that allows you to create, save, and customize documents, graphics, and videos of all kinds. It's used to create social media posts, presentations, posters, videos, logos, and much more, and has also implemented several artificial intelligence features.

Log in to Canva at <a href="https://www.canva.com/">https://www.canva.com/</a> and create your account.

The standard version is completely free and accessible online.

### 1)HOMEPAGE

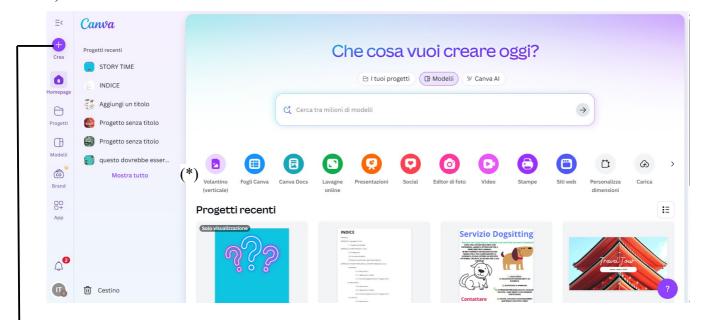


Image 1

Crea

**CREATE button**: selects the type of template to create and opens a second screen with the new project to create (image 2), for example videos, Word documents, spreadsheets, reels,

etc. The templates to select are also shown in the central screen, on the horizontal string.





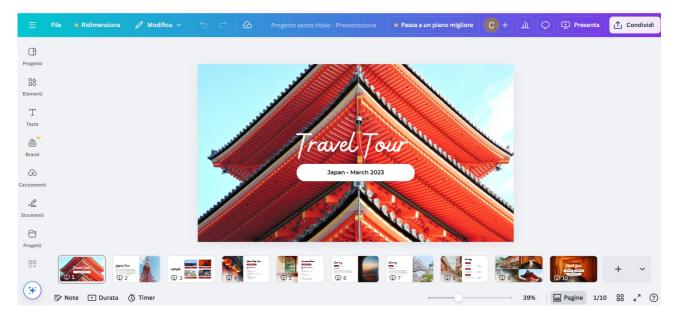


Image 2

Once you've selected the CREATE button and chosen a template from those offered, proceed with creating your product. For the free and standard versions, there are many templates available, and you can only select those that do not display the symbol.

This means that the template or other elements are available to subscribed users.

The main function keys that allow you to create your own design are:

## **ELEMENTS** button

Elementi Selecting the button opens the menu (image 3) where you can choose shapes, lines, and various elements.

At the top, the "Search for Elements" function allows you to type in the area or category you're interested in and obtain a series of images to apply to your working document. For example, selecting "Garden" displays images of flowers, stylized or otherwise, gardening tools, and so on.

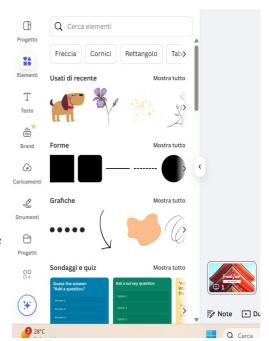


Image 3







### **TEXT button**

The "Text" function allows you to insert words, phrases, and text into your document. When you open the menu (image 4), select the font type, size, and typeface, as well as other graphical options.

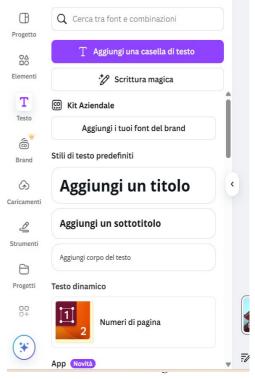


Image 4

### **DOWNLOAD** button

Caricamenti

This feature allows you to upload various formats, such as images, videos, photos, PDFs, Word files, and more, from your PC,

the web, social media, or other devices. Once uploaded, they are automatically saved to the platform and visible when you click the icon (image 5). Once uploaded, the colors and sizes can be changed in the standard and free versions (image 6).

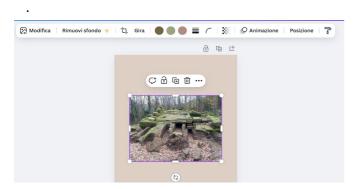
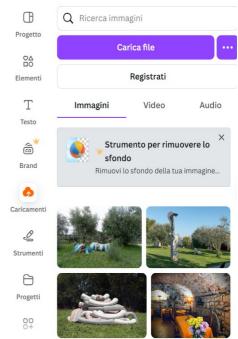


Image 6



Imaage 5





### **TOOLS** button

0

This function allows you to modify your work with text, drawing, Strumenti shape, line, sticky note, and table tools (image 7).

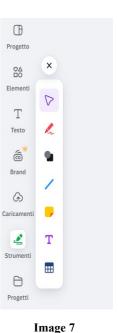
### 2.3 CANVA-HOW TO CREATE A REEL AND QUIZ

- 1. Choose a new template
- 2. Click Edit (go to the right)
- 3. Choose a background (top left)
- 4. Lock the background (by clicking the lock or right-clicking)
- 5. Create slides and add a title and/or text (by clicking the text in the left column)
- 6. Upload photos, previously uploaded to your PC, by clicking Uploads in the left column
- 7. Items (optional). Type what you want to search for in the search engine, clicking on your selections to include them in your reel.
- 8. Group items. Right-click the selected items and click the Group tab.
- 9. Go to Position Layers to overlay or place an element behind it.
- 10. Go to the Animate tab (at the top) to add transitions, or click between slides on the thumbnails at the bottom of the page. You should have enough slides to create a reel of about 30 seconds to 1 minute (you can adjust the slide duration by clicking on the thumbnail edges). Explore other elements (you can use frames over your photos, videos, stickers, etc.), or create your own images with artificial intelligence, one of the tools offered by Canva.
- 11. Finally, add music (by searching for it in the elements or uploading your own).

### Links to exercises carried out in the TRAINING LAB I

https://www.canva.com/design/DAGJKz1yrw4/EGHdebaCWe1J OU4C4Z6bg/edit https://www.canva.com/design/DAGn-Snxz68/PxLOAY7DbkBLGJVkopz1Cw/edit? utm content=DAGn-

Snxz68&utm campaign=designshare&utm medium=link2&utm source=sharebutton









# CHAPTER 3 KAHOOT, WORLDWALL e CHATGPT, MODULE 2 TECHNOLOGICAL TOOLS FOR LEARNING OBSTACLES

The second module involved a course delivered by the German partner XIENT, introducing and using three applications—Kahoot, Worldwall, and Chat GPT—for teaching students with learning disabilities. The course was primarily theoretical, sharing experiences among European schools. These applications were used and tested during a workshop led by the three Teachers Groups. It consisted of two sessions: a practical one and a discussion session analyzing the opportunities and challenges of using the applications. In these activities, teachers focused on how technology and a playful approach can support inclusion and foster learning for children with special educational needs, improving participation and engagement in school settings. In roundtable discussions, intended as discussion, analysis, and coordination activities, teachers, in addition to planning future dissemination activities at each school, discussed the course content and enhanced the workshop with suggestions for improvement, such as examples of how the applications were used.

### **3.1 KAHOOT!**

### 3.1.1 General functions

Kahoot! is an online platform that allows you to create and participate in interactive quizzes, used in educational settings, as well as in companies and informal events. It's a digital tool that transforms

questions and tests into a quiz game, complete with scores, music, colors, and a final leaderboard, making learning more fun and engaging.

The standard version is completely free and accessible online.

Scegli il tipo di account

Azienda Insegnante Studente Amici e familiari

Hai già un account? Accedi

Go to <a href="https://kahoot.com">https://kahoot.com</a> and click "Sign up" to create an account (you can use email or Google).

Image 8







Choose your role: teacher, student, personal, or business (image 8).

Click "Create" and then "New Kahoot" (image 9).

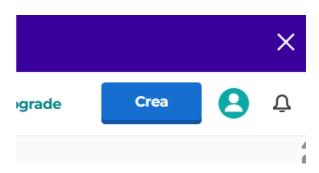
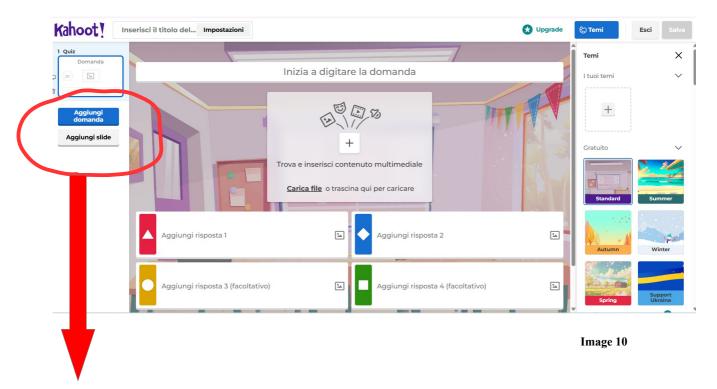


Image 9

You'll be taken to a screen where you can create your own custom quiz, set question types (true/false, multiple choice, etc.), insert images or videos, add correct answers, and set a timer for each question. (Image 10)



In the menu on the left of the screen you will find two functions: "add question" and "add slide". The first allows you to set the type of questions (image 11) and the second allows you to set the slide with a single, multiple, etc. box (image 12).





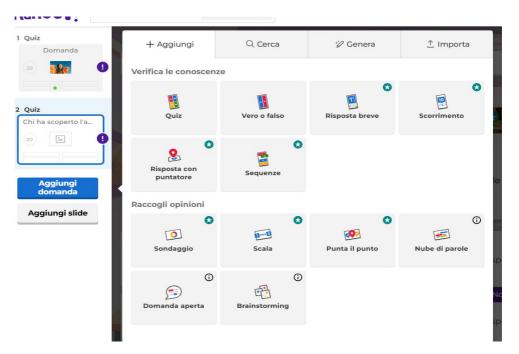


Image 11

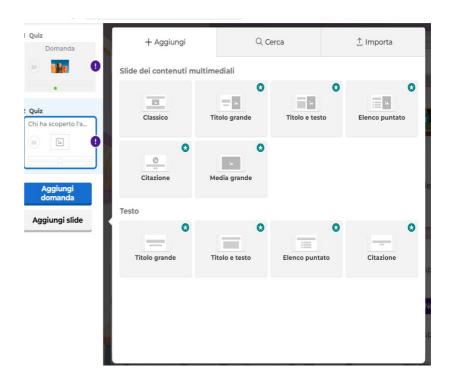


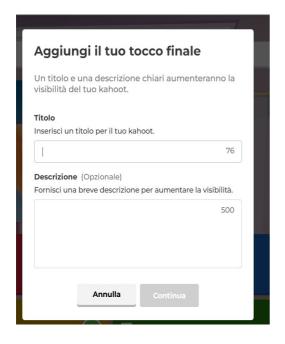
Image 12







Once you've completed the quiz, you must save it ("Save" in the top right) with a name and optional short description (image 13). You can then decide how to distribute it to the class: via link, live, in a conference, or by entering a game PIN (image 14).



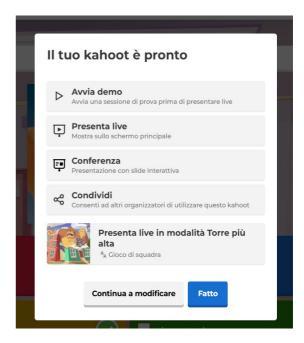


Image 13

Image 14

### 3.1.2 Examples of Applications for Teaching

When imagining using Kahoot! in the classroom, the teachers in TRAINING LAB II highlighted the possibility of dividing students into groups of two for peer-to-peer learning. If there are children with dyslexia, or difficulties with reading and comprehension, the tutor will read the question and motivate the tutor, while retaining the option of changing roles based on the questions. Indeed, the exchange of roles between tutor and tutor not only allows students to address specific gaps but also stimulates participation, self-esteem, and a sense of self-efficacy in students with greater learning difficulties. Furthermore, the ability to work in pairs makes up for the lack of a "quiz with voice reader" feature in the free version, making Kahoot immediately available to all teachers.

In the discussion that followed, the need to set longer response times was emphasized so that the presence of the timer does not generate anxiety or impulsive responses in children and adolescents.







The app allows you to configure quizzes in two modes: a simpler one and a more complex one that requires greater cognitive effort. In the first mode, students can display multiple-choice answers on

their devices, which helps focus their attention on the reading and makes answering easier and more immediate. In the second mode, the question and possible solutions are projected on the main screen, while only the colors and symbols associated with each answer are displayed the student's on screen. Therefore, students must read and select an option only on the main screen and then associate the symbol and color with what is projected on their device. (Image 15)

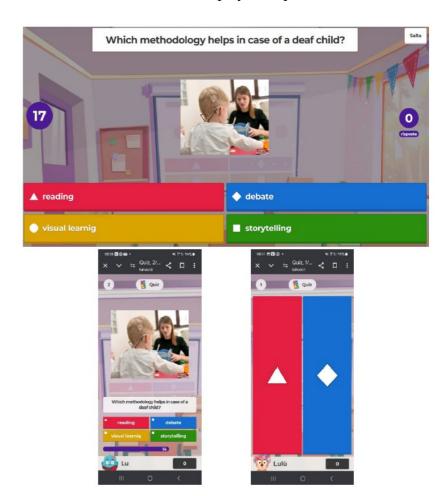


Image 15

The option to choose one or the other is given when administering the kahoot and cannot be set by default when creating the quiz (Image 16).









Image 16

### **Kahoot! Benefits**

Kahoot has proven to be a particularly effective tool for the following reasons:

<u>Interactivity and Engagement:</u> Kahoot allows you to create interactive quizzes that stimulate curiosity and interaction among students. This playful aspect is particularly useful for children with autism, who can benefit from learning methods that go beyond classroom instruction.

<u>Adaptability:</u> The platform allows you to customize questions based on difficulty levels, encouraging learning in small steps. For children with learning disabilities, this may mean offering shorter quizzes with multiple choice answers and extended reflection time.

<u>Inclusive Communication:</u> Kahoot allows you to integrate images, sounds, and videos into questions, facilitating comprehension for children with language or verbal difficulties. The use of visual elements can be particularly useful for children with autism, who often find visual rather than verbal stimuli more comfortable.

<u>Instant Feedback:</u> Real-time feedback helps all students understand their mistakes and successes, encouraging self-correction and motivation. For children with learning disabilities, this approach can be crucial for avoiding frustration and promoting a growth mindset.







<u>Collaboration and Socialization:</u> The competitive aspect of Kahoot can foster peer cooperation and improve socialization. For children with autism, who sometimes struggle with interacting with others, Kahoot offers the opportunity to share a playful experience in a structured and supportive environment..

### 3.3 WORLDWALL

### 3.2.1 General functions

Wordwall is a digital platform that allows teachers to create interactive games and activities for students, useful for teaching and reviewing content in an engaging and fun way.

The free version of Wordwall allows you to create up to 5 saved activities.

Go to <a href="https://wordwall.net">https://wordwall.net</a> and click "Register" or "Sign up."

Once logged in, click "Create your first activity" (image 17).

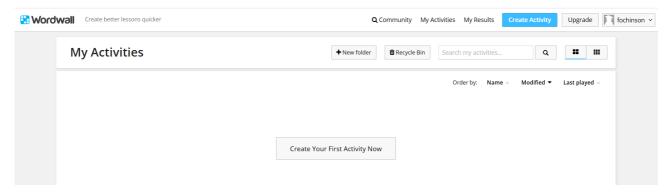


Image 17







Choose a template (e.g. quiz, matching, memory, wheel, crossword, etc.) (image 18)

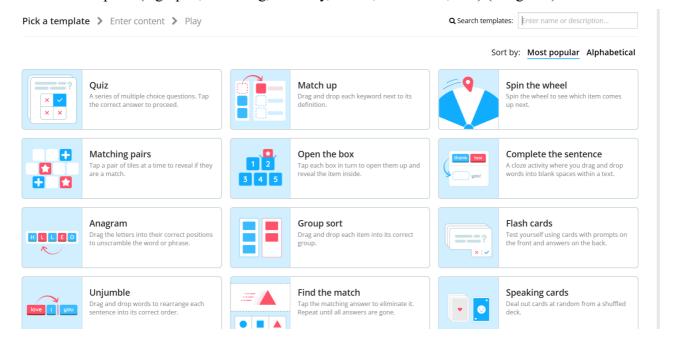


Image 18

Once you've selected the template type, enter the required content such as questions, answers, images, and text. When finished, click "Done" (image 19).

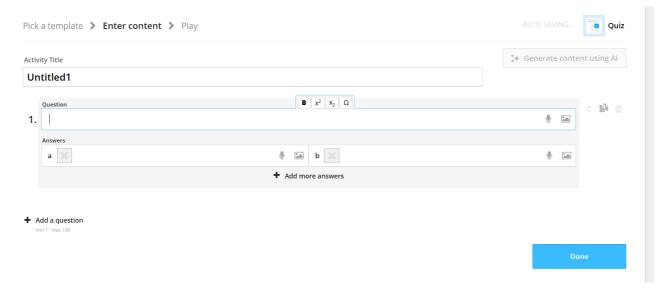


Image 19

Once you've created the activity, you can present it to the class on the IWB or project it onto the screen. It can be shared online with students via a direct link, QR code, or Google Classroom or Microsoft Teams.







### 3.2.2 Examples of Applications for Teaching

Wordwall's versatility allows content to be adapted to different teaching needs, including those of children with learning disabilities. Wordwall is intuitive to use for both teachers and students. The ease with which activities can be created and modified allows educators to quickly respond to each child's learning needs. Children with cognitive or motor disabilities, who may struggle with more complex platforms, can interact with Wordwall without feeling overwhelmed by the technology. Furthermore, it offers a variety of educational activity templates that can be used in a playful manner. Interactivity and the use of games such as quizzes, matching, or timed games can capture children's attention and motivate them to learn in a fun and engaging way. For children with learning disabilities, the playful approach can make learning less frustrating and more stimulating.

This makes Wordwall a valuable tool for children with special educational needs, who can be supported through personalized activities that progress at their own pace and simultaneously utilize different learning mediators. Furthermore, the platform is accessible from any internet-connected device, allowing students to use it at home or at school, and allowing teachers to monitor their progress.

Teachers have also explored its use for children with SEN. In particular, the use of the voice reader is useful for dyslexia; that is, the ability to play games like anagrams using the keyboard or mouse

allows a dysgraphic student to understand the morphology of a word without the cognitive load associated with the movement required to write each individual letter. (Image 20)

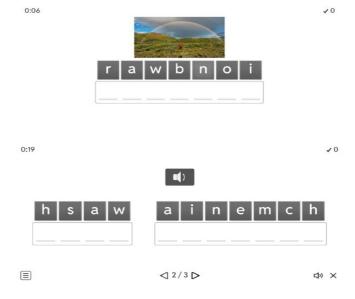


Image 20







However, some critical issues emerged from practical use during the workshop. Specifically:

The potential for cognitive overload. If not properly structured, the excessive number of options or complexity of tasks could lead to confusion or frustration, reducing learning effectiveness.

The need for external support. Some children, particularly those with motor or visual impairments, may require additional support, such as adult assistance, to navigate the platform correctly.

Limited immediate feedback. While some games provide score feedback, not all provide in-depth information about errors or how to correct them, which is particularly important for children with learning disabilities. More detailed process monitoring could also help teachers better understand errors and address gaps.

### **Wordwall Benefits**

Visual and Auditory Support: Wordwall offers the ability to add images, videos, and audio narration to activities. This is useful for students with reading difficulties, dyslexia, or a visual-auditory learning style.

Motivational Learning Through Gamification: Wordwall games such as Quiz, Match Up, and Word Search encourage active participation in lessons. The game format is particularly motivating for students with attention deficit hyperactivity disorder (ADHD).

Personalized Learning Opportunities: Teachers can easily monitor student performance and create customized activities based on their needs. For example, students with learning disabilities can be provided with easier questions or additional visual support.

Repetitive and Reinforcement Activities: Students can practice by repeating the same activity. This is especially useful for learners who need reinforcement, as revisiting activities helps consolidate learning.

Self-Paced Learning: Time constraints on activities can be modified or completely removed. This flexibility reduces pressure on students and allows them to learn at their own pace.

Support for Students with Language and Reading Difficulties: The app offers options to simplify texts, provide audio readings, or use short, clear expressions, which is useful for students with learning difficulties in text-heavy subjects such as philosophy and history.

Below are some platform exercises created by the Teachers Group during the TRAINING LAB II in Cologne.





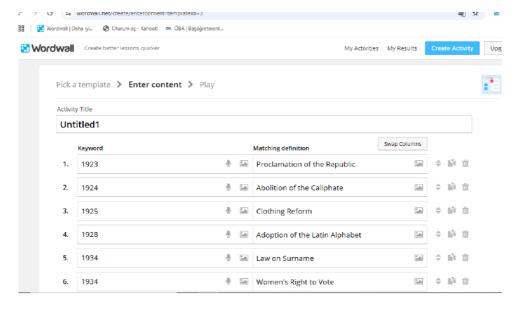
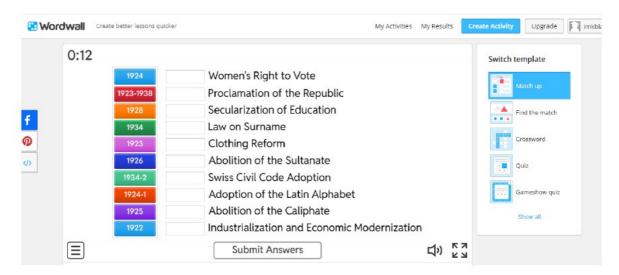


Image 21



To see the game click the following link:

Imagee 22

https://wordwall.net/resource/87599154/learning-about-atat%c3%bcrks-reforms







Image 23



To see the game click the following link:

https://wordwall.net/play/87490/599/891

Other links to exercises conducted by the three teams.

https://wordwall.net/resource/89586154

https://wordwall.net/resource/89585745

https://wordwall.net/play/89590/248/857 (pre-school)

### 3.3 CHATGPT

### 3.3.1 General functions

ChatGPT (an acronym for Chat Generative Pre-trained Transformer) is a chat bot based on artificial intelligence and machine learning, specialized in conversation with a human user. It's an excellent tool in education as it allows you to quickly create lessons through a series of tools or can be used as a tutor to improve specific learning outcomes.

The basic resource is free, even without registration, but you can't save conversations. By registering or subscribing, you can create a personal database, take advantage of more tools, and fully exploit the potential of AI.







Go to https://chatgpt.com/ and decide whether to "not log in" and use the basic resource or "register" (image 24).

You simply enter a question or request a presentation on a specific topic. Chat GPT processes the request, offering an in-depth overview of the chosen topic. The user can then continue to consult the artificial intelligence to build a lesson (in the case of an educational context). (image 25)

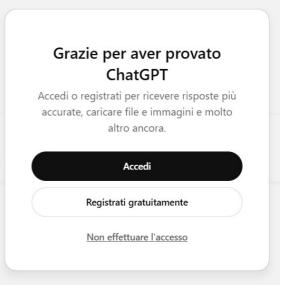


Image 24

explains how thunderstorms form to 7-year-olds

Sure! Here's a simple explanation for a 7-year-old:

How Thunderstorms Form:

Imagine the sun shining on the ground. It warms up the land, and that warm land heats the air above it.

Warm air is light, so it starts to rise up into the sky.

As the warm air goes higher, it gets colder up there. The water in the air turns into little drops and forms clouds. When there's a lot of warm, wet air rising, the clouds get big and tall—like giant towers!

These big clouds are called cumulonimbus clouds, and they can make thunderstorms.

Inside these clouds:

• The water drops and bits of ice bump into each other.

- This makes electricity (kind of like static when you rub a balloon on your hair).
- When the electricity builds up a lot, it goes ZAP! Unat's lightning!

Image 25







### 3.3.2 Teaching Application Examples

During the workshop, the Italian team teachers used artificial intelligence to create a concept map for a student with dyslexia, to develop social and relational skills. It turned out that for AI to be effective, the request must be very precise. Initially, a map on feudalism was requested. ChatGPT proposed a diagram with the most important aspects a student should know by the end of the teaching unit. (Image 26)

FEUDALESIMO

- Origini
- Collasso dell'Impero Romano
- Invasioni barbariche
- Necessità di sicurezza e organizzazione
- Struttura Sociale
- Re → Concede feudi ai vassalli
- Vassalli (Nobili e Signori feudali) → Ricevono terre in cambio di fedeltà
- Cavalieri → Proteggono il feudo e servono il signore
- Contadini e Servi → Coltivano la terra, pagano tasse, dipendono dal signore
- Economia
- Basata sull'agricoltura
- Autoconsumo (produzione locale)
- Corvée (lavoro gratuito per il signore)

Ecco una mappa concettuale sul feudalesimo con i concetti principali:

Image 26

The teachers subsequently asked the AI to design a different map (image 27).

The result is highly original, but could be confusing for students with learning disabilities, so the next request was to make it clearer and more appropriate for the assignment.



Image 27

Before producing it, the program asked for confirmation regarding the characteristics of the project to be generated. (image 28)

Ci vorrebbe una versione più chiara adatta ad un alunno dislessico

Posso creare una nuova versione della mappa concettuale con:

Font ad alta leggibilità (tipo OpenDyslexic o Arial)

Contrasto chiaro per evitare confusione visiva

Pochi colori ben distinti per ogni sezione

Testi ben spaziati e senza sovraccarico di informazioni

Ti va bene questa impostazione?

Image 28







The ability to communicate with AI allows for process monitoring, as well as obtaining final products. (Image 29)

Another exercise conducted with Chat GPT by the Italian team was to ask the AI to put itself in the shoes of four historical figures and produce four monologues to highlight their different emotions and points of view regarding the same event, specifically the invasion of a fiefdom during the Middle Ages. (Image 30)

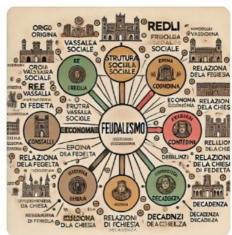


Image 29

### Monologo del Feudatario

"Porto sulle spalle il peso di un'intera terra. Ogni notizia di invasione mi scuote nel profondo, perché so che il destino dei miei vassalli e della mia gente è nelle mie mani. Il mio onore, la mia autorità, vengono messi a dura prova da un nemico sconosciuto e spietato. Anche se la mia voce deve rimanere ferma e decisa, nel silenzio della notte sento il tremore dell'angoscia: temo per la caduta del mio regno e per l'inevitabile rovina che incombe su di noi. Ma non posso cedere alla disperazione; devo essere la roccia che protegge chi mi sta intorno."

Image 30

At the end of the activity, students were asked to complete questions to encourage a deeper understanding of the text. For each character, the following were included:

A True/False question to test basic understanding.

A multiple-choice question to focus on the main ideas.

An inferential question to encourage students to explore underlying emotions and motivations.

A reality task aimed at connecting historical experiences to contemporary situations.

Recognizing the diversity in our class, the additional request was to adapt these materials for students with special educational needs, specifically for a child with learning disabilities and a new student. The texts were simplified, shortened, and vocabulary limited to basic vocabulary. Even the open-ended questions were broken down into smaller, more manageable steps. Once again, it







became clear how important it is to precisely and precisely request what needs to be generated. The AI responded: (image 31)



Image 31

The Spanish team analyzed how ChatGPT can help a student with ADHD. In this case, AI can help the student manage time and organize the task, providing detailed instructions and suggesting ways to break the task down into smaller, more manageable parts.

For example, in a math problem, it can be broken down into simpler steps or explained clearly and concisely. (Images 32-33-34)







give me a maths problem explained for second grade in primary education with two operations for a kid with ADHD

Let's solve a fun math problem together! We'll use both addition and subtraction, and I'll guide you step by step. To make it more engaging, we'll draw pictures to help visualize the problem.

### Problem:

Sarah has 8 apples. She buys 5 more apples from the store. Later, she gives 3 apples to her friend. How many apples does Sarah have now?

### Step 1: Understand the problem

- · What do we know?
  - · Sarah starts with 8 apples.
  - · She buys 5 more apples.
  - · She gives away 3 apples.

Image 32

- · What do we need to find out?
  - · How many apples Sarah has after buying and giving away apples.

### Step 2: Visualize with drawings

Let's draw to help us see the problem:

1. Starting apples: Draw 8 apples.



2. Apples bought: Draw 5 more apples next to the first 8.



3. Total apples now: Count all the apples together.

8 (starting) + 5 (bought) = 13 apples



4. Apples given away: Cross out 3 apples to show they were given away.



Image 33







### Step 3: Perform the calculations

1. Addition: Add the apples Sarah bought to her starting apples.

8 + 5 = 13

2. Subtraction: Subtract the apples she gave away from the total.

13 - 3 = 10

### Answer:

Sarah has 10 apples now.

Tips for solving similar problems:

- · Break it down: Tackle one part of the problem at a time.
- · Use drawings: Visual aids can make understanding easier.
- · Highlight key information: Underline or circle important numbers and actions.

By following these steps and using visual aids, solving math problems can become more manageable and fun!

Image 34

Another example of Chat GPT being used comes from a Turkish team that asked AI to explain the digestive system to students with learning disabilities. (Images 35-36-37)

STEP 1

Explain the digestive system in steps for students with learning disabilities at high school level.

Here's an explanation of the digestive system in simple steps, designed to be accessible for high school students with learning disabilities:

### Step 1: Mouth

- The digestive process starts in the mouth.
- · When we eat food, our teeth break it into smaller pieces.
- Our saliva (spit) has special chemicals that start breaking down the food, especially carbohydrates (like bread and rice).

### Step 2: Esophagus

- . Once the food is chewed and mixed with saliva, it becomes a soft, wet mass called bolus.
- The esophagus is a tube that connects the mouth to the stomach.
- The bolus moves down the esophagus through a process called peristalsis, which is just a fancy
  way of saying the muscles in the esophagus squeeze the food down.

Step 3: Stomach

Image 35







STEP 2

this text is difficult and too long simplify it

Here's a simpler version of the digestive system:

### Step 1: Mouth

- · When you eat, your teeth break the food into smaller pieces.
- · Saliva (spit) helps start breaking down the food.

### Step 2: Esophagus

· The food moves down a tube called the esophagus to the stomach.

### Step 3: Stomach

. In the stomach, food is mixed with stomach acid and turned into a thick liquid.

### Step 4: Small Intestine

. The food moves into the small intestine, where most nutrients are absorbed into the body.

### Step 5: Large Intestine



STEP 3

Step 1: Mouth
When you eat, your teeth break the food into smaller pieces.
Saliva (spit) helps start breaking down the food visualize this step



Here is a visual representation of Step 1, showing the mouth with teeth breaking down food and saliva starting to help in the digestion process. This should when the concept clearer for students. Let me know if you'd like any adjustments!

Image 37

### Other reference links:

https://chatgpt.com/share/679f463f-ab10-800b-80b0-720afa87b327 https://chatgpt.com/share/67da7414-00b0-800b-b178-ee49a1fdc704







In short, the task of the teacher using AI is to make the right requests, understand what to expect, and interact with the GPT Chat to complete their work more quickly and optimize the time available for functional activities.

The AI acts as a tutor for the teacher, offering suggestions or guiding the user with specific procedures. It's therefore easy to imagine how it could be used to provide tutoring to students in the classroom, to practice skills and knowledge, or to teach them to ask the right questions to seek out and organize new knowledge.

### **Chat GPT Benefits**

Text Simplification: ChatGPT can rewrite complex texts into simpler, more understandable language, promoting comprehension in subjects like history and philosophy, where long, dense texts can be challenging for students.

Explanation and Summarization of Concepts: To review lectures and prepare for exams, students can ask ChatGPT about topics they find difficult to understand and receive clear, concise explanations. AI can also answer lecture questions and help students practice areas that require improvement.

Providing Content Suitable for Learning Styles: ChatGPT can offer examples and explanations suited to the student's learning style, whether visual, auditory, or reading/writing. For example, it can visualize the digestive system during biology lessons or explain math problems step-by-step.

Support for Language and Reading Difficulties: ChatGPT can suggest text-to-speech options or provide explanations in simple sentences. Furthermore, it can help with vocabulary and grammar in foreign language lessons.

At the end of the entire course, discussions with representatives from various schools highlighted both critical issues and potential uses of the applications presented. The workshop also emphasized the importance of integrating inclusive pedagogical principles into the design of teaching activities. Some of these principles include:

personalizing learning to respond to the variety of cognitive styles present in the classroom; the need to adopt active and participatory teaching methods that actively involve children with SEN in the learning process, increasing motivation and concentration;

the need to create a learning environment where every child feels part of the group and can







contribute collaboratively to the group dynamic;

the adoption of an approach that encourages teachers to continuously monitor student progress and adapt quizzes as needed, leveraging the flexibility of interoperable platforms.

In conclusion, the various workshops highlighted how the platforms under consideration can be valid tools for promoting school inclusion, effectively responding to the educational needs of all students.

### **TABLES**

**Photos** 

Monitoring Results, Module I

Monitoring Results, Module II







### TRAINING LAB I MODULE 1 METHODS INTEGRATED TO TEACHING-PORTUGAL



















# TRAINING LAB II MODULE 2 TECHNOLOGICAL TOOLS FOR LEARNING OBSTACLES-GERMANY











#### **DISSEMINATION PHASE-ITALY**











### ERASMUS+ PROJECT

#### KA 210-SCH- 000164838

#### SMALL SCALE PARTNERSHIPS IN SCHOOL EDUCATION

# NEW METHODS AND TECHNOLOGIES FOR THE POST PANDEMIC SCHOOL EDUCATION SYSTEM TO COUNTER LEARNING OBSTACLES

#### **SURVEY I MODULE**

The ERASMUS+ project, in which our school participates as a partner with the (enter partners) ...... Spanish school CEIP Los Morales, the Turkish one Borsa Istanbul Mehmet, Arturo Toscanini Institute as a applicant, and the Portuguese training institutes Previform and the German Xient, has the objective of promoting the digital transition of educational institutions. This is done hrough cooperation and the exchange of skills and experiences between schools of different levels (primary and secondary).

It is important to know the level of the digital and linguistic skills of teachers throughout the school in order to plan programmes aimed at expanding the digital skills of our teaching staff.

The survey is anonymous.

Thank you for your cooperation

#### 1. School order:

- 0 Primary School
- 0 Lower Secondary School
- 0 Higher Secondary School

## 2. Which of the digital devices and technological resources listed are present in your school?

This is a multiple choice question, for example for the Toscanini Institute we have:

Lim

Interactive monitors

**Desktop Computers** 

Laptop PCs

**Tablets** 

**Educational Robotics Components** 

Video cameras

"Office 365" package

**AXIOS Electronic Register** 

Specific Software for BES

Subject-specific software

### Logo and name of the Institute (address, phnoe and email...)

Map-building software or app

3. Which of these devices and/or digital resources do you usually adopt in teaching?
the tools listed above are repeated Q2 (multiple choice question)
4. How useful do you think the use of technology is in teaching?
enter a value scale from 0 not at all
0 Not much
0 Enough
0 Much
0 Very much
5. At what point during teaching do you use digital tools and resources the most?  1. Lesson planning 1. Primary exams(to understand the student's level) 2. During class 3. Exams 4. Never  1. Rate your digital skills on a scale of 1 to 10, where the value 1 indicates non-existent and the value 10 indicates very good.
1 2 3 4 5 6 7 8 9 10
7. Before the Covid emergency and the introduction of digital teaching, did you usually use teaching strategies based (teach using an) integration of traditional teaching and innovative technologies?
0 Not at all
0 Not much
0 Enough
0 Much

Logo and name of the Institute (address, phnoe and email)
0 Very much
8. Which of these devices and/or digital resources did you usually adopt in teaching before the pandemic?
repeat list of digital instruments (Q 2)
9. During the pandemic emergency, how adequate did you consider your digital skills to be on a scale from 1 to 10, where the value 1 indicates very poor and the value 10 indicates very high skills.
1 2 3 4 5 6 7 8 9 10
10. What courses, seminars or masters have you done to develop and/or update your digital skills?  Enter your answer
11. Do you feel the need to expand your technological skills today? If so, which instruments among those listed would you like to learn more about?
0 No
0 Yes, for the "Office 365" package (Word, Power Point, Excel, Forms, etc.)
0 Yes, for Educational Robotics apps (Scratch, Arduino, etc.)
Yes, for graphic design tools (Canva, Google Slides, Prezi, Genially, Storyboard, etc.)
Yes, for evaluation tools (Kahoot, WordWall, Mentimeter, Forms, Google Forms, etc.) 0 Yes, for map design tools (Xmint, FreeMind, etc.)
0 Other (added)

12. How would you use these new tools in teaching? Write at least three examples.			
Enter your answer			
13. In your opinion, what improvements can be achieved, in terms of learning, with the use of digital tools and resources? Write at least three options.			
Enter your answer			
14. On a scale from 1 to 10, where the value 1 indicates not at all and the value 10 indicates very much, how much do you think the use of technological tools and resources can bring you closer to a European dimension in terms of teaching methodologies and educationa strategies?			
1 2 3 4 5 6 7 8 9 10			
15. What courses have you attended and/or certifications have you acquired to improve your English language level?			
Enter your answer			
16. What is your level of skill in using the English language?			
0 A1  0 A2  0 B1  0 B2  0 C1  0 C2			
17. What will you do to improve your English level?			
Enter your answer			
18. On a scale of 1 to 10, how much do you think that cultural exchanges with other European countries can provide you with tools to improve your skills in relation to the integration between traditional teaching methodologies and innovative teaching technologies.			

Logo and name of the Institute (address, phnoe and email...)

1 2 3 4 5 6 7 8 9 10

#### MONITORING RESULTS

Which of the former resources do you usually use in your classes? ITALY



In what phases of your teaching practice do you usually use digital resources and tools?

#### DURING CLASS

Italy 58%	
Spain 85%	
Turkey 70%	

#### **PLANNING**

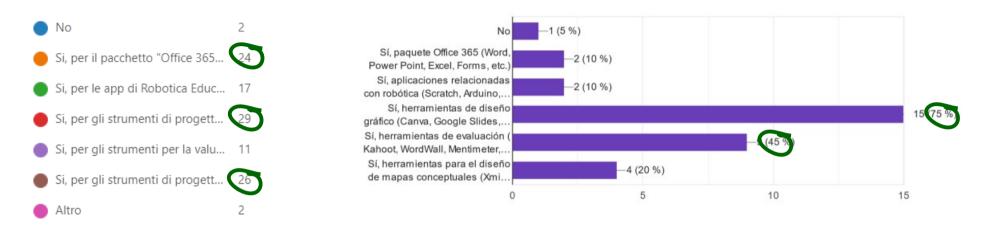
Italy 38%	
Spain 35%	
Turkey 25%	

Before the Covid outbreak and the introduction of digital teaching, were you generally using teaching strategies based on the integration of traditional teaching and innovative technologies (teaching by using)

The data does not show significant changes in the use of technologies applied to teaching.

Do you feel the need to improve your technological skills today? If so, which software or technologies among those listed would you like to learn more about?

ITALY SPAIN





#### How would you use these digital tools in class?

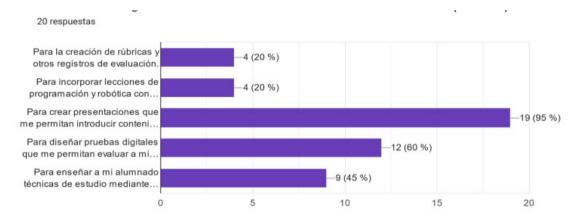


#### Risposte più recenti

"Svolgimento della lezione; momento di verifica; pianificazione delle a...

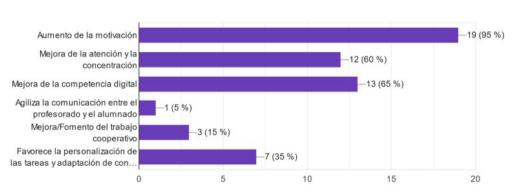
"Facendo vedere video per spiegazioni dirette "

"Per preparare una lezione per tutta la classe. Per preparare una lezio...



#### What benefits do you think the use of digital tools have in your students' learning?





#### Risposte più recenti

"Engagement; tempi di attenzione più lunghi; maggior concentrazione;"

"Esempio diretto"

"Attenzione; Coinvolgimento; Condivisione "









#### **ERASMUS KA210**

New Methods and Technologies for the post pandemic School Education System to counter learning obstacles

## II MODULE: TECHNOLOGICAL TOOLS FOR LEARNING OBSTACLES

(10/2024 a 06/2025)

1. presentation of the working groups (Italy, Spain, Türkiye, Germany) FOLLOW THE ORDER

#### 2. general objectives of the project and of the II module

In the second Module we start from interviews and surveys in each schools to analyze the state of the art on the tools and technologies used for learning disabilities in the school environment. Two online round tables will be held, the first to create a database and to share information; the second to address the next steps that will lead to action.

The action promotes the digital transition of educational institutions, through cooperation, the exchange of skills and experiences between educational institutions of different levels, primary and secondary. The action also disseminates knowledge and the









integration of teaching/learning practices that combine traditional methods with digital, technological and innovative ones and the creation of a European learning and teaching area. Furthermore, with the dissemination of the results of the action, the linguistic and technological skills of the participants and non-participants are strengthened and inclusion among learners is promoted.

#### 3. • activities during the training trip in Germany

The action takes place from 24<sup>th</sup> to 28<sup>th</sup> of February 2025 and provides for the mobility of 14 participants including 12 teachers (4 for each Institute) and the project manager.

The activity is carried out in Germany at the partner Xent and will have a total duration of 5 days organized as follows:

- 1st day: arrival and accommodation, preparation meeting for the action and comparison with the CT;
- 2<sup>nd</sup> day: course at Xent tools for learning obstacles and round table among the participants to address the acquired skills and knowledge;
- 3<sup>rd</sup> day: course and round tables;
- 4<sup>th</sup>day: course and workshop to define a common strategy and plan the subsequent dissemination within each school;
- 5<sup>th</sup> day: meeting between the participants and departure.







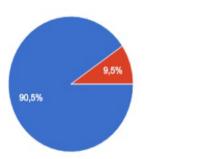


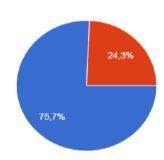
### 4. • results of monitoring activities and targeting

1. Do you know and use IT tools (platforms, programs, applications, etc.) in your institution for inclusive teaching?

ITALIA SPAGNA TURCHIA











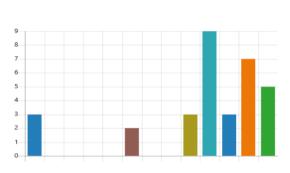




2. If you answer YES, What are the most effective digital tools or platforms you use to meet the needs of students with learning disabilities?

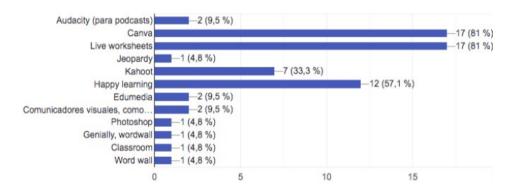
#### **ITALIA**

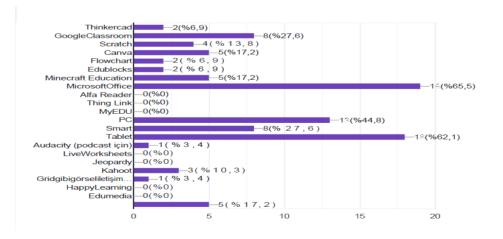




#### **TURCHIA**

#### **SPAGNA**













### 3. How often and for what purposes do you use digital tools when working with students with learning disabilities?

**ITALIA** TURCHIA

Non li uso mai 0

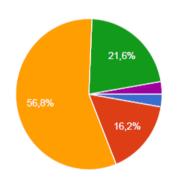
Li uso solo in alcune lezioni 11

Li uso occasionalmente quand... 14

Li uso regolarmente per la ma... 5

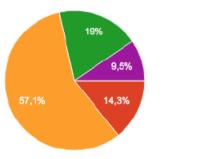
Li uso sempre durante ogni le... 3







#### **SPAGNA**





Solo las uso en sesiones puntuales

 Las uso ocasionalmente, cuando las necesito

 Las uso regularmente la mayoría del tiempo

Las uso activamente en cada sesión







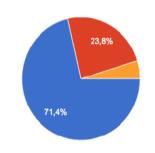


4. When digital tools are used, have you observed any changes in your students' motivation or lesson participation?

#### **ITALIA**

- Sì, ci sono stati cambiamenti p... 17
- Sì, ma solo in situazioni specifi...
- No, non ho notato alcun cam... 0
- Ho osservato cambiamenti ne...

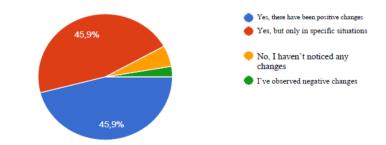






- Sí, he observado cambios positivos siempre
- Sí, pero solo en situaciones específicas
- No. no he notado cambios
- He observado cambios negativos













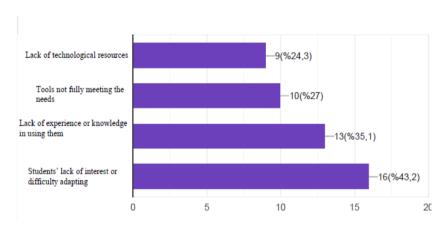
### 5. What are the biggest challenges you face when using digital tools with students with learning disabilities?

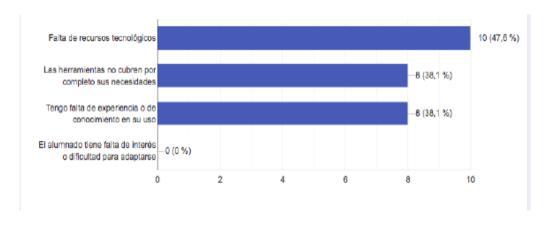
#### **ITALIA**

- Mancanza di risorse tecnologi... 9
- Strumenti che non soddisfano... 12
- Mancanza di esperienza o con... 8
- Altro



#### **SPAGNA**









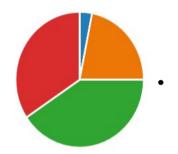


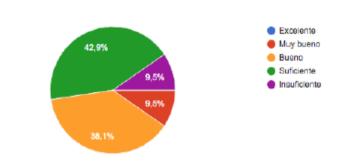


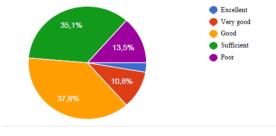
### 6. What is your level of competence in using the IT tools present in your Institute?

ITALIA SPAGNA











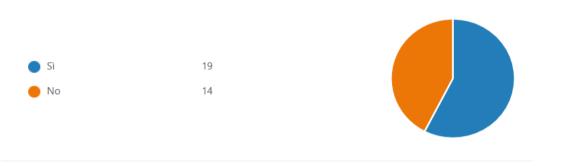


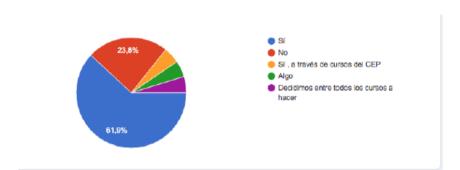


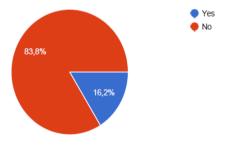


### 7. Does your institution provide regular training or guidance on the effective use of digital tools?

**ITALIA** SPAGNA















#### 7a.IF YOU ANSWERED YES, What is being done?

#### **ITALIA**

9. Se la risposta alla domanda precedente è affermativa, quali corsi hai seguito?

9 Risposte Risposte più recenti "Corso piattaforma MyEdu"

#### **TURCHIA**

No

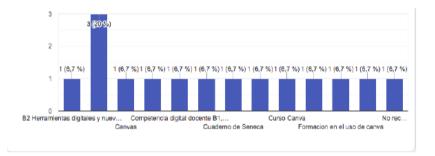
Guide for the maintenance of smart boards

Seminars and courses are organized.

Computer support

Education Support

#### **SPAGNA**



Digital tools and new technologies: 1 (6,7%)

Canva: 7 (46,9%)

Digital competence for teachers B1 & B2: 1 (6,7%)

Digital competence for teachers B1 & Seneca Teachers Digital Notebook: 1 (6,7%)

Seneca Teachers Digital Notebook & Canva: 1 (6,7%)

Seneca Teachers Digital Notebook: 3 (20,1%)

I don't remember: 1 (6,7%)









### **7b Do these trainings meet your needs?**

#### **ITALIA**

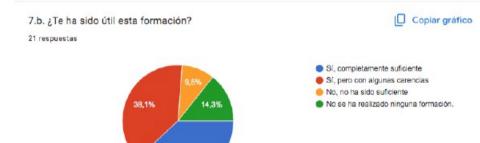
Sì, in modo completamente su... 5

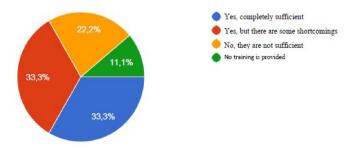
Sì, ma ci sono alcune carenze 10

No, non sono sufficienti
7

Non viene fornita alcuna form... 1

#### **SPAGNA**











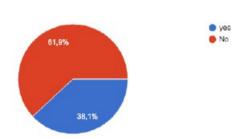


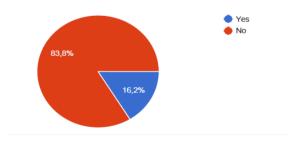
### 8. Have you attended any training courses on Specific Learning Disorders in the last 5 years?

ITALIA SPAGNA













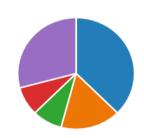


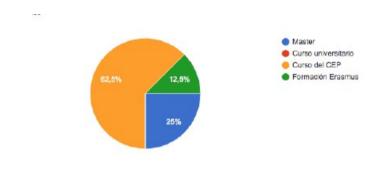


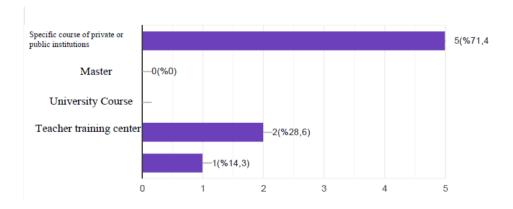
### **8a** .IF YOU ANSWERED YES, WHAT COURSES HAVE YOU DONE?

ITALIA SPAGNA











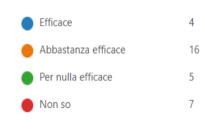




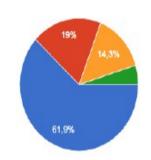


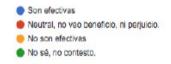
### 9. Do you think your institute's IT tools are effective in improving inclusive teaching?

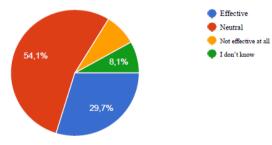
ITALIA SPAGNA













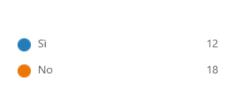




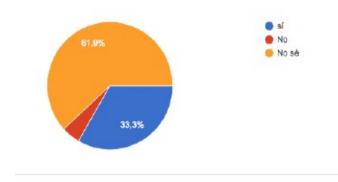


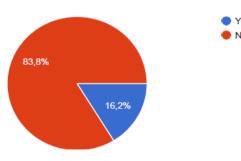
### 10. Are there other technologies that we can integrate into your Institute?

ITALIA SPAGNA

















### 10a. If you answered Yes, which ones?

#### **ITALIA**

11 Risposte Risposte più recenti

"Si potrebbero migliorare le prestazioni degli strumenti che già abbia...

- room rknow, but rm sure there are more tools.
- Using tablets for each students.
- Digital boards, projectors, laptops and computers for all students.
   More tablets and computers, camaras to project in screens, earplugs, etc...

#### **TURCHIA**

**SPAGNA** 

Smart Books

- It doesn't depend on the institution, but on the Administration (Regional government

in Andalucía)

- Tablets, chrombooks...

- Scratch

Canva

**EBA** 









#### 5. dissemination and communication activities after mobility

The first phase (march and april 2025) takes place in each school of the project and consists of dissemination of the results from the previous laboratory.

There will be:

- two workshops aimed at the Institute's staff;
- one conference for to students and families to show all project;
- job shadowing sessions follow in some classes made by the participants at the

Training lab, in order to disseminate the acquired techniques and practices.

The second phase (May 2025) provides for the mobility of the partners in Italy (2 for each school and the legal representative or delegate of the two companies for a total of 6 people) at the school Arturo Toscanini for 4 days in which the following activities will be carried out:

- 1st day: arrival and accommodation, planning and coordination meeting;
- 2<sup>nd</sup> day: event day with presentation of the results, workshop open to other schools and conference for the public, accompanied by artistic performances by the students;
- 3<sup>rd</sup> day: job shadowing in the classes for implementation of acquired practices and methods and meeting for closing the project and future actions;
- 4<sup>th</sup> day: departure.

Each Institute will promote a day dedicated to the dissemination of the project results with

- 2 workshops
- 1 conference.

The products that will be realized by this activity are: the publication of two information brochures, one for the integrated methodologies and the other for the tools applied to learning obstacles, the report of the project, the creation and diffusion of the video of the project, realization of one webinar.