IC Le Cure Firenze - C. Collodi Primary School

Didactic ICT initiatives for students with special needs

31 maggio 2023

The school integration of students with disabilities is a strong point of the Italian school, which aims to be a welcoming community in which all pupils, regardless of their functional diversity, can have experiences of individual and social growth. The full inclusion of pupils with disabilities is an objective that the school of autonomy pursues through intense and articulated planning, enhancing internal professionalism and the resources offered by the territory. MIUR (Ministry of Education and Merit - Miur) implements various accompanying measures to promote integration:
support teachers funding of projects and activities for integration training initiatives for support and curricular teaching staff as well as administrative, technical and auxiliary staff.
The use of Information and Communication Technologies (TIC) in learning contexts promotes motivation, participation and the interaction of the students with intellectual disability; it also helps to keep attention and promotes the development of self-esteem.
In fact, there is greater ease of use than traditional tools, also favored by the possibility of repetition.
Furthermore, these tools allow multiple possibilities of setting in the activities, promoting the specific processes of learning individualization and personalization.
Around the 80% of the disabilities in our schools concern intellectual and/or relational disorders : if we consider the delays in the social inclusion of people with intellectual disabilities, these support tools for training activities appear particularly welcome and useful.
In fact, it is necessary to realize the aim of the general improvement of the quality of their life project and to ensure their right to participate, enhancing and implementing the learning, enabling and including opportunities that can be achieved at school, also with the support of the most advanced technologies.

HOW DO I USE NEW TECHNOLOGIES FOR STUDENTS WITH DSA AND BES?

The Italian acronym **DSA** in English **SLD** refers to specific learning disabilities. In the school environment, these students are entitled to compensatory and dispensative instruments.
Compensatory tools are used to compensate for a critical area of the children (for example, the calculator compensates him in doing calculations).
The dispensative measures , on the other hand, dispense them in doing something (perhaps removing an exercise during a test or giving more time).
Technology comes to our aid for compensatory tools: even just having the computer on which to write for a SLD person can make a total difference.

There are many free applications to make schemes, one of them is **XMind**.
In this software you can export mind maps in Microsoft Word, PowerPoint, PDF format and as Mindjet MindManager documents.
In XMind mind maps and charts are created by simply pressing Tab, while pressing Enter can create new main and secondary topics. Additional uses such as, markers, labels, notes, audio notes, attachments, hyperlinks and graphs can be added to a mind map (or a fishbone diagram).

Audiobooks can be very useful, there is an application that can also be used from the phone "Lions Spoken Book". All services are managed by the Associazione "Amici del Libro Parlato Lions of Verbania ONLUS" with the aim of spreading culture among those who due to physical or sensory disabilities "certified" even at the moment are not able to read independently (blind and visually impaired, dyslexic, suffering from DOWN syndromes, ALS, etc.), and to offer them recreation, solidarity and social integration and in the world of work through the distribution, free of charge and on loan, of books recorded in speakerphone.
After submitting a certification, through this app people can have access to thousands of books totally free.

Tech4all is a project in continuous improvement and development phase, this application, available on computers, smartphones and tablets has multiple functions, such as: upload a photo of notes, a pdf file of a text for:
-change the font type (e.g. using the highly readable simplified reading font), the size and line spacing of the text
-coloring letters or words
-have the meaning or synonym of each word through a simple click
-have the reading of the text in an automated way; associate an image with a word
-draw directly on the screen an image to be associated with the word
- transform text in an automated way into customizable concept maps and have support in 4 languages (Italian, English, French and Spanish).

Reasy also provides the Google Chrome extension, i.e. the possibility of using it directly on the web to make any online page and school platform accessible with a click (Google classroom, Moodle, Teams).
The latter application is for a fee, but with a substantial discount if taken with school or class package.
For Maths, it is possible to use an **editor for writing the mathematical language** such as **MateMitica** (not free), which will allow the users not only to carry out the exercise in a more orderly way, but also to avoid copying errors from the book and between one step and another. Inside **MateMitica** there is also a "talking" calculator, equipped with **speech synthesis**, which will allow the boy to monitor any errors in typing numbers and performing calculations. Finally, the results can be archived, to be easily identifiable when needed and if necessary integrated with new contents. (Anastasis)

All the software we have talked about can help everyone: both those with physical or intellectual disabilities, or those who have neurodivergences, but also for those who are neurotypical.

In our classroom…

In our school there is a boy with a severe physical disability but a high cognitive competence that can follow the class program. He moves autonomously on his electric wheelchair by maneuvering a joystick and can use the tablet for educational and leisure activities.


In the same class there is a girl with mild cognitive disability and selective mutism. A valid help from the technologies has been the use of the digital recorder to create, for example, audio captions to be inserted in the slides

There are also three SLD children with dysgraphia and dyscalculia problems that use the tablet for writing and self-correction, sometimes even self-dictation with rereading.
Xmind is used directly by the students with the help of the teacher
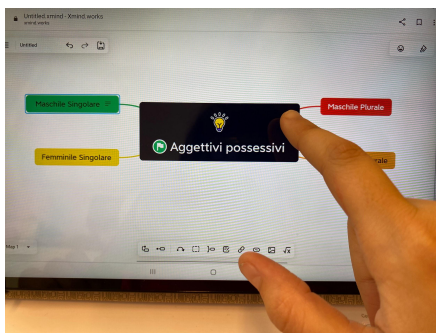
Through the use of interactive monitors, it is also possible to involve all the students in the class at the same time for review activities of the various subjects or Coding activities (Scratch, Blockly ...)
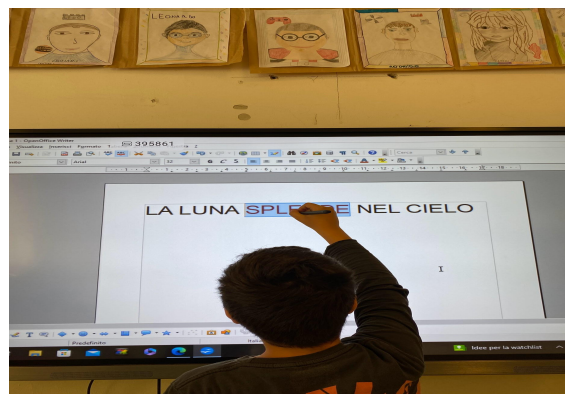
In our classrooms, children with special needs (L. 104, DSA, BES) work together with their classmates ; the new technologies makes possible to divide activities so that no one is left

behind. Let's see this example of video that allowed to develop a history topic through the following steps:
-Subdivision of the class into mixed groups-Preparation of a written summary
-Preparation of the drawing (first of the background, then of the elements to be inserted on the same)
-Use of the voice recorder to read the summary
-Editing the work with Power Point
Our girl with selective mutism, for example, reads and records her own voice like the other companions!
https://drive.google.com/file/d/1_9VnIfeRWKFf1gp23Ary4EvYqSDmUVDW/view?usp=sharing

Finally, considering the high percentage of foreign students present in our school,the **Immersive reading tool** present in **One Note**, in the Office 365 package, is extremely useful. The last student arrived from Peru in December, managed to adapt himself through the daily use of this tool, which allowed him (in addition to the possibility of following simple educational activities), to understand what teachers and classmates said and, above all, express personal needs.