WEBINAR: SPECIAL NEEDS EDUCATION AND TABLETS

Marco Iannacone
Introduction

Digitally Different is a startup that produces EdiTouch the first software suite for simplified learning that leverage the capabilities of modern tablets to support young students with SEN /SLD.

Our solution has been developed ground-up with the support of psychologist, speech therapists and teachers gathering feedbacks also from parents and students.
Evidences based on scientific trial

To assess and enhance our software we run a two years long scientific trial (2012-2014) with 400+ students who used our tablets at school and home for every studying activities.

It is one of the widest research in Europe to scientifically verify the effectiveness of digital solutions to support dyslexic child.

Our results indicate that studying with EdiTouch tablet favors greater capacity in terms of academic performance, higher self-esteem, autonomy and motivation, in a short time.

MORE DETAILS ON THIS RESEARCH ARE AVAILABLE AT PAGE 37 OF SENnet INNOVATION 2014 REPORT

http://bit.ly/1ENzm2I (MIRROR LINK)
Students we have experience with

The information & best practices provided in this webinar are related to the type of students that have been involved in our research:

• Students with SLD (some with ADHD)
• Average I.Q. (or higher than average)
• Two age groups:
  • 8-11 years old (Italian primary school)
  • 11-14 years old (Italian secondary school)
• Main areas to be enhanced
  • Reading & Writing
  • Making calculations
  • Studying
What **does not work** in PCs at school

- Young children find **traditional PC-based compensatory tools complex to use**.

- Use of the computer in class is often **rejected by the child who feels "different" from his friends**.

- A tool as complex as **the PC is sometimes a source of distraction** for children who are struggling to concentrate on what they need to do.

- **Some teachers** are not familiar with the PCs and **find difficult to teach younger children how to use it**.

- **PCs are not optimized for readability** by default: default text to speech libraries are not good in reading aloud Italian, fonts are small and don’t simplify reading

- The traditional compensatory tools and **PCs are a major cost for families**

- The loss of self-esteem during primary schools has a negative impact on subsequent educational levels
What we provided to students

- A nice, modern device with attractive package
- A simple User Interface that help kids to focus their attention to studying activity
- Control features that allow teachers to select apps to be used and monitor students activity
- Training for teachers and parents to support kids to continue to use same methodology at home and school
- High readability fonts and high quality text to speech libraries
- Specific apps and method to simplified learning in key areas

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Creative Classroom Lab 7th May 2015
Devices and sizes do matter

- Students like and need big screens: min 9.5’ (7’ and 8’ are too small for young pupils)

- Students valued Android & iOS devices more than Windows (the latest is perceived as a system for old/ancient people)

- Pupils are able to recognize quality products (while cheap ones are soon to be disliked)
Training and buy-in is key

**Kids** require minimal training as they *are used to learn by doing*

Essential is to **train teachers**: some of them at the beginning had **psychological resistance** and lack of confidence with these devices

**Teachers** are the ones that **have to make personalized lessons** leveraging the device: they need examples to start to create their new classes

Support at home is very important (especially for the younger): **parents need to know** what their child do at school and how to help them at home
Prepare digital lessons for tablets

• Leverage the technology you have: do not just transpose to digital your analogue class
  • Make it interactive
  • Use videos & animations
  • Use gamification
• Provide concept maps to your students
Don’t reject it if it is not digital

- It is not a holy war: digital and analogue can coexist
- You will find out that kids don’t see strong separation
- They can benefit from both world
Select the proper apps

APPS REALLY MAKE THE DIFFERENCE

We provide specific apps for:

- Reading school books with text to speech
- Track homework
- Write properly
- Make calculation
- Memorize topics
Control is Key (for kids 11+)

Teenagers very quickly learn how to use their devices (and much better than teachers)

Cheating, playing games in class, chat with schoolmates are a temptation impossible to resist at.

You need a mechanism to control & limit their device at school
Curiosity kills the cat (for kids 11+)

Teenagers are actively seeking every kind of information.

It is important to limit the information they can have access to the ones appropriate for their age & context (school).

It is also important to protect them from cyber bulling, gambling, online threats, etc.

It is important to have a control & monitoring mechanism preinstalled on the tablet.

We provide control and monitoring mechanism that make both teacher and parents more comfortable on how students use our tablets.
Adopt a competency based evaluation

COMPETENCY-BASED EDUCATION IS A METHOD THAT FOCUSES ON MASTERING SPECIFIC SKILLS OR STANDARDS RATHER THAN COMPLETING COURSE WORK OVER A SPECIFIC PERIOD OF TIME.

WHY IS GOOD: It offers opportunities for all students; It is student-centered, students can work on specific skills or knowledge until they can demonstrate their understanding and ability to apply them.

Essential Elements Competency Based Evaluation:

• Identify a defined set of specific skills (competencies) as a framework for education in your field of practice
• Apply the competencies to individual student learning goals
• Assess student skill level, at the beginning and at the end of the year
Tablets can (re)activate interest for learning

EdiTouch played a key role as a cultural mediator

Once kids trust (once again) school as a place where they can learn we could easily start new project

- coding (App inventor)
- Maker attitude (Littlebits)
- Robotics at school
- MIDI keyboard & composition
Thanks!

WE ARE LOOKING TO ENHANCE OUR SOLUTION AND MAKE OTHER TRIALS IN EUROPE. IF INTERESTED, PLEASE WRITE TO IANNA@DIGITALLYDIFFERENT.IT

http://tabletascuola.net
https://facebook.com/Tabletascuola
http://twitter.com/tabletascuola
ANNEX – 1

About Dyslexia (and SLD)
About SLD

Specific Learning Disability (Dyslexia, Dysgraphia and Dyscalculia) is now a universally-recognized condition of **neuropsychological disorder**, in the **absence of cognitive impairment**, but with a high frequency of comorbidities with other neuropsychological disorders.

SDL can cause **serious school learning problems** as well as numerous **negative effects on the psychological well-being** of pupils who are affected if they **don’t receive diagnosis, treatment, compensatory tools** and the exempting measures in the time required by their cognitive development.

Providing what is necessary for these school children means promoting the prevention of secondary diseases and enabling the children's success at school.
Helping kids with SDL

Dyslexia cannot be prevented or cured, but it can be managed with special instruction and support. Early intervention to address reading problems is important.

Children diagnosed with dyslexia, are entitled by law (in most U.E. countries) to have specialized educational and support services.

Italy was late to adopt this approach (L. 170/2010) but we are starting to pay attention to this in almost every school.

Currently in Italy dyslexic child

- Can do specific exercises with speech therapists & neuropsychiatric to acquire some of those mechanism that typical reader have (specialist are often provided by Italian public health care system – “ASL”)

- They are entitled to have a personalized didactic plan (PDP) which will include exempting measures and compensatory tools (such as laptops)
ANNEX – 2

Several models available
EdiTouch is available in several models:

**EDITOUCH Primaria**
- Processor: Cortex A9 Quad Core 1.60 GHz
- Memory RAM: 2 GB DDR3
- Display: IPS capacitive (1920x1200 px)
- Connectivity: Wi-Fi b/g/n, Bluetooth 4.0
- Memory: 16 GB (expandable up to 64 GB)
- Camera: post. 5 MPx (with LED), ant. 2 MPx
- Ports: 1 miniHDMI, 2 micro USB, 1 headphone
- Audio: 2 internal cases
- Battery: 7.600 mAh
- Operating System: Android 4.2.x

**EDITOUCH Medie (1025)**
- Processor: MediaTek Quad-core 1.2 GHz
- Memory RAM: 1 GB
- Connectivity: Wi-Fi, Bluetooth, 3G (sole model EdiTouch 1025s)
- Memory: 16 GB (expandable up to 64 GB)
- Camera: post. 5 MPx, ant. 1.3 MPx
- Functionalities: stand incorporated
- Audio: double altoparlante Dolby DS1
- Battery: 18 hours in standby
- Operating System: Android 4.2.x

**EDITOUCH High School**
- Processor: Snapdragon Quad Core 1.6 GHz
- Memory RAM: 2 GB
- Display: IPS capacitive (1920x1080 px)
- Connectivity: Wi-Fi, Bluetooth, 4G (HSPA+)
- Memory: 16 GB (expandable up to 64 GB)
- Camera: post. 8 MPx, ant. 1.6 HD MPx
- Ports: wireless HDMI (miracast), 1 micro USB
- Audio: 2 Dolby, 1 headphone 3.5
- Battery: 9,000 mAh
- Operating System: Android 4.3