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eFESTO project: a *deafinite* step towards e-inclusion

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The topics

- The scenario
- The problem
- The solution
- The eFESTO project
- A view of the learning environment

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The scenario:
The state of the art 1/2

State of the art of social inclusion, in labour market and in the VET in Europe of deaf people :

Italy: disabled have limited labour market access, employment rate is being 19,3 compared with 55,8 of non disabled people;

Poland: the 80% of disabled including deaf are excluded form polish labour market ;

Hungary: the governmental system do not provide special measures for young deaf people;

Bulgaria: the isolation is one of the biggest problem experienced by disabled.

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The scenario:
The state of the art 2/2

State of the art of in the education system in Europe of deaf people :

Italy: fully recognized the integration of disabled in mainstream scools;

Poland: Polish Special Education system is integrated with General Education system;

Hungary: deaf are educated separately from hearing people and in spoken local language;

In Bulgaria there are 2 solutions: the former is based on facilitationa and rehabilitations and is practiced in specialized schools, the latter is implemented in public schools.

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The problem

The European Commission in 2008 called on all authorities and industries to promote the digital skills that are critical especially for persons at risk of digital divide and thus excluded from the modern e-society.

In Europe there is a lowly-qualified vocational activities of young disabled due to :

- low-level education system
- inadequate vocational qualifications
- educational choice made by schools which often focus on job and skill no longer required or inappropriate

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EFESTO

The solution

It's fundamental to give disabled and in particular to deaf people an opportunity to access the education services necessary to acquire new marketable skills, including communicative competence in forein languages

Distance learning can help to achieve this goal

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The eFESTO Project

www.efestoproject.eu

The general objective is to allow **deaf people** to access education on equal term with other students.

- Didactic objective: learning scientific subjects, learning to manage innovative electrical instrumentation and English language
- Social objective: to support communication and social inclusion

The proposed solution is a **distance learning system** to deliver digital subjects (as Mathematics, Physics and Information Technology), English language and how to use and manage modern laboratory apparatus

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The eFESTO Project

www.efestoproject.eu

The eFESTO project was funded by "Lifelong Learning Programme – Leonardo Da Vinci – Transfer of Innovation" in the 2009.

The eFESTO project derives from the experience of two previous Italian National project :

- **La.Di.Re.** is an innovative distance education system for experimental activities aimed at teaching electric and electronic measuremente subjects

- **P.S.E.L.D.A**. is an innovative distance education system for deaf students based on lecture presented step by step, with high visual impact and strongly exploit various multimedia objects

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eFESTO : the new methodology

The objective of the new and specific methodology is to exploring and devising new teaching methods through the mediation of technology to make information and communication easier for deaf learners.

The defined methdology takes into account that:

- it's important to use methods capable to include deaf and get them most from lectures
- Deaf heavily depend on visual aids
- Deaf organize their thought through images rather then through words
- Deaf have a poor vocabulary that often does not include scientific terms

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eFESTO : the new methodology

The methodological approach underlying the making of the eFESTO project teaching contents takes into account at least **three basic elements in the education of deaf people:**

- The communicative difficulties that the deaf typically face as well as the complex acquisition process of correct language competences that characterizes the educational actions addressed to this category of students;

- The peculiarity of a proposal using suitable technological solutions contains a necessary methodological choice strongly affecting both the process architecture and the shape of the products that will be planned;

- The peculiarity of the single typologies of the subject contents to be devised forcefully leads to the choice of a specific methodology in compliance with the structure of the subjects chosen.

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eFESTO : the new methodology

The learning contents are focused on three subjects:

- teaching **English language**

- teaching **scientific subjects** (Mathematics , Physics and, only for workers, Information Technology)

- the use of **lab advanced electronic equipment**

For each subject have been defined: i) the didactic methodology ii) the contents presentation iii) the required competence level .

The involved language are (Polish, Italian, Bulgarian, and Ungarian)

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Efesto Methodology : English language

The European standards fixed by CEFR (Common European Framework of Reference). The reference to a common standard could allows to identify Minimum levels of competence in the contents of the written language targeted Each Learning Objective will include:

Text: written in English to ensure reading, analysis and comprehension
Translation in national Sign Language: video containing translation in national Sign Language associated to the text to reinforce the understanding ;
Translation in International Sign Language translation in International Sign language to reinforce and enhance transverse personal competences;
Synchronization synchronized with the English written text, that will be highlighted by changing its colour as the video is being played
Spoken audio track of the English written text will be offered to all deaf users (using hearing aids successfully or having a cochlear implant)
Exersisesrules referred to the grammar rules in the text, explained in national language and accompanied by some reinforcement activities.

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eFESTO methodology : Scientific subjects

The subject contents of the first year of the school taken into account or of the first year of the degree course in scientific subjects will represent the reference point for the teaching of scientific subjects.

Text: the text written in national language is the description of the subject content
Translation in national Sign Language: video containing translation in national Sign Language associated to the text to reinforce the understanding ;
Translation in International Sign Language translation in International Sign language to reinforce and enhance transverse personal competences;
Synchronization synchronized with the English written text, that will be highlighted by changing its colour as the video is being played
Glossary of scientific terms: glossary of scientific and specific terms will be created in order to provide the deaf with an explanation in national language
Exercises: set of exercises prepared for each subject content as a support to the comprehension of the topics explained.

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eFESTO methodology : Laboratory activities

The main subject content consists of three different and sequential stages, Including the subject contents supporting the understanding of the lab exercises, the video-tutorial of the teacher in the lab, illustrating the use of the equipment, the modalities of the experiment and the experiment themselves to be conducted remotely.

Text + translation in the national sign language: theoretical contents in national language and video of National Sign Language translation.
Tutorial: is the video of the lecture given by the teacher in the lab.
Glossary of scientific terms: glossary of scientific and specific terms will be created in order to provide the deaf with an explanation in national language
Subtitles: subtitles in national language will be provided along with the translation in International Sign language. The subtitles refer to the spoken tutorial, therefore, to the spoken lesson.(**synchronized with** N.S.L.)
Esercitazioni remote: laboratory activities on real apparatus

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eFESTO methodology : English teaching

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eFESTO methodology : English teaching

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eFESTO methodology : English exercises

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You can buy:

food (sugar, milk, flour, eggs) at the grocer's

vegetables (potatoes, tomatoes, onions, carrot) or fruit (apples, pears, grapes) at the greengrocers

bread, rolls or pastry at the baker's

chicken or turkey's meat, ham, sausage at the butcher's

clothes (t-shirts, jeans, sweaters, coat) at the clothes shop, shoes, boots, socks at the shoe shop

Italian Sign Language

Play International Sign Language

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eFESTO methodology : English exercises

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Let's go shopping 2 ?

②

You can buy a new pair of boots

- a) at the optician
- b) at the stationary shop
- c) at the bookshop
- d) at the shoe shop

Read and complete the sentences choosing the only one right answer

Polish Sign Language

International Sign Language

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eFESTO methodology : Scientific subjects

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Rodzaje energii mechanicznej

Energia bardzo ważne pojęcie w fizyce

Ciało które ma energię może wykonać pracę (definicja)

Każda działalność, np. zabawa, praca maszyn, wytwarzanie materiałów i gotowanie wymaga energii.

Różne rodzaje energii umożliwiają różne działania.

Rodzaje energii mechanicznej

Energia potencjalna - jest w ciele, które jest na pewnej wysokosci.	**Energia kinetyczna** - jest w ciele, które jest w ruchu.
$E_p = m * g * h$	$E_k = \frac{m * v^2}{2}$
Jednostką energii jest dżul $J = kg \cdot \frac{m}{s^2} \cdot m$	Jednostką energii jest dżul $J = kg \cdot \frac{m^2}{s^2}$

Polski Jezyk Migowy

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eFESTO methodology : Scientific subjects Exersises

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Energia mechaniczna

Ćwiczenie 2

Podaj przykład ciała które ma energię potencjalną
Podaj przykład ciała które ma energię kinetyczną

Ćwiczenie 3

Uzupełnij tabelkę

Energia potencjalna to	Energia kinetyczna to
Wzór na Ep m·g·h	Wzór na Ek _____
Jednostką energii jest _____	Jednostką energii jest _____

DALEJ

Polski Jezyk Migowy

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eFESTO methodology : Scientific subjects

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Qual'è la media?

1.

Gianni ha avuto i seguenti voti nel primo quadrimestre: 3, 2, 6, 5, 4, 4, 5, 3.

Come calcoliamo la media dei suoi voti?

$$\frac{3+2+6+5+4+4+5+3}{8}=\frac{32}{8}=32:8=4$$

Dobbiamo sommare tutti i voti di Gianni e dividere il totale per il numero dei voti: 8. Dunque la media è 4,0.

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eFESTO methodology : Scientific subjects Exersises

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Calcolo della media aritmetica

Esercizio 3.
Calcola la media di tutti i numeri primi minori di 20.

Attenzione! I numeri primi sono numeri divisibili solo per 1 e per se stessi. Il più piccolo numero primo è 2.

Esercizio 4.
Calcola la media aritmetica dei seguenti numeri: -10, 32, -24, 21, -3, 8.

Esercizio 5.
In un gruppo di cinque persone la media dell'età di tre donne è 26 anni e la media dell'età di due uomini è 36. Qual'è la media di età di tutte e cinque le persone?

Esercizio 6.
La media di temperature in dicembre, gennaio e febbraio è stata di -8,8°C. La temperature media di gennaio era 10,9°C, a febbraio -12° C. Calcola la temperature media di dicembre.

CONTINUA

Italian Sign Language

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QUESTION TIME

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