



# INVESTIGATION ON BEST PRACTICES IN INNOVATION AND RESEARCHES ON EXTRACURRICULAR MEDIA COMPETENCES

ASPECTS TO TAKE  
INTO CONSIDERATION  
FOR THE DEVELOPMENT  
OF THE DIGITAL ATELIERS

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# THE DIGITAL ATELIER

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The “digital atelier” is a “laboratorio” in which the teacher proposes ICT activities using the Alberto Manzi and Bruno Munari Methodologies. The teacher will be able to design an educational experience that starts from an ICT content (for example an app) to develop then a manual task, with tools and materials, in order to start a personal and collective research with students.

Contemporary art and installations, ICT, cultural services and common work materials will be mixed in students' and teachers' hands. The media content is a new space of "signification" and becomes the material of labour of the student who interacts in a divergent way.

Students are asked to use their extracurricular skills to solve problems in new ways, being the attitude that of the "researcher" who is both autonomous and involved in the group. The digital atelier focuses on the creative use of the new media and apps, on the promotion of a creative and innovative attitude to use and interact with media, to carry out successful digital actions embedded within life situations.

For this purpose each consortium interviewed and analyzed 5 innovative best practices in their countries and 3 researches on extracurricular media competences, defining each 5 key aspects to take into consideration for the development of the Digital Ateliers.

# 5 BEST PRACTICES

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The following examples have been identified as best practice:

1. Robotics School;
2. **Mobile Scientific Laboratory;**
3. Menar's Method;
4. Mobile Fab-Lab;
5. Code Academy Kids;



# Observations

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## Key aspects

1. Students are engaged to learn science, technology, engineering, arts and math (STEAM curriculum) while equipping them with the real-world knowledge required by today's global society.
2. True learning takes place when students discover on their own through hands-on, minds-on approach, experimentation.
3. Combination of meaningful work and organized leisure activities is an effective and fun way of learning.
4. It is expected that after workshops participants will create some invention useful for the people, or develop a start-up, a successful future career.
5. Individualized approach that enables students to progress at their own pace.

Key aspects

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# Observations

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## Additional aspects

1. Different senses developed: touch, sight and hearing.
2. Mobility of the labs which can access remote areas in the country.
3. Combination of different subjects (arts+technologies, biology+physics).
4. Transference of knowledge to teachers.
5. The ability of participants to do complex tasks (quick learners).

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Key aspects

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# Observations

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## Innovative aspects

1. Bringing robots to every day life;
2. Focusing on STEAM curricula;
3. Self-evaluation performed by children;
4. Encouragement of positive self-development;
5. A participant gets point for doing certain tasks and then a new level with new programming languages is opened;
6. Fousing on the creation of the chosen project, not a certain subject;

Key aspects

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# Commonalities

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## Competences developed

- Imagination
- Creativity
- Logical and analytical thinking
- Solving problems
- Entrepreneurship
- Teamwork

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# Active Citizenship

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## Robotics School:

They have taken a part in EU project with visually impaired people „Let's see each other”. During the project blind people talked and shared about challenges they deal with every day. It was proposed to reduce the challenges via technological means, e.g. contributing to print 3D models of famous people, well known buildings, as well as local buildings such as schools.



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# Active Citizenship

## Mobile Fab-Lab

The project intensively uses electronic waste, for example, in one school from 100 kg electronic waste there have been created 60 „vibrobots“, sculptures. Children learnt to recycle electronic devices and used their parts (lamps, small engines, buttons, wires, etc.) and each created a moving bug. Big „vibrobots“ from old washing machines were also created.

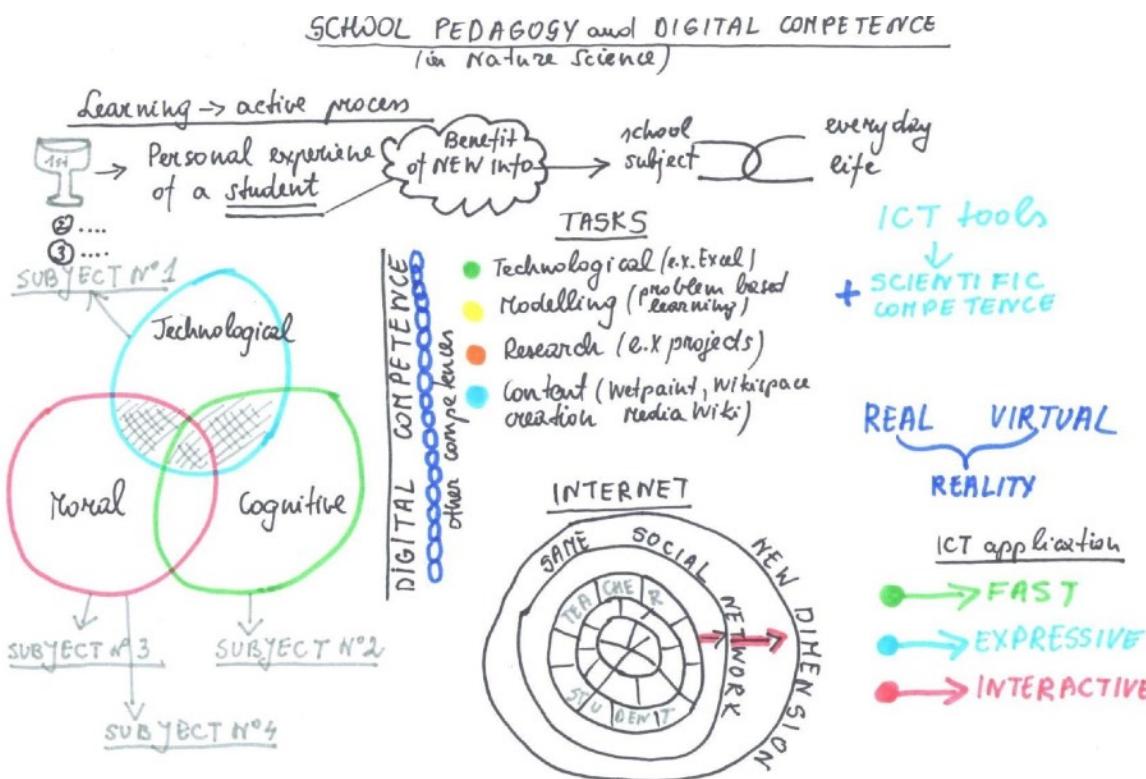
<https://www.youtube.com/watch?v=aABhS0rxGcM&feature=youtu.be>



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# Researches

## 1. "Science Pedagogy and Digital Competence (in Nature Science)";



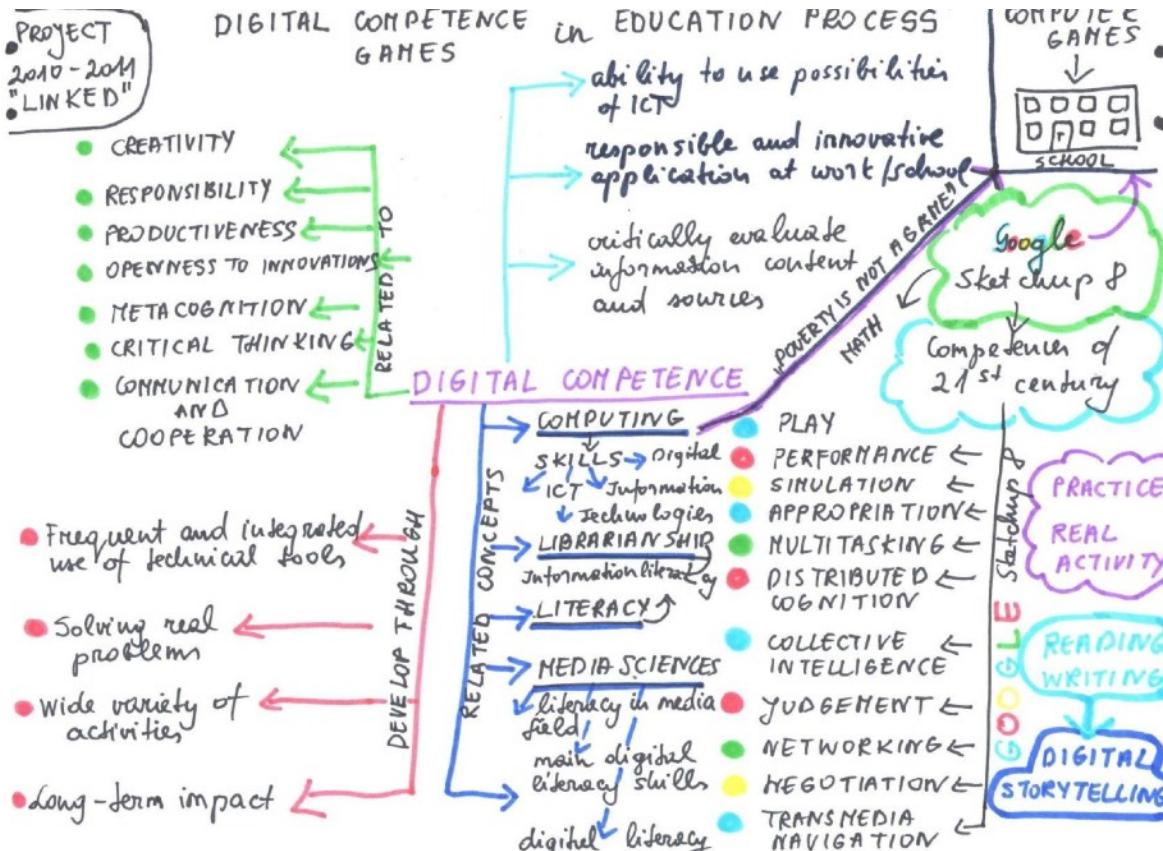
Some interesting observations from the researches:

- Shortcomings of ICT tools;
- Application of virtual solutions instead of real experiments that can be done in the laboratory;
- Computer graphics sometimes is more for aesthetic image and the information provided by them is false;
- The access to non-verified information;
- Copying and pasting information without clarifying the meaning;

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# Chosen Researches

## 2. "Digital Competence and Digital Games in the Education Process";

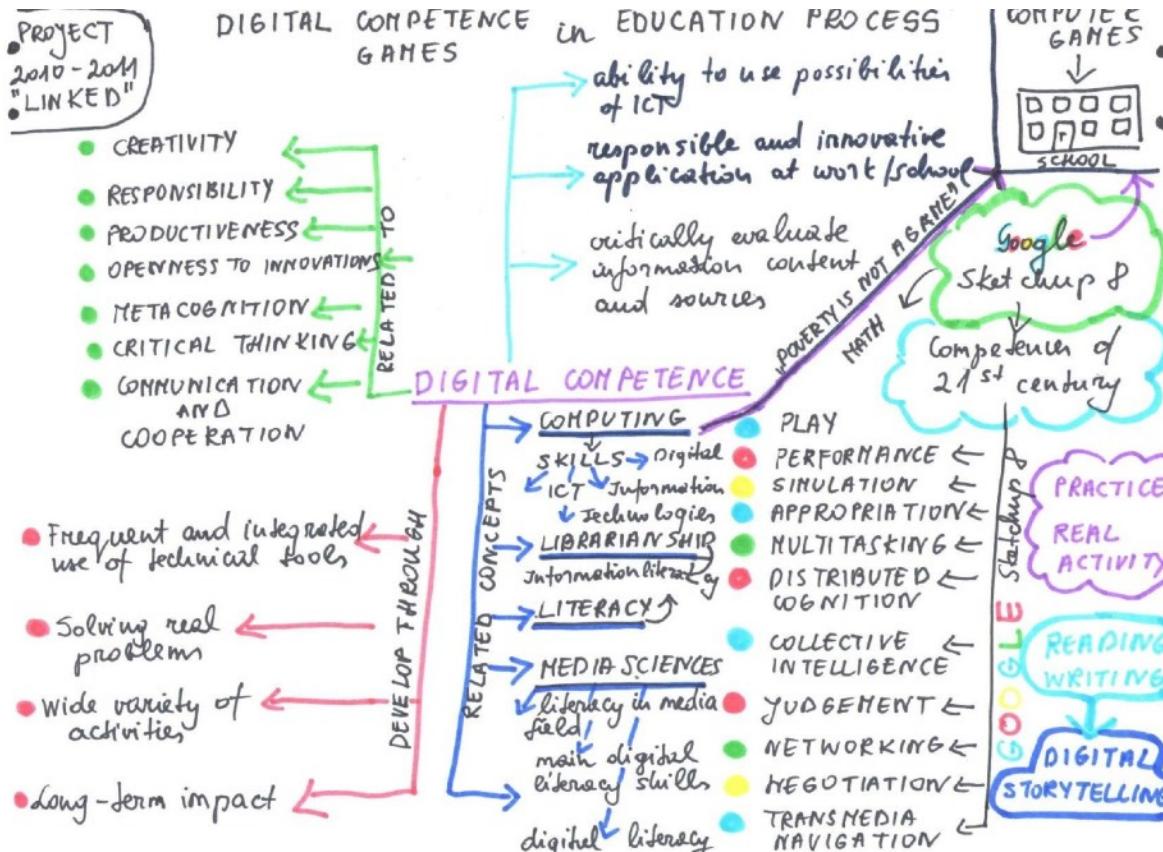


- Digital storytelling (practice of using computer-based tools to tell stories);
- Competences described in terms of H. Jenkins skills of 21<sup>st</sup> century (Play, Performance, Simulation, Appropriation, Multitasking, Distributed Cognition, Collective Intelligence, Judgement, Networking, Negotiation, Transmedia Navigation);
- Solving real life problems increase motivation to learn.

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# Chosen Researches

## 3. "Mobile Communications Technologies for Young Adult Learning and Skills Development (m-Learning)". (PROJECT; trial phase)



- Improving math and English skills via a wide range of mobile devices;
- Developed ways in which participants could collaboratively use materials developed for individual use;
- Difficulty to measure learning gains;
- A private space for learning at your own pace without embarrassment;
- Themes relevant to a particular country;
- Evaluation using a mobile device (SMS, VXML);
- Multidimensional virtual space created by a group of learners (a town with info added by learners).

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# Researches

**1.“Science Pedagogy and Digital Competence (in Nature Science)”;**

[https://weblab.deusto.es/olarex/cd/europamedia/English/science\\_pedagogy\\_and\\_digital\\_competence.html](https://weblab.deusto.es/olarex/cd/europamedia/English/science_pedagogy_and_digital_competence.html)

**2. “Digital Competence and Digital Games in the Education Process”;**

[http://mo.emokykla.lt/metodika/Metodiniai%20darbai/Skaitmeninis%20FINAL\\_portalui.pdf](http://mo.emokykla.lt/metodika/Metodiniai%20darbai/Skaitmeninis%20FINAL_portalui.pdf)

**3. “Mobile Communications Technologies for Young Adult Learning and Skills Development (m-Learning)”.**

<http://www.idi.ntnu.no/~divitini/umocec2003/Final/Colley.pdf>



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