

DIGITAL COMPETENCES IN THE EDUCATIONAL SPHERE:
KNOWLEDGE – SKILLS – ATTITUDES.
A CASE FROM ITALY.

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DIGITAL SKILLS: THE DEBATE

Digital skills are one of the most **contested** key competences in the educational sphere (Green 2014).

They have become essential to **guarantee standards of educational quality and progress**.

They tend to further **hamper educational inequalities** among the contemporary highly-diversified student population (Taddeo 2020).

The **European Commission** is determined to tackle the digital skills gap and promote projects and strategies to improve the level of digital skills in Europe (EC 2022).



DEFINITION

Digital competence is a combination of knowledge, skills and attitudes with regards to the use of technology to perform tasks, solve problems, communicate, manage information, collaborate, as well as to create and share content effectively, appropriately, securely, critically, creatively, independently and ethically (EU, 2020).



SOME DATA

- Italy ranks 20th out of 27 EU Member States in the 2021 edition of the Digital Economy and Society Index (DESI).
- The Digital Economy and Society Index (DESI) shows that 4 out of 10 adults lack basic digital skills.

		Italy		EU	
	DESI 2019	DESI 2020	DESI 2021	DESI 2021	
1a1 At least basic digital skills	NA	42%	42%	56%	
% individuals	2017	2019	2019	2019	
1a2 Above basic digital skills	NA	22%	22%	31%	
% individuals	2017	2019	2019	2019	
1a3 At least basic software skills	NA	45%	45%	58%	
% individuals	2017	2019	2019	2019	
1b1 ICT specialists	3.6%	3.5%	3.6%	4.3%	
% individuals in employment aged 15-74	2018	2019	2020	2020	
1b2 Female ICT specialists	15%	15%	16%	19%	
% ICT specialists	2018	2019	2020	2020	
1b3 Enterprises providing ICT training	17%	19%	15%	20%	
% enterprises	2018	2019	2020	2020	
1b4 ICT graduates	1.0%	1.3%	1.3%	3.9%	
% graduates	2017	2018	2019	2019	



- Girls/Women are low represented in tech-related professions and studies, with only 1 in 6 ICT specialists and 1 in 3 STEM graduates being women.
- Over 70% of businesses have staff with inadequate digital skills.

THE OBJECTIVE OF THIS STUDY

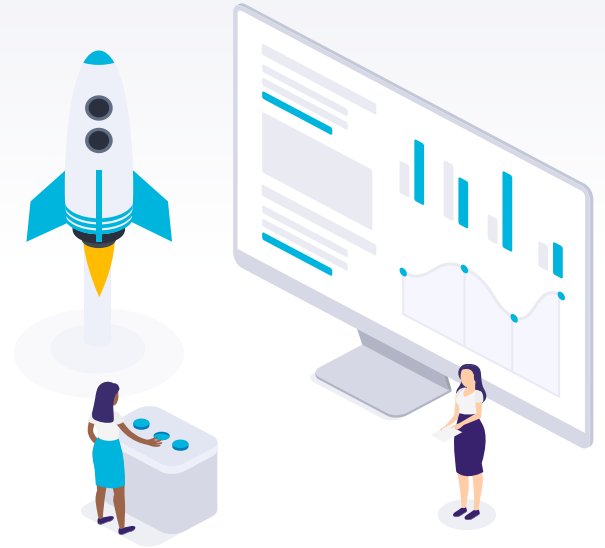
A case study located in Turin, Italy

Horizon 2020 Project "KIDS4ALLL"

Involvement of 19 teachers and educators from all school levels (primary, lower secondary and upper secondary education): 6 focus group and 2 single interviews.

Objective: Highlight the **transformation of needs and challenges** related to the different phases of the life cycle of students about **digital skills**.

Identify differences related to age, the track attended, gender, social class and ethnic origin.



METHOD

Method	Learning context		Study participants	Notes
FG1	FORMAL	Elementary school	4 teachers	4 different elementary schools in Turin among which 1 being semi-private
FG2	FORMAL	Upper secondary school	3 teachers	3 different schools in Turin, 2 of which professional institutes
FG3	FORMAL	Lower secondary school	2 teachers (former principals)	different middle schools in Turin
FG4	NON-FORMAL	Association	6 trained volunteers working with children enrolled in primary schools and pre-adolescents aged 11-14 and 1 educator	all volunteering in the association 'ASAI', with various years of experiences
FG5	NON-FORMAL	Parish club	3 Educators	all from oratorio 'Michele Rua'
SI1	NON-FORMAL	Association	1 Coordinator	1 Policymaker from 'SERMIG' Turin
SI2	NON-FORMAL	Association	1 Coordinator	1 Policymaker from 'Il nostra pianeta'
FG6	TRANSVERSAL	Psychologists	2 Psychologists	both working with migrant children thorough experience w/peer projects

THE INVESTIGATION



attitude

(3) their **attitude** to transfer potential benefits to enhance learning outcomes through digital instruments.

skills

(2) their **skills** to implement digital instruments in their working context

knowledge

(1) the coherence of the **knowledge** of teachers and educators about opportunities and challenges of digitalisation in education

RESULTS -TEACHERS & EDUCATORS

High-quality and effective staff formation represents one of the most critical issues when talking about digitality in the educational sphere.

Primary school: the “It’s never too early” approach clashes with the priority given to educational, emotional and relational needs

Heterogenous institutional endowment with **technical devices** (PCs, digital infrastructure, etc.)

Suspiciousness towards benefits of digitality in the class room □ innovative vs traditional methods □ Distance Humanities vs. STEM teachers

□ digital means must be preceded by a sort-out pedagogy

RESULTS – THE NARRATIVE OF TEACHERS ON STUDENTS

Digital competence

Very low and limited to smartphone use for students;

Behaviour

Lack of attention and concentration

Pandemic related effect

Decrease of attention and involvement.

Gender

Low interest and low activation by parents and teachers against the social representation about gender and STEM

Families

Low activation and involvement □ key role of skills development

Social class

Digital divide and availability of technology by social class

RESULTS – TEACHERS & EDUCATORS

▶ DIGITAL COMPETENCE

Low digital competence for teachers and educators: the digital divide and the need of training;

Need of critical thinking towards the platform and digital means

▶ COMPETENCES

the definition of "competence" is neither shared nor unanimous. Starting from the 8 competences proposed by the project, all are generically defined as important by the interviewees but should be differentiated according to age of the learners

▶ WHAT COMPETENCIES?

For primary schools and for associations that interact with fragile children and adolescents, priority is given to literacy, active citizenship skills, STEM skills; on the other hand, transversal skills, entrepreneurship and digital skills are crucial for high school cycles

SPECIFIC SUGGESTIONS FOR ACTION LINES

- common definition of competences
- enhanced coordination of methods and actions for development + improvement of skills
- consider the characteristics of the subject area (Humanities or STEM) and the level of the school when designing staff trainings for digital skills
- train teachers and educators to:
 - develop a listening attitude : identification of needs & want
 - focus on the transversality of all competences
 - conscious use of IT resources
 - specifically plan and programm the intervention for groups by age
 - involve students actively in the “design” and execution of lessons

Danke!

THANKS!
Grazie!

Any questions?

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