Lesson: The Digital Education Action Plan (2018) vs the Digital Education National Plan

Ugo Vitti, 2018

Audience

- Computer Science engineers

- Methods to teach Computer Science

- 15 students

Objective

OK … **what has been done in Italy** according to the National Plan for Digital Education (PNSD) which started in the end of 2015, and what should be done in the near future according to the

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS on the

Digital Education Action Plan

PNSD
(Digital Education National Plan)

1. Access to internet

2. Learning environments

3. Digital administration

4. Digital identity (SPID)

5. Students' Competences

6. Digital contents, entrepreneurship and work

7. Teachers' education and training

PNSD

1. *Access to internet*

Provide each school with a good access to the internet

"Right to Internet" must be granted in every school, from play-school

Provide digital access, in order to realize digital teaching

Action #1 - Optical Fiber for each school

Action #2 - Cabling the schools (LAN/W-Lan)

Action #3 - the cost of connectivity: right to the Internet begins in the school

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PNSD: *2. Learning Environments*

Strengthen digital infrastructures

Transform school laboratories in places for innovation

Move from "transmitting" to interactive teaching

Adapt school buildings to teaching evolution

Re-evaluate the school as an educational interface in the local area

Action #4 - Environments for integrated digital teaching

Action #5 - Challenge Prize for the digital school (Ideas' Box)

Action #6 - Guidelines for active policies of BYOD (Bring Your Own Device)

Action #7 - Plan for practical learning

Synergies – Innovative School Building

PNSD: *3. Digital Administration*

Complete the digitalization of school administration (reduce paper based processes)

Strengthen digital services related to school-family-student

Open data and services of the school to citizens and companies

Action #11 - Digitalize the administrative actions of the school

Action #12 - Electronic Register

Action #13 - Strategy "Data of the school" (open data web portal)

PNSD: *4.Digital Identity*

Associate a single digital profile to each person in the school, using the SPID (State Public IDentifier)

Reduce complexity in accessing MIUR digital services

Associate the digital profile of students and teachers to user-friendly services and applications

Action #8 - Single-Sign-On

Action #9 - A single digital profile for each student

Action #10 - A single digital profile for each teacher

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PNSD: *5. Students' Competences*

Define a common framework of digital competences for each student

Help teachers to define innovative teaching paths, defining teaching strategies for key competences

Involve students in innovative teaching schemas with 'targets'

Innovate school curricula

Action #14 - A common framework for the digital competences of the students

Action #15 - innovative scenarios for developing digital applied competences

Action #16 - A research unit for the Competences of the 21st century

Action #17 - Bring the Computational Thinking in all the primary school

Action #18 - Update the "Technology" curriculum in the secondary school, first grade

PNSD: *6. Entrepreneurship and work*

Remove the Digital Gap

Promote careers in "STEAM" (Science, Technology, Engineering, Arts & Maths)

Give value to the relationship school-work

Involve students to digitalize companies

Promote creativity, entrepreneurship of the students

Action #19 - A curriculum for (digital) entrepreneurship

Action #20 - Girls in Tech & Science

Action #21 - Digital Careers Plan

Synergies: Work experience (ASL) in the digital enterprise

PNSD: *6.Digital contents*

Promote the use of quality digital contents (digital books)

Promote innovation and teaching contents sharing

Balance quality and openness in producing digital contents

Action #22 - Basic Standards and interoperability of the online environments for teaching

Action #23 - Promote Open Education Resources (OER) and Guidelines on teaching contents autoproduction

Action #24 - School Libraries as environment for digital literacy education

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PNSD: *7. Teachers' education and training*

Strengthen digital competences of school workers

Promote the link between teaching innovation and digital technologies

Develop effective standards for training to innovation in teaching

Strengthen training to innovation in teaching at each level (entry, beginning, at work)

Action #25 - Training at work for innovation in teaching and organization

Action #26 - Reinforce the starting training on innovation in teaching

Action #27 - Technical Assistence for primary schools

Sinergies - The new training for new teachers

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PNSD: *School workers training*

Innovate assistance to schools

Propagate innovation in each school

Develop locally the PNSD

Reinforce collaboration with partners on the PNSD

Transform the monitoring of the digital school from administrative to strategic

Monitor, for quality and quantity, the whole Plan and its implementation

Strengthen the relation between the Plan and the scientific and digital school

Action #28 - A digital animator in each school

Action #29 - Territorial agreements

Action #30 - Stakeholders' Club for the digital school

Action #31 - A gallery to collect practices

Action #32 - Give to innovative networks a constant listening

Action #33 - Observatory for the Digtal School

Action #34 - A scientific Committee to align the Plan to international practices

Action #35 - Monitoring the whole Plan

Sinergies - PTOF

DEAP
Digital Education Action Plan

Priorities

1. Making better use of digital technology for teaching and learning

2. Developing relevant digital competences and skills for the digital transformation

3. Improving education through better data analysis and foresight

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DEAP
Digital Education Action Plan

Measures for each priority

A. providing tools to help educators and trainers make better use of technology including better internet connectivity;

B. targeted action to develop relevant digital competences;

C. reinforced and new efforts to improve education via better evidence and analysis.

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DEAP
Priority 1: making better use of digital technology for teaching and learning

1. **Tackle the connectivity divide by**

    i. raising awareness of the benefits for schools and available funding opportunities;

    ii. supporting connectivity i.e. through a voucher scheme focusing on disadvantaged areas and ensuring full implementation of the toolkit for rural areas;

    iii. publishing data about progress.

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DEAP
Priority 1: making better use of digital technology for teaching and learning

2. Support the digital readiness of both vocational and general schools by

i. strengthening their digital capacity;

ii. making the SELFIE self-assessment tool reach 1.000.000 teachers, trainers and learners by end of 2019;

iii. promote a mentoring scheme at national/regional level, supported by an EU-level awareness-raising platform.

DEAP

Priority 1: making better use of digital technology for teaching and learning

Dig comp 2.1 in italian (AGID)
Dig comp 2.1 in english

Examples of dig comp usage

3. Provide a framework

a) for issuing digitally-certified qualifications;
b) for validating digitally-acquired skills that are trusted, multilingual and can be stored in professional profiles (CVs) such as Europass;
c) fully aligned with the European, Qualifications Framework for Lifelong Learning (EQF);
d) fully aligned with the European Classification of Skills, Competences, Qualifications and Occupations (ESCO).

Poster of digital competences

DEAP
Priority 2: Developing relevant digital competences and skills for the digital transformation

4. Create a Europe-wide platform for digital higher education

a) using it also for enhanced cooperation;

b) supported by Erasmus+, will offer online learning, blended mobility, virtual campus and exchange of best practices among higher education institutions at all levels (students, researchers, educators).

DEAP

Priority 2: Developing relevant digital competences and skills for the digital transformation

5. Strengthen open science and citizen scienze by piloting

a) dedicated training;

b) continuos professional development courses on open science in higher education institutions at all levels (students, researchers, educators).

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DEAP

Priority 2: Developing relevant digital competences and skills for the digital transformation

Europe Code Week

6. Bring coding classes to all schools by increasing schools' participation in EU code week.

7. Tackle the challenges of digital transformation by launching

i) an awareness-raising campaign targeting educators, parents and learners to foster online safety, cyber hygiene and media literacy;

ii) a cyber-security teaching initiative building on the Digital Competence Framework for Citizens, to empower people to use technology confidently and responsibly.

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DEAP
Priority 2: Developing relevant digital competences and skills for the digital transformation

8. Decrease the gender gap in the technology and entrepreneurial sector by

i) promoting digital and entrepreneurial competences among girls;

ii) mobilise stakeholders (companies, NGOs) to equip girls with digital skills built on the Digital Competence Framework for Citizens and the Entrepreneurship Competence Framework.

DEAP
Priority 3: Improving education through better data analysis and foresight

PIAAC survey home page

Survey about digital competences in adults

i)   It will cover the availability and usage of ICT infrastructure and digital tools and levels of digital skills;

ii) mobilise stakeholders (companies, NGOs) to equip girls with digital skills built on the Digital Competence Framework for Citizens and the Entrepreneurship Competence Framework.

DEAP

Priority 3: Improving education through better data analysis and foresight

10. Launch artificial intelligence and learning analytics pilots in education

i)   to make better use of the huge amount of data now available;

ii) to help address specific problems;

iii) to improve implementation and monitoring of education policy

iv) to develop relevant toolkit and guidance for Member States

DEAP

Priority 3: Improving education through better data analysis and foresight

11. Initiate strategic foresight on key trends

i) arising from digital transformation for the future of Education Systems;

ii) working in close cooperation with Member States experts;

iii) making use of existing and future channels of EU-wide cooperation on education and training.

Useful Links

1) A self assessment tool for teacher as to their digital competences [dig comp self assessment for teachers](#);

2) [dig comp for educators: report](#)

3) [La classe di quizlet](#)

4) [Link per quizlet](#)

5) [AN Open Educational Resource - Coursera](#)

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