GoDigital - Integrading mobile learning and upgrating teachers' digital skills: A tool kit for effective in primary school

Intellectual Output 1: The Digital Competence Framework for primary schools

NATIONAL REPORT - ITALY

P2 – PDE Crete

Erasmus+

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1. NATIONAL REPORT – ITALY

Italy

1.THE ITALIAN NATIONAL POLICY FOR DIGITAL SCHOOL AND DIGITAL EDUCATIONAL CONTENT

The educational system in Italy is based on two proposals, a public organization by the Ministry of Education of the University and Research (MIUR), and one organized by the various private sector organizations (including also our Istituto Maestre Pie dell'Addolorata).

In the public sector, financial resources are managed by the government while in the private sector, resources, which mostly come from fees paid by families, are managed by the managing bodies of the individual Institutes.

Compulsory school starts at the age of 6 and ends at the age of 16.

3 orders: primary school (6-10 years), first grade secondary school (11-13 years), second grade secondary school (14-19 years).

1.2. National policy for digital school

In Italy the education system is governed by the Ministry of Education but the management of the premises is also entrusted to private institutions. Schools can decide how to implement the school curriculum, which books to use and which meetings to make.

Starting from the school reform of 2015 "The good school", the Italian government has written a document to define the National Plan for the digital school, placing great importance on the use of technologies in school.

Structure of the National Plan for the Digital School:

IT IS NOT THE BOOK OF DESIRES This Plan has a multi-year validity and concretely directs the activity of the whole Administration, with actions already financed that will be taken in charge by the individual Departments of the Ministry for implementation; it contributes to "catalyze" the use of multiple sources of resources in favor of digital innovation, starting from the resources of the European Structural Funds (PON Education 2014-2020) and from the funds of law 107/2015 (La Buona Scuola).

A PLAN THAT GENERATES DIFFUSED INSTITUTIONAL OPPORTUNITIES The Plan spontaneously generates connections and margins of collaboration between the resources and projects committed and conducted by MIUR and those of other Ministries and other government offices, Regions and local bodies.

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FOR THE ENTIRE COUNTRY Faced with a critical and rational reading of the path taken so far by the Ministry and the heritage of experience of the Italian school, the Plan, through its guidelines and investments, intends to produce a perceptible impact throughout the country, from the North to South, in the city and in the province.

A PLAN FOR EDUCATION IN THE DIGITAL AGE To speak only of digitization, despite certain delays, is no longer sufficient. Because it would risk concentrating our efforts on the technological rather than the epistemological and cultural dimension. This Plan is not a simple deployment of technology: no educational passage can in fact prescind from an intensive teaching-learning interaction and technology cannot be distracted by this fundamental "human relationship". The OECD recently mentioned this. This Plan responds to the call for the construction of a vision of Education in the digital age, through a process that, for the school, is related to the challenges facing society in interpreting and supporting learning throughout the life (life-long) and in all contexts of life, formal and non-formal (life-wide). This is confirmed by the High Level Conference of the European Commission of December 2014, by several publications of the OECD Center for Educational Research and Innovation, by the New Vision for Education Report of the World Economic Forum, and by research such as "Education for the 21st century ”of the Ambrosetti think tank.

A CULTURAL AND SYSTEM ACTION What we mean by education in the digital age will be clarified, starting from Chapter 3, by the organization of this document. But it is first of all a cultural action, which starts from a renewed idea of school, intended as an open space for learning and not only a physical place, and as a platform that enables students to develop the skills for the life. In this paradigm, technologies become enabling, daily, ordinary, at the service of the school activity, primarily the activities oriented to training and learning, but also the administration, contaminating - and in fact reuniting them - all the environments of the school : classes, common areas, laboratory spaces, individual spaces and informal spaces. With spillovers extended to the territory. The objectives do not change, they are those of the educational system: students' skills, their learning, their results, and the impact they will have on society as individuals, citizens and professionals. These objectives will be updated in content and in ways, to respond to the challenges of a rapidly changing world, which increasingly requires mental agility, transversal skills and an active role of young people. For this it will be necessary - and here is the greatest cultural and human investment - that all school staff, not only teachers, get involved, and be supported, to embrace the necessary challenges of innovation: methodological-didactic challenges , for teachers, and organizational challenges, for school managers and administrative staff. The tools to overcome them, and at least accompany their path, are contained in this Plan, and probably will not end with it.

AN ALLIANCE FOR SCHOOL INNOVATION The Plan is, through its actions, a request for collective effort. Not only to all those who already create a more innovative, future-oriented school that meets the needs of students every day. But also to all those worlds that, approached by the challenges it faces - educational, organizational, learning and improvement - build or intend to build important experiences with the school. We will work to create a "Stakeholder Club for the digital school", a permanent partnership that will make our school capable of supporting change and innovation. The school is potentially the largest generator of demand for innovation, and therefore digital, and it is also in this perspective that this Plan must be read. We are aware that saying all this broadens the range of action and, with it, the needs and expectations of the country, but we find it fundamental to reason together. After all, the "digital school" is not another school. It is more concretely the school's innovation

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challenge. At the same time, we must place ourselves on the right trajectories of innovation, to better use the available resources, to attract new ones, and not to make mistakes in the choice that we could pay over the years. And finally, to give our students the keys to the future. To write together an "Italian way" to the digital school.

2. CURRENT MODEL OF INTEGRATION AND USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) IN PRIMARY SCHOOL

In Italy in primary school the teaching of ICT is limited within the subject called technology and has the following objectives:

The pupil recognizes and identifies in the environment that surrounds him elements and phenomena of an artificial type. He is aware of some processes of transformation of resources and energy consumption, and of the related environmental impact. He knows and uses simple everyday objects and tools and is able to describe their main function and structure and to explain how they work. Knows how to obtain useful information on the properties and characteristics of goods or services by reading labels, flyers or other technical and commercial documentation. It orients itself among the different means of communication and is able to make appropriate use of it according to the different situations. It produces simple models or graphic representations of its work using elements of technical drawing or multimedia tools. It begins to critically recognize the features, functions and limitations of current technology.

3. OBJECTIVES IN INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) IN PRIMARY EDUCATION

The Ministry of the Public Istruction is currently implementing an ICT integration plan. The aim of this program is to effectively use Information and Communication Technologies (ICTs) in the educational process and to enhance the digital literacy of students and teachers. The core objectives of this program include:

- Providing schools with advanced ICT infrastructure and equipment
- Improving the teaching and learning aids, while exploiting the affordances of ICT, in accordance with the current curricula reform and pedagogical methods.

Training teachers in order for them to acquire the skills for using ICT tools in the educational process and to keep up with the current technological developments.

4. PRESENTATION OF THE CURRENT SCENE IN ITALY

In Italy the use of ICT is more widespread in high schools while in primary school it is limited to technology. In public schools there is a digital animator who is asked to design and implement projects to implement the National Plan for the digital school. Many teachers do not have specific ICT skills.

From a survey of ISTAT is clear that Italy has to work on digital competences:

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Broadband access

In 2019, 74.7% of households who have a broadband connection (fixed and / or mobile) with a small increase compared to 2018 (73.7%), however slowing down the growth that was recorded last year (in 2017 they were 70.2%). The gap between the regions is reduced by 2.5% (however significant, ranging from 79.4% in Trentino to 66.7% in Molise, while the province of Trento is 81.2%) also as a combined effect a general growth in the most late regions and a substantial stasis in the most populous regions such as Lombardy. There is a significant gap between families residing in municipalities in the center of the metropolitan area (80.4%) and families residing in municipalities with less than 2000 inhabitants (69.6%).

Compared to the reasons stated by families who do not access the Internet from home, only in Umbria and Liguria is more than 5% of those who refer to the lack of availability of broadband connection in the area (7.2% in the municipalities under the 2000 inhabitants), and economic reasons account for only 9.8% (in 2018 they exceeded 15%), with significant values over 10% only in the municipalities of the metropolitan areas and in some regions (Lazio, Campania, Sicily , Puglia).

In all regions, the main reason is the inability to use the Internet, with peaks of 65% in Molise and a national average of 58.4% distributed equally between the geographical areas (with a higher percentage in small municipalities) and in in line with the value recorded in 2018. It makes us reflect the data of the regions with the highest percentage of accesses, where the answer "Internet is not useful, interesting" is chosen by more than 40% of the families interviewed (Trentino-Alto Adige, province Trento, Bolzano) against a national average of 25.5%, unfortunately up on 2018 (21%).

As regards, however, the factors correlated with the presence of a broadband connection, emerge as mainly discriminating

age, so almost all families with at least one minor have a broadband connection (95.1%), while in families composed exclusively of people over sixty-five the share drops to 34.0%;

the qualification, for which 94.1% of families with at least one graduate component have a broadband connection against 46.1% of those in which the highest qualification is at most middle school.

Use of the Internet

The factors mentioned are also more discriminating in the use of the Internet, although there are signs of improvements for the over 65 age groups.

In general, the percentage of those who access the Internet (at least once in the previous 3 months) remains substantially unchanged (67.9% of the population aged 6 years and over, with a slight increase of 1.5% compared to 2018) while daily use increases appreciably (from 51.3% to 53.5%).

As the report highlights, the gap between the regions confirms what has been recorded for broadband access: there are strong differences between the Center-North and the South (70.6% against 62.5%). Puglia and Calabria are the regions with the lowest share of Internet users (59.7% and 60.1% respectively) with a significant gap compared to the regions with the highest percentages (73.2% of Trentino-Alto Adige and 73.8% in the province of Trento). Compared to 2018, significant increases were recorded for Sicily (+6.6%) and Campania (+3.5%).

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Regarding, in greater detail, the major discriminating factors on the use of the Internet:

compared to age, the gap remains wide between the 15-24 (over 90%) and 55-64 (67%) groups, and even more compared to the 65-74 range, which passes to 41.9% (however still very low) with an increase of over 3%;

compared to the qualification, 82.9% of those with a higher diploma go to the Internet compared to 51.9% of those who have attained the upper secondary level, while among the employed, the differences between managers, entrepreneurs and freelancers and workers, over the years, have gradually decreased (91.0% against 80.0%). Even greater evidence, however, of the weight of the qualification is given by the joint analysis by generation and qualification, where it emerges that the graduates of the "baby boom" generation (the people who in 2019 are 54-73 years old) who surf in Internet are 88.0%, at the same levels as young people aged 25-34, while the share drops to 40.9% among those in the 54-73 bracket who have low educational qualifications.

Furthermore, as the report highlights, the use of the Internet is still characterized by a gender gap in favor of men (71.7% against 64.2% of women) which remains stable compared to the previous year. Up to the age of 44, however, these differences are very limited and disappear between young people up to 19 years.

Devices used

The use of the smartphone to access the Internet is growing (among users aged 14 and over, 91.8%) even if it is to be carefully evaluated the fact that the highest percentages of exclusive use of the smartphone for access are reached among those segments of the population also characterized by a lower use of the Internet, that is, among people with low educational qualifications (51.7%) and among residents in the South (40.7%).

Population groups with greater use of the Internet favor the use of multiple devices. For example, young people aged 20-24 years use PCs and smartphones in a combined way (43.9% against 35.7% of the average) even if a significant share only accesses via the smartphone (29.5%).

People aged 65 and over have the highest share of those who access exclusively through the computer (18.7% versus 5.4% of the average), although there are some gender-related differences with 39.5% of women 60 years and older who only uses smartphones to surf the net with a difference of 14 percentage points compared to male peers, while men 65 and older prefer the exclusive use of the computer (22.1% against 14.2% of women).

Services used

It does not substantially improve the use of the services. The use of the Internet for messaging (91%) and calls and video calls prevails. Compared to the use of the Internet, the use of the newspaper reading service prevails over 3 months (57%, balanced in all age groups, except the much lower one in the 14-17 age range, where use prevails for games, music and films, with 80.2%), while banking services (46.4%) and payment services (39.9%, are less than half, with a significant gap between the 20-44 bands and subsequent ones).

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For public digital services, the level of interaction with PAs in the last 12 months is generally observed, still very low (29.3%), with significant gaps between the regions (ranging from 36.1% in Trentino-Alto Adige and 37.1% of the province of Trento to 20% of Sicily) and between the metropolitan municipalities (35.7%) and the small municipalities under 2000 inhabitants (25.8%), while remaining, however, also in the peak values, on very low altitudes.

A specific study is dedicated to the use of online purchasing services. Here, considering the past 12 months, 57.2% of Internet users aged 14 and over have purchased online and among these 36.1% have ordered or bought goods or services in the past 3 months. Men (60.8%), young people between 20 and 34 years (71.3%) and residents in the North (60.6%) buy online more, while the percentage is higher in small municipalities than in metropolitan ones . The most purchased goods are clothes and sporting goods (45.3%), household items (41.6%) and services relating to "travel and transport" (40.1%), in line with 2018, albeit with slightly higher percentages.

With what digital skills

Finally the level of digital skills is detected (it has not happened in Italy since 2016), always according to the DigComp framework but unfortunately limited to those who are Internet users. However, it can be assumed that those who do not fall within this reference population have lower digital skills than the basic ones.

We can thus better read the data of the Istat survey:

29.1% of 16-74 year old internet users have high digital skills, while 25.8% reach basic skills. The highest percentage is among those with low skills, lower than the basic ones (41.6%) and 3.4%, equal to 1 million and 135 thousand people, do not have any digital skills even if they access the Internet;

although unfortunately the inhomogeneity of the detection age groups does not help, we can calculate that the percentage of the population (over 16 years) who has at least basic digital skills is worth about 39%, with percentages that vary according to age and the level of education, but with peaks of 67% in the 20-24 bracket and minimum of 15% in the 65-74 age bracket, and just over 70% in graduates;

in any case, therefore, the values remain low. Young people aged 20-24 who go on the Internet, for example, have advanced levels of skills in 45.1% of cases and however 28% have lower skills than the basic ones (which is not surprising, given the PISA data of olds). The same is true for graduates, where only slightly more than half of those who use the Net have high digital skills (52.3%);

analyzing separately the four dimensions on the basis of which the composite indicator on digital skills is calculated (four of the five areas of DigComp competence), it is found that the highest digital skills are achieved in the domain of communication (72.3%) and information skills (61.8%) compared to those related to the ability to solve problems (49.8%) and to use software to treat / convey digital content (42.6%), with large gaps related to gender (above all 45 years) and the territory

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5. OTHER PROVISIONS

The objectives of the National Plan for the Digital School are the following:

ACCESS Provide all schools with the conditions for access to the information society by investing in digital access infrastructures (cabling / LAN W-Lan.

SPACES FOR LEARNING Switch from solely transmissive teaching to active teaching, promoting flexible digital environments. Encourage the setting up of increased classrooms and policies for BYOD ...

DIGITAL IDENTITY Associate a digital profile with each student and teacher and reduce the complexity of access to MIUR services

DIGITAL ADMINISTRATION Spread the electronic Register and the administrative digitalization of the school Dematerialisation of contracts (short substitutes) and invoicing of electronic payments

STUDENT SKILLS Develop computational thinking and digital skills since primary school (Initiative Program the future). Update the technology curriculum in upper secondary school.

DIGITAL, ENTREPRENEURSHIP AND JOB Promote digital entrepreneurial experiences for students. Reducing the gender gap in science and technology careers (STEM)

DIGITAL CONTENT Promote the use of digital content and digital platforms for teaching (sharing of educational content, books and digital libraries)

PESONAL TRAINING Strengthen the preparation of staff in the field of digital skills, reaching all the players in the school community. Promote the link between educational innovation and digital technologies.

ACCOMPANIMENT Assisting the diffusion of innovation by training the Animator and the innovation team in each school, facilitating forms of collaboration with the territory and monitoring tools (Technological Observatory)

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6. RATES OF ICT USE

On average, 47% of Italian teachers allow students "frequently" or "always" to use ICT for projects or work in the classroom (53% the OECD average).

In Italy, 52% of teachers reported that "the use of ICT for teaching" was included in their training, while 36% felt prepared for the use of ICT for teaching at the end of Education.

68% of teachers participated in professional development activities including "use of ICT for teaching" in the 12 months preceding the survey. Training on the use of ICT is however the theme of professional development which teachers report a strong need: 17% in Italy (18% on average in OECD countries).

On average, in Italy, 31% of school managers report that the quality of education in their school is held back by an inadequacy of digital technology for teaching (25% on average in OECD TALIS countries).

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