Italy

Country Report on ICT in Education

Available on http://insight.eun.org

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# TABLE OF CONTENTS

1 THE EDUCATION CONTEXT ............................................................................................................... 1
   1.1 Education Reform .................................................................................................................... 1
   1.2 Key challenges /priorities for education ................................................................................ 2

2. ICT POLICY ...................................................................................................................................... 2
   2.1 Responsibilities ...................................................................................................................... 2
   2.2 ICT policies for schools .......................................................................................................... 2
   2.3 ICT priorities .......................................................................................................................... 3

3. THE CURRICULUM AND ICT ......................................................................................................... 3
   3.1 The curriculum framework ...................................................................................................... 3
   3.2 ICT in the curriculum .............................................................................................................. 4
   3.3 Students’ ICT competence ....................................................................................................... 4
   3.4 Assessment scheme .................................................................................................................. 4
   3.5 ICT based assessment .............................................................................................................. 4
   3.6 Quality assurance of the use of ICT in schools ...................................................................... 4

4. DIGITAL LEARNING RESOURCES AND SERVICE ........................................................................ 5
   4.1 Content development strategies ............................................................................................ 5
   4.2 E-content development .......................................................................................................... 5
   4.3 User - generated content ....................................................................................................... 5
   4.4 Web 2.0 ................................................................................................................................. 5
   4.5 Content sharing ....................................................................................................................... 5
   4.6 Learning Platforms .................................................................................................................. 5

5. TEACHER EDUCATION FOR ICT ................................................................................................. 5
   5.1 ICT competence targets ......................................................................................................... 5
   5.2 Assessment Schemes ............................................................................................................. 6
   5.3 ICT in teacher education ....................................................................................................... 6
   5.4 Training the Teacher Trainers ............................................................................................... 6
   5.5 Incentives .............................................................................................................................. 6
1 THE EDUCATION CONTEXT

1.1 EDUCATION REFORM

Two governments, belonging to two opposite political coalitions, have been in power since 2003. As a consequence, the education system has undergone various amendments. The reform of the Italian education system started with Law no. 53/2003. It took place within the principle of Lifelong Learning, defining the main characteristics of the education system, divided into two cycles:

- 1st cycle: primary school and lower secondary school
- 2nd cycle: upper secondary school.

This law and its legislative decrees led to the reform of the 1st cycle of the educational system which has been into force since 2003. The reform of the 2nd cycle announced by the law was only realised in February 2010.

Pre-primary school is not part of the education system. The law establishes 24 hours per week as school time, as well as only one class teacher in primary education for the 1st cycle. It also gives rules for introducing progressively e-books, which will become compulsory from 2011.

The National Guidelines for pre-primary school and the 1st cycle of education, introduced shortly after Law no. 53/2003, have been implemented by the Guidelines for the Curriculum, drawn up by a panel of experts in 2007 and supported by the new Ministry of the Government in power from 2006 until 2008.

With a new government in 2006, compulsory education was extended by two more years, lasting now ten of eight years as previously, to the age of 16, including the 1st cycle and the first two years of the 2nd cycle.

The government in 2008 modified the previous law by including within the ten years of compulsory education (primary, lower secondary school) two more years which can be undertaken within the formal education system (General Education, Technical and Vocational education) or within the Vocational Training courses organised by the Regions.

The Reform Law no. 53/2003 enhanced the national evaluation system and improved teachers’ initial training (introducing compulsory five-year masters degrees).

The law on upper secondary schooling (2nd cycle), approved in February 2010, concerns General Education (Liceum), Technical Education and Vocational Education and aims at giving more educational choice to students and families. The reform will be applied for first year students in September 2010. The Liceum has six pathways:

- Artistic
- Classic
- Scientific
- Linguistic
- Musical
- Human science

Technical Institutions have two sectors (including eleven pathways):

- Economic sector
- Technological sector

Vocational Institutions have two sectors:

- Services
- Industry and Arts &Crafts

Evaluation of the Educational system

The National Service for the Evaluation of the Education and Training System (INVALSI) was set up in 2004. In 2006 and 2007 more administrative autonomy was given to INVALSI, setting out its competences for the evaluation of the School System (MPI). In September 2008, further guidelines were given by the Ministry of Education (MIUR) which defines the duties of INVALSI:

- School system evaluation
- School proficiency evaluation
- Student learning outcomes
- School examination tests
- Evaluation of school staff
- Enhancement of the evaluation culture
- Participation in international surveys
1.2 KEY CHALLENGES /PRIORITIES FOR EDUCATION

The main priorities of the education reform are as follows:

- Reinforcing Latin language as a subject
- Increasing the number of hours for mathematics, physics, and sciences
- Enhancing foreign languages
- Introducing a technological career in the scientific programme
- Introducing an economic subject in the scientific and human science programme
- Introducing a non-linguistic subject taught in a foreign language
- Valorising the quality of subjects rather than the quantity
- Reinforcing school autonomy
- Building a stronger relationship between schools/workforce/university

For more information: [http://www.istruzione.it/](http://www.istruzione.it/)

2. ICT POLICY

2.1 RESPONSIBILITIES

By constitutional law the State is in charge of education. The State, providing general rules concerning curricula and outcomes in education, outlines the fundamental principles and standards of the school system. The Regions, Provinces and Municipalities are in charge of organisational matters at local level.

Schools produce their own POF (Educational Offer Plan), which is the result of the teamwork of the Teachers’ Assembly, according to the input given by the School Council and with the supervision of the School Head. The POF is the fundamental document that describes the cultural and planning identity of a single institution. It defines the curricular, extracurricular, educational and organisational projects that each school adopts according to its autonomous regulations. Schools, while following the general principles/rules given by the State, meet the territorial needs within the Educational Plan Offer which is presented to families at the beginning of every school year.

2.2 ICT POLICIES FOR SCHOOLS

Since 2000 the Ministry of Education, University and Research (M.I.U.R.) has supported schools in the use of ICT in teaching/learning processes. Widespread use of new technology in schools was introduced by means of the School System Reform in 2003 concerning the 1st cycle of education. A wide offer of initiatives has had the aim of reforming the school administration and renewing and enhancing the teaching/learning methodology to better cope with the needs of teachers, students and families. The major initiatives have concerned:

- Supplying schools with multimedia equipment
- Connecting schools to the Internet
- Setting up networks and services
- Training teachers

Initiatives to update the school system have been taken by the Ministry of Education and the Ministry of Public Administration and Innovation to develop school networks and support digital schooling (October 2008). The Ministry of Education has adopted several projects to develop the use of IT in the teaching/learning process:

The Digital School action plan concerns the support and spread of ICT tools and methodologies to innovate in schools. The initiative will be developed in two phases: the supply of IWBs to schools within classrooms and the development of digital classes – cl@ssi 2.0

IWB project: the introduction of Interactive Whiteboards is implemented in two phases: first with the supply of 16,000 IWBs to lower secondary schools in 2009, and in a second stage 8,000 IWBs will be provided to primary and upper secondary schools by 2011; ANSAS (National Agency for the Support of School Autonomy, formerly INDIRE) will ensure in-service teacher training for a proficient use of IWB and digital content (50,000 teachers at lower secondary level and 25,000 teachers at primary and upper secondary level).

Cl@ssi 2.0 project: the experimentation of innovative learning environment will involve 156 classes at lower secondary level spread over all the regions; the project will last three years and the process will be monitored in order to evaluate the impact of ICT and the new
learning environment on students’ performance and skills.

The School-Family project provides new services for families for better communication; the project includes on-line reports, digital registers, surveys on students’ attendance (to be communicated to families by means of emails or mobile phone), access to the on-line student file, interview booking. This project will involve 4,180 school institutions (40 %) and will start in December 2009. By means of the network teachers can produce and share digital contents and use tools like blogs, wikis and videoconferencing.

The Online national school registry project will involve 32 provinces by 2010 (50% of the population) with the support of the school territorial observatories in order to update students’ attendance and monitor drop-out.

Via the Schools network about 11,000 school institutions were interconnected together with public administrations within the SPC (Public Connectivity System) by December 2009.

In the area of Teacher Training: ANSAS has taken over the commitment from the Ministry to realise the eLearning environment for school staff training. PuntoEdu is conceived as the online training environment to be complemented by in-presence sessions, adopting a “blended” methodology. In this framework ANSAS provides the online training and the Regional Ministry Authorities organise the face-to-face activities.

In 2006, the Ministry of Education (MPI) continued to support ICT and innovation by establishing a Working Group for the Development of Scientific and Technological Culture. Four ministries agreed to support the group: the Ministry of Education, Ministry for Universities and Research, the Ministry of Cultural Heritage, and the Ministry of Public Administration and Innovation. The tasks of the interdepartmental group are the following:

- Support and enhancement of scientific and technological culture in the country
- Policy to include public and private actors within education
- Definition of structural actions for schools and wider society
- Support for teacher training
- Proposals for the development of ICT within curricula

The first task of the working group focussed on investigating laboratory equipment in 11,000 schools followed by a more in-depth analysis of 1,400 schools.

2.3. ICT PRIORITIES

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3. THE CURRICULUM AND ICT

3.1. THE CURRICULUM FRAMEWORK

According to the Italian Constitution the State is in charge of education and shares some responsibilities with the Regions, Provinces, and Municipalities. School autonomy is also safeguarded for some aspects. The State provides general rules concerning
outcomes in education, lays down the fundamental principles and sets the standards in education.

While following the general principles and rules given by the State and in accordance with territorial needs, schools produce their own POF (Educational Offer Plan) which is the result of the group work of the Teachers’ Assembly according to the suggestions given by the School Council with the supervision of the School Head.

The POF is the fundamental document that describes the cultural and planning identity of every school institution. It defines the curricular, extra-curricular, educational and organisational projects and activities that each school adopts according to the local needs. The regulations concerning autonomy allow every school to create and realise its own curriculum. School autonomy is applied to:

- Autonomy in teaching
- Autonomy within organisation
- Autonomy in research, experimentation and innovation.

### 3.2. ICT IN THE CURRICULUM

The national guidelines and the curriculum guidelines give the framework for introducing and supporting ICT within the 1st cycle of education. The Guidelines for the Curriculum are meant to be the reference framework for the curriculum which will be implemented at school level by means of the POF. The Guidelines for the Curriculum also establish the learning objectives and the final goals to be reached by means of the development of competences. In 2004 Computer Science and Technology was introduced as a subject within the curriculum. The Guidelines for the Curriculum (2007) pointed out the importance of ICT in order to contribute to the development of the skills and competences of the younger generation within the information society. The curriculum consists of the humanities area and the MST area, where interdisciplinary interactions and collaborations are envisaged.

ICT also plays an important role within the humanities area as a multimedia offer of new languages for communicating while building knowledge. ICT is a subject within the MST subject area with well defined goals and objectives at the end of primary and lower secondary levels.

### 3.3. STUDENTS' ICT COMPETENCE

The Guidelines for the Curriculum state the competences which have to be reached by pupils at the end of primary school and of lower secondary school.

- **Goals for primary school:** pupils can use ICT and multimedia to develop their work in various subject areas, they can produce presentations of their work and communicate it; pupils can use ICT in educational games and in communication with others.
- **Goals for lower secondary school:** pupils can use ICT and multimedia to support their work, make and validate hypotheses, make self-evaluations and produce presentations of their work; pupils can search for information, select it and make syntheses; pupils can work up their ideas and share them with others.

### 3.4. ASSESSMENT SCHEME

Teachers are in charge of assessing students’ knowledge, skills and competences. At the end of the 1st school cycle, pupils have to pass an examination to enter the 2nd cycle. At the end of the 2nd cycle there is the upper secondary school leaving examination. Students’ assessment concerns all the subjects of the curriculum, including ICT.

### 3.5. ICT BASED ASSESSMENT

There is no ICT-based student assessment.

### 3.6. QUALITY ASSURANCE OF THE USE OF ICT IN SCHOOLS

The ENIS (European Network of Innovative Schools) network has assured the quality of ICT within schools over the years. In the meantime the number of teachers involved in ICT projects has increased enormously because of other factors such as the great success of eTwinning, which involved up to 5,187 schools by April 2009.

In-service teacher training by means of the PuntoEdu platform has contributed a lot in raising and enhancing teachers’ competences in ICT for pedagogical purposes. Training is monitored by awarding credits to participants.
4. DIGITAL LEARNING RESOURCES AND SERVICE

4.1. CONTENT DEVELOPMENT STRATEGIES

No information available.

4.2. E-CONTENT DEVELOPMENT

PuntoEdu is the environment where multimedia educational content has been developed. The repository contains more than 3,000 LOs which have been developed for teachers’ online training by teachers themselves. The Los proposed are meant to be reused and shared by teachers with their students. The very first purpose for introducing LOs in PuntoEdu was to offer training activities as well as pedagogical training to teachers. LOs, together with the know-how to use them, have become meaningful within the new pedagogic concept of “learning by doing” which is becoming more and more familiar to teachers.

4.3. USER-GENERATED CONTENT

ANSAS has developed a database system which collects resources to be used by teachers:

- Dia (http://www.indire.it/archivi/dia/) is the digital database of 25,000 images dealing with all the subject of the curricula. Every image has its file card which provides historical information and background together with suggestions for in-depth developments and study.
- Gold (http://gold.indire.it/gold2/) is the database of best practices, including the LOs produced by teachers.
- Musiknet (http://www.indire.it/musiknet/) is a virtual museum of music, offering images, sounds and descriptions of the instruments.

4.4. WEB 2.0

The experimentation of innovative learning environment will start soon by means of cl@ssi 2.0 pilot project, which will involve 156 classes at lower secondary level spread through all the regions. The project will last three years and the process will be monitored to evaluate the impact of ICT - since a new learning environment has been set up - on students’ ICT competences (www.scuola-digitale.it/classi2.0).

4.5. CONTENT SHARING

The repository of LOs developed in PuntoEdu provides about 1,100 LOs to be shared within the LRE portal. In addition, about 19,000 assets of the database DIA are also available through the LRE portal.

4.6. LEARNING PLATFORMS

PuntoEdu is the most widely used platform in the country. Most of the school staffs’ training has been done on this platform. Teachers’ interest in the new training environment has increased throughout the years as shown by the growth of user satisfaction expressed in evaluations. Several aspects have been improved, with for example the technical upgrade of the platform to underpin the huge number of participants, better performance and support from eTutors (not only from a technical point of view) and the transformation of the training from content delivering to content producing and sharing.

Since 2000 technical issues have been replaced by didactic concerns. eContent has reached a high level of quality so that eLearning has shifted from an environment based on social interaction, such as virtual classes and fora, to an environment where digital content is crucial for training and didactics.

This change in attitudes is certainly due to the growth of social networks, which increasingly permeate individual life. Synchronous events and peer-to-peer sessions are now the most valued events according to the participants, and that is also due to the role of “moderators” who prove to be highly competent as far as didactics and subject area content are concerned.

5. TEACHER EDUCATION FOR ICT

5.1. ICT COMPETENCE TARGETS

There is no defined framework of competences for teachers.
5.2. ASSESSMENT SCHEMES

There is no defined framework for competences for teachers.

5.3. ICT IN TEACHER EDUCATION

ICT is part of initial teacher education at higher education level, even if ICT training is not compulsory. ICT is part of the in-service teacher training provided through PuntoEdu, at national level.

eLearning training is compulsory for newly permanent teachers and newly appointed Heads. Teacher training must be planned within the Educational Plan Offer (POF) according to the needs at school level and agreed by the Assembly of Teachers. Teacher training can be planned by the Ministry or schools; or schools networks can also plan staff training with the support of Universities, Teachers’ Associations or other qualified institutions such as Research Institutes (Employment contract - CCNL scuola 2006-2009).

eLearning initiatives for teachers

ANSAS has taken over the commitment from the Ministry to realise the eLearning environment for school staff training. PuntoEdu is conceived as the online training environment to be complemented by in-presence sessions, adopting a “blended” methodology. In this framework ANSAS provides the online training and the Regional Ministry Authorities organise the face-to-face activities. Subject experts give advice on the content of eLearning activities including courses, fora, chat, laboratories, virtual classes, LOs. Activities for monitoring eLearning initiatives have the purpose of transferring credits to the participants and evaluating the training process.

Within PuntoEdu a new kind of online activity has been further realised: Edulab, which consist of online cooperative peer-training for teachers.

In the synchronous activities, moderators have supported the group of participants, receiving training for this purpose. Moderators have been selected from among subject area experts in order to be able to lead groups of people in synchronous events, making the best use of all the resources of the software and giving content and methodological support.

In the latest eLearning course for Newly Permanent Teachers (2007-2008), a new figure has been introduced, the coach, who has increasingly taken on the features of a “mediator” within the training process, rather than an expert in technical matters.

Since September 2006 DiGi scuola, a pilot project by the Ministry of Education (MPI), has been running. The Ministry of Education has given ANSAS (ex-INDIRE) the task of providing schools with IWBs and supporting teachers’ online training. The southern regions (Abruzzo, Basilicata, Calabria, Campania, Molise, Puglia, Sardegna and Sicilia) have been involved. The project aims to support the development and use of Learning Objects and introduce ICT within the learning process. The project covers Italian language and Maths subjects in upper secondary schools. In this project, the coach performs tasks similar to the tasks of eTutors in previous projects. This new figure combines all the features of the eTutor – high levels of technological competence together with mediator skills. The coach is a subject content expert as well as solving technical problems.

For, a new virtual environment has been introduced in the last few years. This environment allows teachers who have already undergone or are undergoing their training to meet to share knowledge, ideas, digital resources and tools. This environment has been conceived to give teachers the opportunity to keep in touch and cooperate beyond the formal training activity.

5.4. TRAINING THE TEACHER TRAINERS

eLearning has developed with the support of eTutors, who have been proved to be crucial figures for the involvement of teachers and the success of the initiative. PuntoEdu eTutors have received special training from INDIRE. Over the years a task force of eTutors has reached quite a high level of knowledge, skills and competences.

5.5. INCENTIVES

Incentives for in-service training are not provided according to the Employment contract (CCNL scuola 2006-2009).