

The information society in Italy

COUNTRY REPORT

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Content

Foreword	3
Introduction	5
Italy: an overview	6
1. Political structure	6
2. Social and economical summary.....	7
Pointers and data regarding new technologies in Italy and their usage	8
Information society and policies	17
1. e-Government.....	17
2. eGovernment and strategic goals	18
3. ehealth	22
4. Ecommerce.....	24
5. digital culture	25
6. training , research and development	26
7. Universities and the Information Society.....	30
Recommendations for future research activities	38
Bibliography	39

Foreword

This reports present a general overview of the relevance and significance of the Information Society in Italy. The data used to compile this study mainly relates to the period from 2000 to 2007.

Generally speaking the data on the use of Information and Communication Technology derived from different studies confirms a widespread increase in Internet usage in Italy and while this trend shows instances of discontinuity over specific short-term periods, the overall long-term trend is one of increased usage, the total amount of usage having more than doubled by 2007 with respect to that observed in 2001.

While it is safe to say that Internet usage in Italy is not just available to “the few” it can be equally said that at this current time, neither is it yet “for everyone”. The concentration of internet users is still higher in northern Italy. Adult users, those ranging in age from 25 to 54 years represent 65% of total Internet usage. Young people (18 – 24 years of age) are more inclined to log on from their own houses while adults predominantly log on at the workplace. Almost two thirds of people online (70% of frequent users) have a high school qualification or a degree and “domestic” usage is widespread between young people who have not completed their education. Furthermore, the overview points out that Internet usage is not a substitute for, but co-exists with other resources (books, newspapers, satellite TV etc). The most active online users were also those that more often read and used other types of resource.

The e-government sector together with that of e-health represent the most active sectors within the Information Society scenario.

The “Strategic Lines study on e-government” presented at the beginning of 2007 by Luigi Nicolais, Minister for Reform and Innovation in the Public Administration, and the subsequent “Innovation Directive”, both aimed to strengthen the central idea of the Lisbon strategy: the building of a knowledge based society, where the public sector is not required to relinquish its enabling role, i.e. that of making the Country more competitive . Seven target goals which have to be met by the Italian e-government initiative/programme have been established:

- 1). the improvement of public administration efficiency (innovation of processes, implementing suitable tools for their use, training of staff online);
- 2). the development of full co-operation between different administrations, (through the integration of national data banks and public record books);
- 3). the improvement of public expense transparency (all payments will be informatised and recorded in order to monitor public accounts, optimizing Internet usage for acquiring goods and services);
- 4). the creation of digital citizenship (promoting e-democracy and overcoming the digital gap, providing quality information services and the possibility to log on to national portals and public administration websites);
- 5). the monitoring of public administration initiatives to measure their efficiency (creation of “a network of excellence”
- 6). the encouragement of company competitiveness, that also foresees an innovation discussion table/arena;
- 7). the positioning of Italy as a principle protagonist for processes of innovation within Europe.

The impact of ICT on the health system the eHealth Sector has been profound and wide-ranging. The September 2006 'Health Agreement for the new National Health Care Information System (NSIS) established eight (8) fundamental requirements to be met in order for the system to operate effectively. The 8 identified requirements or strategic goals constitute a coherent and integrated informatics system comprised of:

- A system of Integration for individual health information;
- A network for monitoring Assistance requirements
- A system for monitoring the adequacy of Basic Aid Level provision;
- A system for monitoring Expenses;
- A system for the Monitoring of Waiting Lists;
- A system for the Monitoring and Protection of Mental Health;
- A system for the Monitoring of Medicine Usage and Medicine Shelf Life;
- An Observatory/Oversight function for Public investment in Health Care.

The figure for European E-Commerce turnover in 2006 was equal to 135 billion Euros. In Italy the figure is increasing rapidly, particularly in sectors such as Tourism, Electronics and Leisure Time. In 2007, 70% of online purchases were carried out by credit card (97% of these were contributed by the Tourism sector), 10% via PayPal, and 7% via bank transfer, while 7% of purchases were paid by cash. Payment systems such as PayPal while not yet widespread in Italy are starting to become increasingly commonplace. Operators are proposing lots of solutions such as prepaid credit cards (3 million cards in 2006) and new security protocols that require a password for online payment (Verified by Visa etc).

The Education sector has undergone major change over the last ten years. These changes have also affected the use of information and communication technology within the different school levels.

In 2005, there were approximately 736,738 permanently employed teachers in the public school system. In public schools, the ratio between the number of enrolled students and the number of available PCs is about 10 to 1.

Currently, the main application of Technology by teachers is in its use for the purpose of updating and collecting information. The use of the Internet in the classroom as a teaching aid is still limited. Amongst the identified teacher groups who used ICT to collect information, those who taught technical or scientific subjects or worked in technical-scientific high schools were more inclined to use it. Many initiatives have been launched by the Italian Ministry of Education to promote and enhance the use of ICT in didactics.

Significant dynamism may be observed within the University sector in which two-thirds of Universities are involved with joint cooperative programmes/initiatives, (both formal and informal) relevant to the subject of e-learning. These joint initiatives have involved both other universities and institutions of a different character or nature. In other words, it is quite common for Italian universities to take part in initiative consortia in relation to the world of e-learning as well as those involving other ICT technologies. The research sector too has provided notable examples of joint initiatives, projects and programmes, conducted at local, national and European level, but it must be said that generally speaking, it would appear that a lack of coordination together with inadequate mission definition and "follow through" practice has often resulted in an inability to shift from best practice theory to main-stream action, in which the technology finds application in real world contexts.

Introduction

The NETIS projects aims to enrich students' knowledge and skills with respect to Information Society. NETIS wants to promote the improvement of students', teachers', researchers', specialists' and citizens' knowledge and skills, developing an e-Learning course about the Information Society that is widely accessible, innovative and sustainable. This report aims to introduce the difficult theme of the Information Society in Italy and has been developed with the intention of being included in the NETIS text book. This report presents a brief overview of the situation with respect to the Information Society, if you want find a more elaborative and exhaustive analysis please refer to the texts listed in the bibliography. For further information please see the web site: <http://www.ittk.hu/netis/>

Italy: an overview

I. Political structure



Official name: Italian Republic

Government type: Parliamentary Republic

Independence

Italy became a nation-state in 1861 when the peninsula was united under King Victor Emmanuel II. After the period Benito Mussolini Fascist dictatorship and Italy's defeat in World War II, a democratic republic replaced the monarchy in 1946.

Constitution

The Italian Constitution was passed on 11 December 1947 and came into being on 1st January 1948

Legal system

Based on codified Roman law, with elements of the Napoleonic civil code; the civil code of 1942 replaced the original of 1865.

Administrative division

The administrative division introduced by the Italian Constitution established the regions as administrative entities with limited legislative powers in a number of fields. Twenty regions were established: 5 regions enjoy a “special autonomy” (Trentino-Alto Adige, Friuli-Venezia Giulia, Valle d'Aosta, Sicily and Sardinia) and the remaining 15 an “ordinary autonomy”. All regions¹ are further subdivided into two or more Provinces (the total amount of provinces is 110, three of which are newly organized, and will be effective only as of 2009)². The lowest level of administrative division is that of the municipality (of which there are 8.100).

A brief outline of the division Italian administration

Legislative power belongs to the state and the regions in accordance with the constitution and within the limits set by European Union law and international obligations (Art. 117 State and Regional legislative Power).

¹ Except the Valle d'Aosta.

² Provinces of Trento and Bolzano have special autonomy

- Article 117 lists the scope of legislative authority belonging only to the **State**, this includes matters such as, foreign policy, defence and armed forces, immigration, citizenship, State taxes, electoral law, courts and national boundaries etc. National-central government has exclusive legislative power over most of the main issues, including the general rules regarding education and a provision for minimum service levels (Article 117 of the Constitution).
- Basically, pursuant to Article 117 of the Constitution, the **Regions** are free to legislate on matters not governed by State law. Regarding the matters that lie within their field of competence, the regions and the autonomous provinces of Trento and Bolzano participate in any decisions about the formation of community law. The regions and autonomous provinces also provide for the implementation and execution of international obligations and of the acts of the European Union in observance of procedures set out by state law. The Regions have 'exclusive' legislative powers over vocational education and training, apart from those tasks connected with the European Union, as well as parallel legislative powers over general education, although the State is responsible for deciding the basic principles (Article 117, paragraphs 2 and 3 of the Constitution).
- **Municipalities, provinces and metropolitan cities** have their own administrative functions and, in addition, those conferred to them by the law of the state or the region according to their respective fields of competence. Local authorities (**municipalities**) provides many of the basic civil functions, such registry of births and deaths, registry of deeds, contracting for local roads and public works, etc. **Provinces** intermediate between the municipality and the region, both care for and promote the interests the development of the provincial community.

2. Social and economical summary

Population:	58.751.711 million ³ (31 st December 2005)
Capital:	Rome
Area:	301.230 sq km (187.184322 sq miles)
Major languages:	Italian
Major religion:	Christianity
Life expectancy:	78 years (m), 84 years (f) ⁴
Monetary unit:	€ (Euro)
Main exports:	Textiles, articles of clothing, machinery, motor vehicles, food and food products, metals and minerals
GNI per capita:	US \$ 30,010.00 (World Bank, 2005)

³ISTAT National demographic balance. Data released on July 10, 2006

⁴The World Health Report 2006

Pointers and data regarding new technologies in Italy and their usage⁵

In the case of Italy, reliable sources indicate that there are fifteen million people online – and this maybe as high as sixteen, if we include people who use the internet occasionally (“at least once a month”).

A “enlarged” evaluation about less frequent usage would probably arrive at the figure closer to 18 millions.

Current analysis of the various demographic categories shows that, in respect to or 6 years ago, the situation has substantially changed.

Internet in Italy is not yet “for everyone” equally can be said but is not for “the few”- and there is a discontinuous, but firm and progressive, tendency toward an increasingly widespread usage of the net.

According to the data collected by Gandalf, in 2007 the overall number of people that enter the net, even only occasionally, has risen to 18 million, but this figure decreases to less than 17 millions if we exclude those accesses occurring in external situation, such as training courses, at friends’ house, at the library or at internet café. This number further lowered to a little over 13 millions if we consider only those people that claim to log on to the net “at least once a week”. Similar indications ensue from other sources. For example according to the Censis⁶ research (2005) 36 % of Italians from 14 years old upwards declared themselves to be able to use the Internet and 20% declared that they used it “at least two or three times a week”- which represent a dramatic increase to that of 20% total and 12% “habitual” usage previously reported in 2001. According to more recent data from the same source (2006-collected using different methodology) the total number of Italians that regularly use the net represents, 40% of the population, while people that use it “at least 3 or 4 times a week” or “everyday” represent 28% and 22% of the population respectively.

The core of this analysis is based on research by Eurisko⁷ that has provided historical continuity for several years regarding internet usage (recent data can be compared with those published on this site in [1999](#)) as well as on other sources of information. Criteria and figures vary, but trends are confirmed by a variety of studies.

There was slower development in 2001-2003 than in previous years, but, as we see in this following graph growth continued.

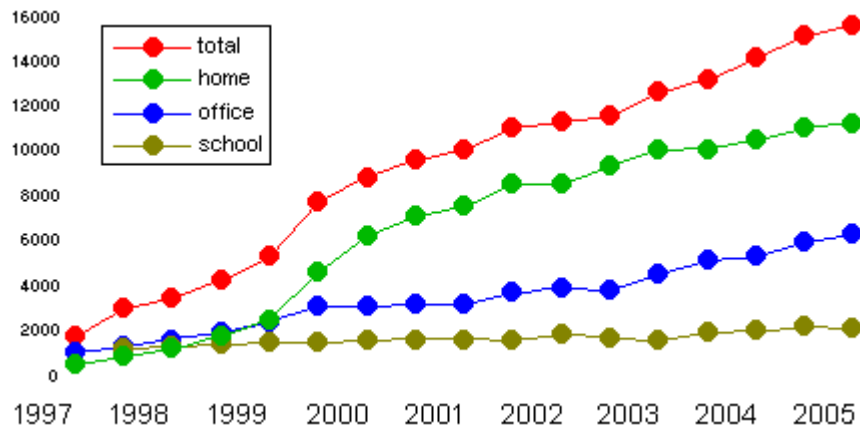
⁵ This paragraph is taken from G. Livraghi “Dati sull’internet in Italia” which can be downloaded from the following website : <http://www.gandalf.it>

⁶ Censis is the Centre for Social Investment Studies that from more than 40 years has consistently carried out research, consultancy and evaluation on key social sectors with respect to Education, Work., welfare, economy at a local, urban and government level. Web site : www.censis.it

⁷ GfK Eurisko the most important Italian institute that carries out market research on consumers Web site: <http://www.gfk.com/gfk-eurisko>

People online in Italy 1997-2005

Numbers in thousands



For several years there has been traditionally greater use of the internet from work than from home, but a change in this trend was noted in 2000 with greater growth of online activity at home. Internet usage at work did not increase during the period 2000-2001. It was static in 2002, but a new growth trend appeared in the second half of 2003.

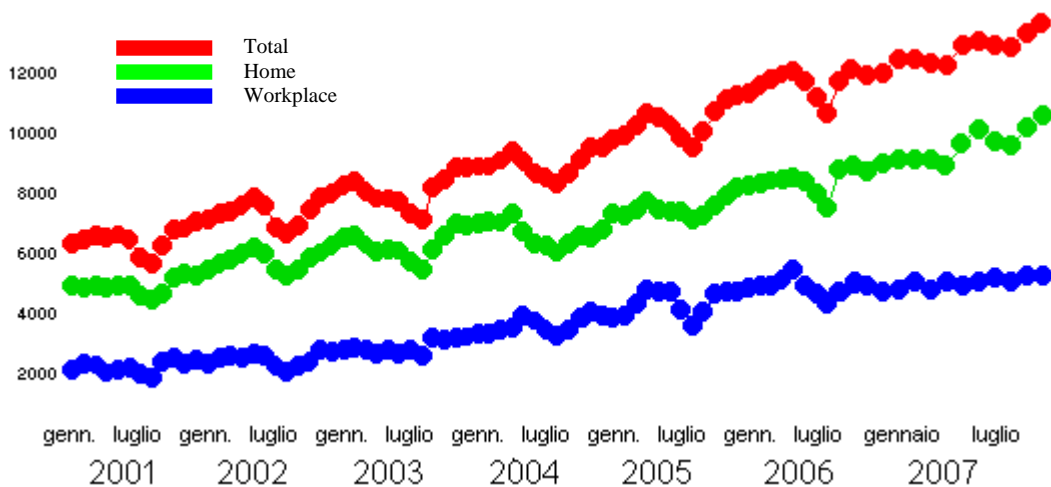
The evolution is continuous. The total data are the “algebraic sum” of conflicting tendencies: some-one starts or increases his or her online activity, while others stop or reduce it. Even independently from the rate of growth, the picture changes constantly.

The following graph gives tendency lines based on Eurisko⁸ survey from January 2001 to October 2007. The data refers to “frequent” users (people that have claimed to have logged on to the Internet “at least once during the last 7 days”).

⁸ GfK Eurisko the most important Italian institute that carries out market research on consumers Web site: <http://www.gfk.com/gfk-eurisko>

“People online in Italy form January 2001 – November 2007

Numbers in thousands



Note in the above graph, for “genn”. read “January” and for “luglio” read “July”.

Despite the apparent modulation (not only seasonal) an upward trend is confirmed. For the first time in April 2005 the total number of people that declared to have logged on to the net in “the last seven days” passed the 10 million mark- by November 2005 this figure had risen to 11 millions and by May 2006 was over 12 millions. It would seem that from September 2006 the observed development has a less coherent trend, and while there is a higher levels of “domestic” usage than in previous year, a similar increase is not observed in workplace usage. In September 2007 a new “historical maximum” was registered, with a figure of 13 millions reached for the first time. While there was another apparent rise observed in October 2007, for accuracy purpose this trend needs to be evaluated on longer periods of time.

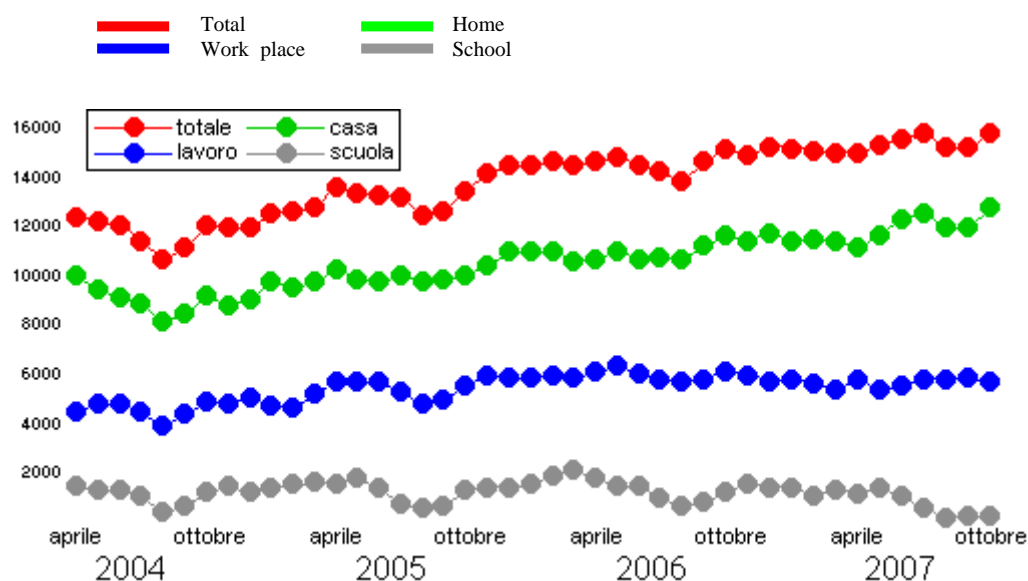
Net usage in workplaces, while initially demonstrating a decrease, was followed by a long static phase after which a recovery became apparent 2003. Even in the first half of 2006 the domestic usage of the net increased faster than that in the workplace. For the first time in April 2006 the number of people that entered the net from the workplace surpassed 5 millions. A new “historical maximum” was registered in May 2006 but in the following 17 months it was never increased upon. The usage development after summer 2006 and in the first 10 months of 2007 appears weaker. In domestic usage an “historical maximum” was registered in June 2007, when usage level reached 10 millions. In October 2007, the connections total connection increase observed is 5% and 14% if we consider only the domestic connections. No increase has been registered in relation to connections in the workplace.

This data confirms the increase of the widespread usage of the net in Italy- while this usage development trend is sometime discontinuous the overall long term trend is one of increased usage. By 2007 the total amount of usage had more than doubled in respect to that observed in 2001.

The following graph from the same source but following a more wide concept of “users” (that is people that claim to “have connected to the net at least once in the last 30 days”) demonstrates the trends from April 2004 to October 2007.

Internet “Users” in Italy from April 2004 to October 2007

Numbers in thousands



Note in the above graph, for “aprile” read “April” and for “ottobre” read “October”.

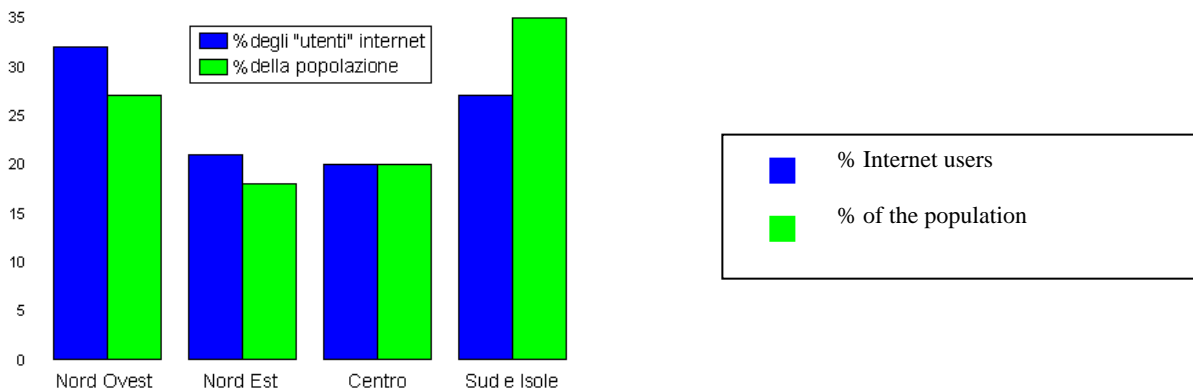
The evolution described by this data set is a little bit different from that of the “frequent” usage, with less seasonal variations. Even from this point of view an increase was registered following the “summer phase” of 2006, with a “historical maximum” observed in October 2006 which was higher than all the previous periods of total and domestic usage, followed by a static phase during the last two months of 2006 and the first four months of 2007. Following this, new increase was observed for May-July 2007 (which surpassed for the first time, a figure of 15 millions in May 2007) and the further increase was subsequently observed in October. In terms of net usage in the workplace, the figure continues to remain static. According to this data, in relation to net usage in schools a continued decrease in usage is observed. A continued trend such as this if demonstrated by more up-to-date data would necessitate further investigation as to whether this trend is due to the wider availability of domestic internet connections and is not directly related to decreasing usage of the net in schools. In October 2007 we register an increase, in respect to a year before, of 6% in domestic connections, while the total increase is paltry and there is, it seems, a decrease in the usage of the net in the workplace.

If we compare this data with that of the “relatively frequent” usage, it seems that the number of people logged on is increasing at a slower pace, while people that already use the net do so a little more frequently. Obviously this trend also is something that we will be able to understand better in the longer term.

In order to provide a greater perspective of the trend encountered, an overall increased in usage of 28% is observed over the three years of the data taken.

The following graphs are based on data from a February 2006 Eurisko general report (data updated at the end of 2005) and the data is still considered to be relevant to 2006 and 2007 trends. According to this data no significant changes have occurred in respect to the situation pertaining to 2003-2004.

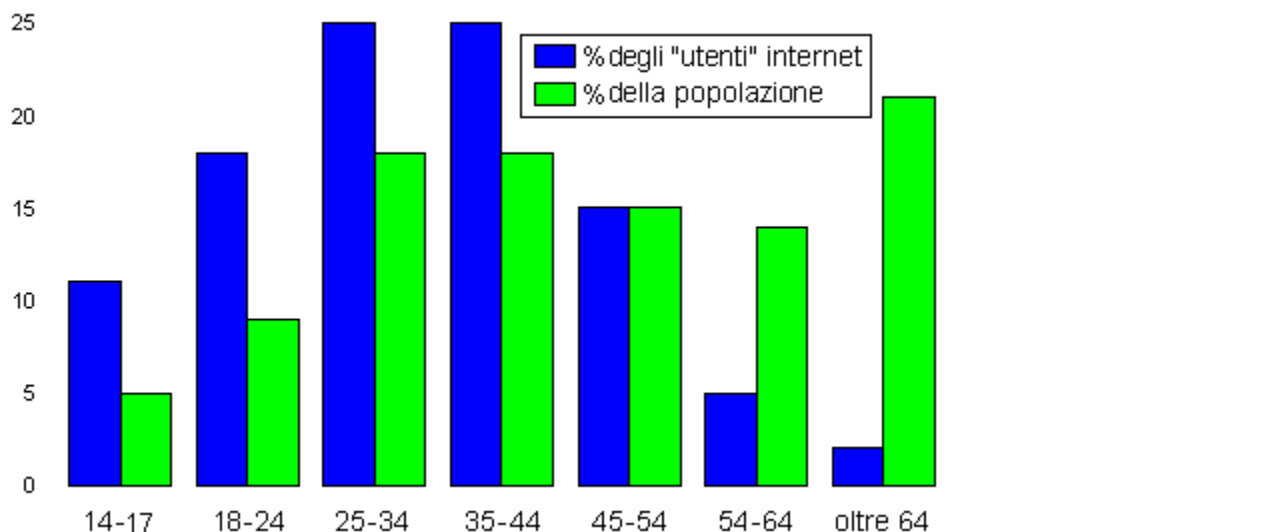
Percentage Internet “Users” divided by geographical areas



Note in the above graph, for “Nord Ovest” read “North-West”; for “Nord Est” read “North East”, for “Centro” read “Central” and for “Sud and Isole” read “South and Islands”.

While the situation is different to that of six years ago, the concentration of internet users is still higher in northern Italy. The 2004-2005 data confirms that a condition of balance is consolidating in central regions, while in southern and Islands regions, after a substantial improvement three or four years ago, now the situation seems to be static. In terms of “frequent” net usage we register a higher concentration of usage in the North West.

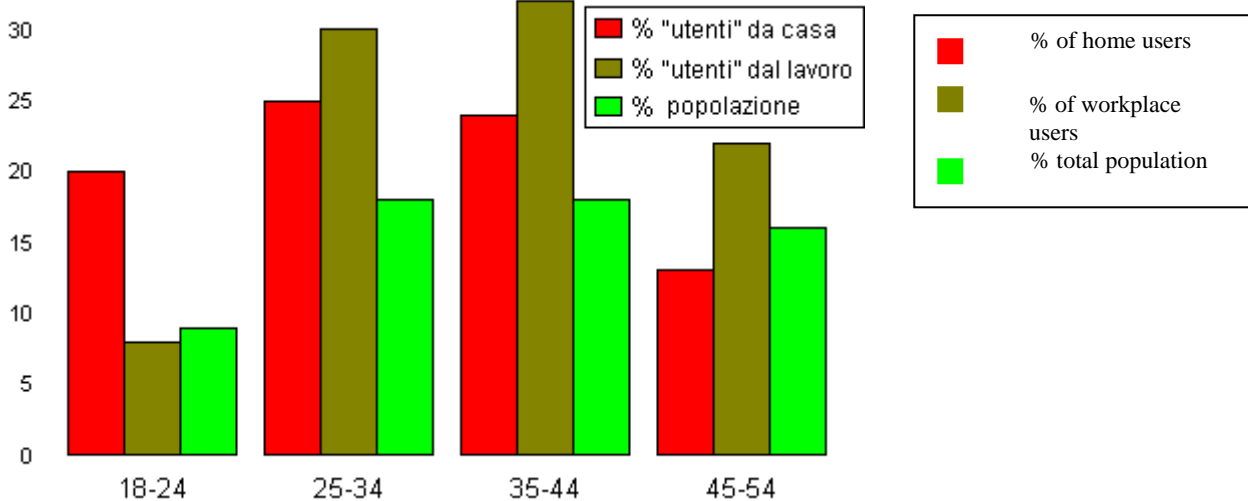
Percentage Internet “Users” divided by age



Since 2000-2001, there has been a steady and increase of young people using internet. However among the people who continue to stay active on the net the presence of adult users is again increasing. According to this analysis the traditionally stronger usage group (25-44 years old) would now represent at least half of the people online. A more extended grouping of adults users from 25 to 54 years of age represents 65% of total usage.

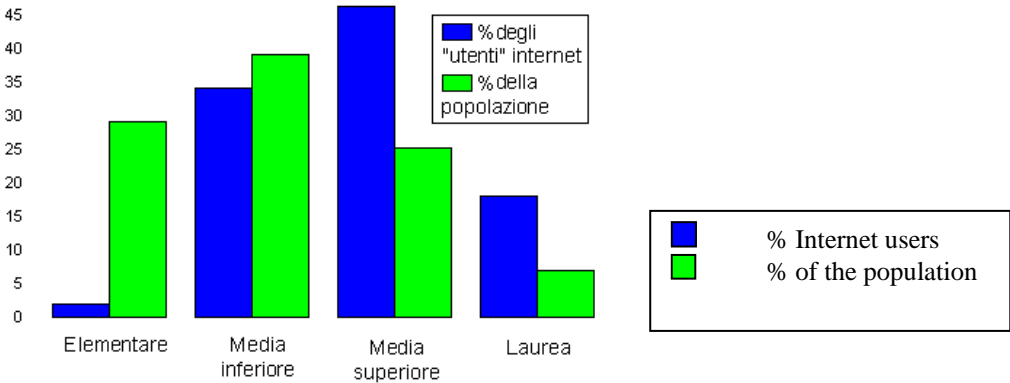
Widespread usage of the net still remains very weak among older persons, but it is possible to notice small hints of improvement in overall usage level by this group. It is difficult to interpret whether this change relates to an increase of older people that decide to log on or is due to the fact that existing internet users are getting older and are being now included in this grouping. Without doubts there exists, even they are very few, some users, over 70 years old, that are learning for the first time how to use the internet. Even in this case we can note some differences between “domestic” and “workplace” usage.

Percentages Internet users divided by age and place of Internet access.



While young people (18-24 years of age) log on more often from their own houses, adults predominantly log on to the Internet from at the workplace.

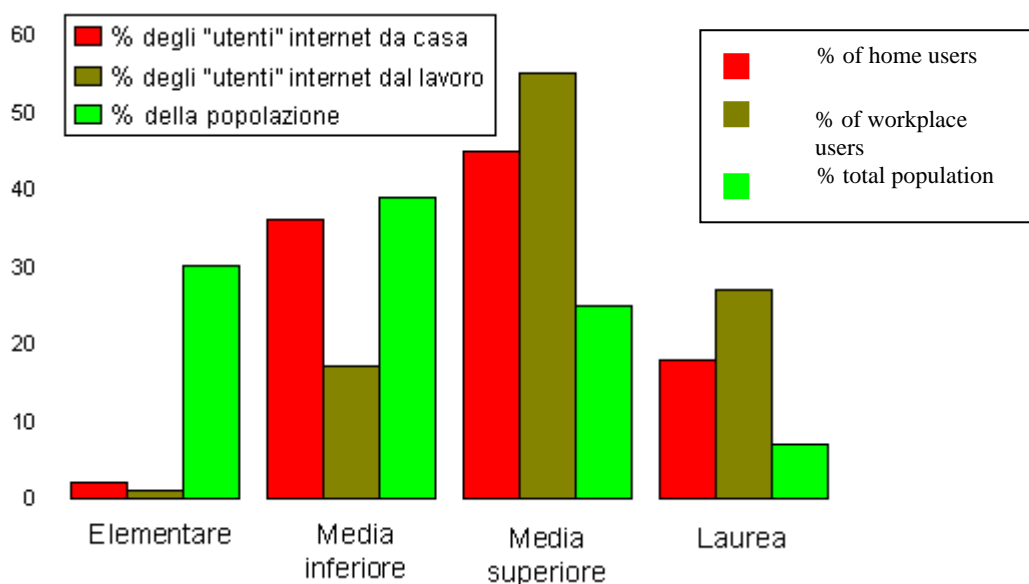
Percentage “Internet users divided by educational qualification level”



Note in the above graph, for “Elementare” read “Primary school”; for “Media Inferiore” read “Low High school”, for “Media Superiore” read “High school” and for “Laurea” read “Bachelor degree”.

A noticeable change has taken place between 1998 and 1999, with an greater widespread usage of the net at the “secondary school” levels. This trend has continued but without any “major” changes in short term period in comparison to the year 1998-1999. Almost two thirds of people online (70% of frequent users) have a high school qualification or a degree.

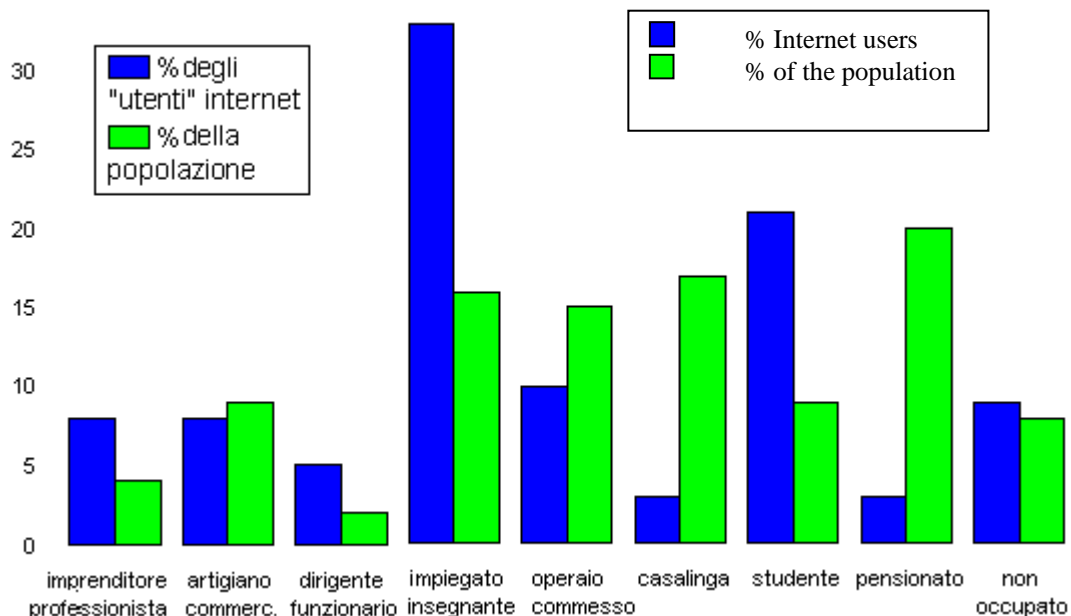
Percentage “Internet users divided by educational qualification level and place of Internet access”



Note in the above graph, for “Elementare” read “Primary school”; for “Media Inferiore” read “Low High school”, for “Media Superiore” read “High school” and for “Laurea” read “Bachelor degree”.

Often than not, people with lower educational level have a job that does not require use the Internet. Moreover “domestic” usage is widespread between young people who do not have completed their education.

Percentage “Internet users by job type”



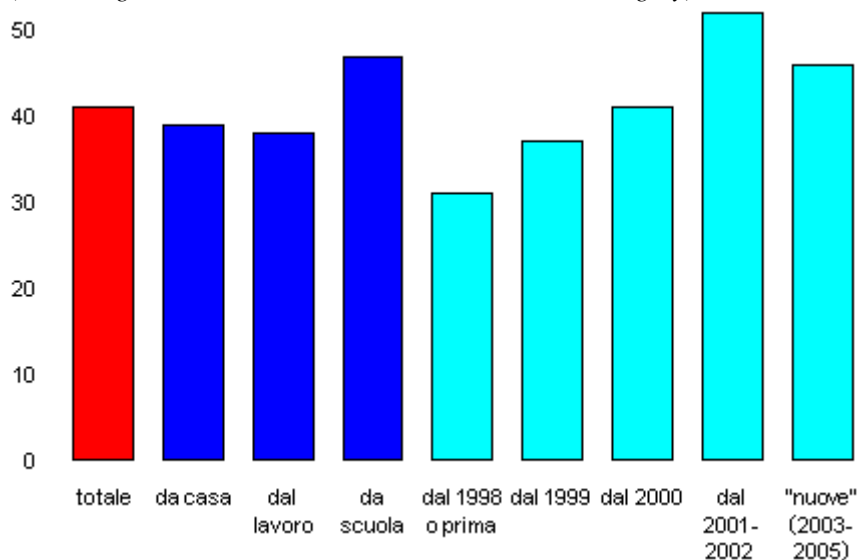
Note in the above graph, for “Imprenditore-professionista” read “Professional business people”; for “artigiano-commerciante” read “Craft workers and commercial representatives”, for “Dirigente-Funzionario” read “Managers and Directors”, for “impiegato-insegnante” read “office workers and teachers”, for “operaio-commesso” read “factory and shop workers”, for “casalinga” read “housewife”, for “studente” read “students”, for “pensionato” read “pensioners” and for “disoccupato” read “unemployed”.

An enlargement of net usage for wider categories is confirmed, with a notable diffusion among employees and teachers. The “student” category does not show any further increase in 2004-2005. No increase has been registered in housewife online presence.

The number of women using the net is increasing but, the percentage in Italy as remained more or less the same as that register two years ago.

Percentage of women using the net

(Percentage calculated on total internet users in each category)



Note in the above graph, for “Totale” read “Total”; for “da casa” read “At home”, for “dal lavoro” read “at the workplace”, for “da scuola” read “at school”, for “dal 1998 o prima” read “from 1998 or before”, for “dal 1999” read “from 1999”, for “dal 2000” read “from 2000”, for “dal 2001-2002” read “from 2001-2002” and for “nuove” read “new”.

At the end of 2003 women represented 41% of the persons that logged onto the Internet in Italy. Two years later seemed that the percentage as remained the same- in contrast to the continuous increase seen in the previous periods. In 2001-2002 women represented more 50% of the “new” people online. While currently this percentage has drop to 46% it still represent a relatively high usage level especially if it is put in comparison with the situation that existed some years ago.

Five or six years ago in Italy the percentage of women among the people that logged on the net from the workplace was higher. Since then the domestic usage of the Interned has increased and now it would appear that usage level between workplace and home is quite evenly distributed.

Data indicates that 47% of girls use of the net from school.

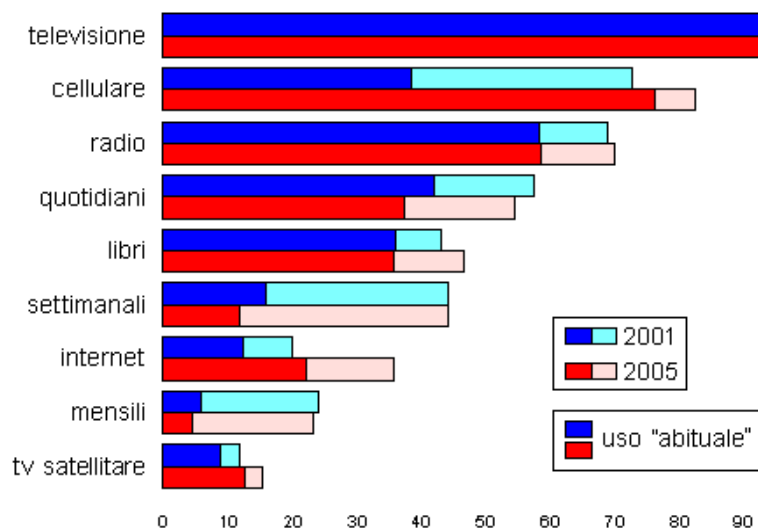
The percentage of women logged on to the net is increasing in Europe as well as in other fully-developed countries such as the United States. the international developments taking place in the medium to long term will probably contribute to a further evolution of usage in Italy.

The following graph outlines the level of widespread usage of information and communication systems and resources in Italy in 2005 in comparison to available data for 2001 as cited in Censis report (2006).

“Information and communication resource usage in Italy”

Percentage calculated on total population.

The darkest part of the bar represents « everyday » usage. The definition used to define “everyday usage” ignores source of information related to resources involving less availability such as weekly and monthly magazines.



Note in the above graph, for “Televisione” read “Television”; for “cellulare” read “mobile phone”, for “radio” read “radio”, for “quotidiani” read “daily newspaper”, for “libri” read “book”, for “settimanali” read “weekly magazines”, for “internet” read “internet”, for “mensili” read “monthly magazines” and for “TV satellitare” read “satellite TV”.

While majority of resources display an increasing usage including a slight increase of usage of TV and the “occasional” reading, this is not the case for newspapers and the reviews that have decreased over the last 10 years.

The strongest increase is in the “frequent” use of cell phones which has almost doubled. But overall (including “non frequent” use) the Internet has seen the highest growth with an increased percentage usage of greater than 78%.

However, this study, like others, confirms that the Internet still continues to maintain a relatively minor though more than “marginal”, presence in the information and communication sector in Italy. This study confirms, moreover, that Internet usage is not a substitute but co-exists with other resources. The most active people online are those people that more often read and use other resources. There is a strong separation between groups whose usage involved the “poorest” forms of information and communication resources, namely television) and those who have a “broader” cultural sphere which includes many varieties of resource. According to this Censis research (also confirmed by other sources) usage of Internet influences a greater decrease in television usage than that observed for other resources.

Information society and policies

I. e-Government

The Italian policy for e-government to be fulfilled at national level has been directly adopted from that of the European community. The current approach was drawn up in 2000 by the European Council in Lisbon, the so called “Lisbon Strategy” that has defined the strategic objective of the European Union in relation to economy development for the next 10 years: ie “to become the most competitive and dynamic knowledge based economy in the world”. To date this strategy has been successfully translated in to the eEurope Action Plan (2002), followed by the eEurope Plan (2005) and finally in to the Strategy “i2010”, that includes an updated revision of the “Lisbon Objectives” outlined in the original strategy.

The three Lisbon objectives envisaged for attainment by 2010 are to:

- Build a unique European information space;
- Strengthen innovation and investment in ITC research;
- Build an information and media society based on inclusivity.

The concept of e-government represents one of the sub-objectives of the third of these general objectives, along with social inclusion, service accessibility, broad band development, cultural heritage digitalization and technologies for sustainable development.

In response to the stimulus and impetus of the Lisbon Strategy, the Italian Action Plan for the Information Society was established in 2000, and amongst, the different intervention sections developed, that of e-government has been the one on which the greatest efforts has been placed over the subsequent years - thanks in great part to the gains accrued from the selling of the UMTS (Universal Mobile Telecommunications System) licences that have been a central basis of the National e-government Plan.

The accomplishment of the plan has been characterized by strong cooperation between central government and peripheral areas /regions, allowing, in the first place, the co-funding of 134 projects proposed by the Regions and Local Agencies, aimed at the production of online services- for both citizens and companies- together with the implementation of infrastructural services.

The second phase of the plan has foreseen the enhancement and territorial enlargement and diffusion of the experiences already started in the first phase together with a number of new initiatives, for example the start-up projects for “digital citizenship” (e-democracy). An important step in this process has been the unanimous approval by State-Regions, Cities and Local Authorities of a common document **“e-government for efficient federalism., A shared vision and a co-operative production”**. This document has provided the basis for a coherent and sustainable model for e-government in Italian public administration system that tends toward that of a federal system.

During the intervening period since the establishment of the Lisbon Strategy, the European Commission has updated their policies on this subject, and approved the “I2010 eGovernment Action Plan” document, that

sets out five priority goals to be achieved over the period 2006 to 2010: The requirements for these goals are to:

1. not leave any citizen behind;
2. make efficiency and effectiveness a reality;
3. develop high impact key services;
4. make enabling tools available,
5. strengthen democratic participation.

The contextual change that is occurring within the Italian political arena, requires coherent adjustment of eGovernment policies, especially in light of a current requirement for the unification under the same “political vision” of both public function and technological innovation. This changing panorama represents a never-before seen opportunity, to both implement new and modify existing governmental mechanisms, that would make public administration actions more effective.

The **“Strategic Lines about e-government”** presented at the beginning of 2007 by Luigi Nicolais, Minister for Reform and Innovation in the Public Administration, followed by the **“Innovation Directive”**, aim to strengthen the central idea of the Lisbon strategy: the building of a knowledge based society, where the public sector is not required to relinquish its enabling role, that of making the Country more competitive.

2. eGovernment and strategic goals

The seven target goals are:

1. the improvement of public administration efficiency (innovation of processes, implementing suitable tools for their use, training of staff online);
2. the development of full co-operations among administrations, (through the integration of national data banks and public record books);
3. the improvement of public expense transparency (all payments will be informatized and recorded in order to monitor public accounts, optimizing net use to buy goods and services);
4. the creation of digital citizenship (promoting e-democracy and overcoming the digital gap, providing quality information services and the possibility to log on to national portals and public administration websites);
5. the monitoring of public administration initiatives to measure their efficiency (a network of excellence will be created);
6. the encouragement of company competitiveness, also foreseeing an innovation discussion table/arena;
7. to make Italy a protagonist of innovation processes in Europe.

GOAL 1: Improving Public Administration Efficiency

Innovative processes in PA

Innovation is a process that has to integrate all the available levers (normative system, technologies, processes reorganization, human capital etc) within a strongly coordinated context that includes both central and local levels of Public Administration, in order to simplify and reduce both the time and costs of the relevant procedures.

Implement the PA digital code to develop more efficient and/or simplify existing administrative procedures.

In order to obtain the full accomplishment of the code, tables of work have been established which enable the issuance of standard technical rules, that give full accomplishment to the law in force and start planning initiatives of significant impact in terms of reorganization and automation of processes.

Online training for PA staff qualification.

In order to guarantee continuous training for public administration staff, in a sustainable manner, e-Learning methodologies and tools will be used in a focused and weighted (oriented manner), that guarantees that a continuous source of quality digital content is provided along with a suitably constructed net that allows these resources to be efficiently shared by the all relevant users.

GOAL 2: “Built In Interoperability” and full cooperation among administrations

Define a cooperative model for PA

The potential for the simplification and improved efficiency of processes that ICT can provide requires a global review of existing PA working processes and is based on the development and suitable modification (fine-tuning) of a common cooperative model, where the services and performances offered by each administration are clearly defined. Full interoperability among Administrations will be completed through the consolidation of basic tools and infrastructures: Public Connectivity and Cooperative Systems, management of document flow; authentication systems, digital signature and digital filing systems etc.

Integrating national data banks

Administration data banks will be made available, for mutual access, on the basis of shared access rules, standard usage modes and include data and service descriptions that are homogeneous, exhaustive and rigorous (“ontologies”).

Integrating public record books

Collaboration between Administrations will permit integrated management of the information presented in a number of important public record books, for example the Cadastre in the management passage from Territorial Agencies to the Municipalities; the Industry Record Book, for General Counters; the Traffic Control Authority and the Public Car record Book, for transfer of property etc.

GOAL 3: Improve public expense transparency

Using information science for public finance services

The informatization of payments of PA and for the PA, will be completely informatized, to monitor state accounts. The 2007 Budget Law, has introduced innovations in many field (such as health services, job, economic accounting, taxes etc) that will allow more effective control of public expenses and to income expenditure.

Increased net use for the acquisition and provision of goods and services.

The processes for the acquisition of goods and services within the PA sector, will be made more transparent through a significant increasing in the use of electronic tools by Administrations to buy goods and services (“e-procurement”).

GOAL 4: Building digital citizenship

Making e-democracy

e-democracy is an important instrument in reevaluating and increasing the involvement of the citizen in public life. The first step that has to be undertaken is to bridge the “digital divide”, both in terms of infrastructure - wide band usage etc., a situation in which the public sector will need to play a more active role in order that the user market does not become fragmented and isolated - and socio-cultural and generational differences, for which it will be necessary to provide carefully planned services and suitable means for their diffusion through various different channels.

Provision of services for safe and simple the access to the net

In order to allow the citizens make full use of online PA services, a net based support system for national identification that meets all relevant safety and modernization requirements and which at the same time grants them continued and uninterrupted use of existing systems must be provided.

Implementation of online payments methods

This allows businesses and clients conduct their business dealings “at distance” through telethematic modes e.g. data transmission and allows citizens to complete various procedures online, such as bill payment, document registration etc.

Guaranteeing quality and accessibility to national portals and PA websites.

Implementation and integration of national portals that demonstrate suitable quality attributes, will be achieved through the rationalisation of investment and by encouraging a more active role for Administrations in the development of interactive contents and services. Accessibility of the websites to citizens of different and diverse levels of ability will be guaranteed, bridging the disconnect that too commonly occurs between existing written law (statutes etc) and its practical application in relation to the citizenship at large. This will involve the introduction of sanctions and benefits where appropriate, to support real and effective implementation of legislation in support of the community.

GOAL 5: A systematic approach for effectiveness and efficiency in PA

Monitoring PA initiatives to measure their efficiency

Each PA action will be assessed both qualitatively and quantitatively, using a multi level and integrated approach that takes into consideration the stages of “Planning – Implementation – Monitoring/Feedback – Improvement/Development”.

Creation of a network of excellence and innovation

A network of scientific, technological and administrative resources will be created thanks to the involvement of Universities, centres of excellence, and resource and research centres. This network will allow each of the individual centres /models of excellence to contribute a general overall improvement to the PA system “by making available at a broader level “current best practices”.

GOAL 6: Encouraging Business competitiveness and growth within the ICT Sector

Transforming Administration into a “promoter” for development

PA has to create a favourable environment for innovation and become a “market driver” through the provision of technologically advanced products and services. In this respect, a table for innovation” will be created in which all companies can participate in order to obtain suggestions and proposals that will be both recognised and acknowledged during the planning phase.

Supporting software development

Software development, is centred on providing incentives as well as promoting and supporting the innovation of products. Key to national development is the fact that this process should be further extended to include qualification and integration activities between the knowledge /information network and public domain. In this regard, the use of Open Source approaches/ resources that promote management initiatives, exchange of experience and collaborative development between central and local Public Administrations must also be adequately supported.

GOAL 7: Make Italy a protagonist for administrative innovation in Europe.

Strengthen Italian presence on the international stage

Italy must strengthen its commitment at a national level, both in order to integrate more tightly its national e-government system with that of the European Community, and in order to have a more active and proactive role in developing the themes and concepts of the information society.

Implementation of Lisbon UE Strategies

The UE Lisbon Strategy for growth and employment aims to implement four priority goals: Namely to:

- Update PA,
- Provide innovation in strategic sectors such as those of education, healthcare, tourism, “infomobility” and electronic identity,
- Promote technological innovation within industries and
- Reduce the digital divide.

- Centro Nazionale per l'Informatica nella Pubblica Amministrazione (CNIPA) ⁹ The National Center for Informatics in Public Administration (CNIPA)

CNIPA under the auspices of the Prime Minister implements Ministry policies relating to the innovation and reformation of the PA system. CNIPA is made up of two pre-existing bodies: the Authority for Informatics in Public Administration and the R.U.P.A Technical Center.

The primary aim of CNIPA is to support the Public Administration in using informatics efficiently to improve and increase service quality and control associated administrative expenses.

In short CNIPA:

- contributes to defining Government and Ministry innovation and reformation policies in PA and provides consultancy to evaluate and assess draft legislation being generated by or developed within with informatics sector
- coordinates both the planning processes and the main development interventions; provides criteria and regulations to support the design, development and management of Public Administration information systems; provides guidance on quality attributes; defines criteria, technical safety rules and general interoperability and performance characteristics.
- Monitors that the goals and the results of PA innovation projects are coherent with Government strategy; for this reason CNIPA works closely with public administrations in the planning phase and provides an evaluation of the technical-economic adequacy of the system;
- Is responsible for the implementation of important projects for technologic innovation in public administration, e-government diffusion and the development of large national/ country-wide network infrastructures that allow public agencies to both communicate and deliver their services to both citizens and companies alike;
- Is responsible for employee training in the information sector, using new technologies that encourage continuous learning.

From the organizational point of view, CNIPA is directed by a collegiate body made up of a President and four members, appointed by the Prime Minister and chosen on the basis that they are acknowledged to have high levels of skill and expertise appropriate to the role.

3. ehealth¹⁰

Given the background of profound change occurring within the National Health Care System, the Permanent Representative Committee formed by State, Regions and the Special Autonomy Provinces of Trento and Bolzano, signed on February 22nd 2001, the Framework Agreement on the development of the new National Health Care Information System (*Accordo Quadro per lo sviluppo del Nuovo Sistema Informativo Sanitario Nazionale - NSIS*)-. The new health care information system is designed to be an essential tool for the Government to realise effective management of the health care system at national, regional and local levels and to improve both medical facility access and service provision to citizens-users. The 23rd March 2005 a Protocol Agreement and then the 26th September 2006 "Health agreement"- (*Patto per la Salute*) confirmed the NSIS use of quality, efficiency and pertinence measures as a means of assessing the effectiveness of the Health Care Sys-

⁹ www.cnipa.gov.it

¹⁰ This paragraph is from: <http://www.nsis.ministerosalute.it/nsis/paginaMenuNsis.jsp?id=45&menu=sistemi&lingua=italiano>

tem and highlighted that the suitable recording/archiving of such data within the Health Care Information System “was among the duties to be carried out by the responsible Region”.

The New Health Care Information System, based on co-operation and integration of the different regional and local information systems, is comprised of:

- Statutory Government Instruments supported by information outputs from the National Health Care System;
- Source reference data available at a national level which provides a measure of quality, efficiency, pertinence, and cost within National Health Care System, and also a measure of the provision of Basic Public Assistance Levels.

The accurate design and development of the NSIS required the availability of a common language to allow information interchange within Regional Health Care Systems. In particular has been highlighted the need to have:

- Data classified and codified homogeneously;
- Homogeneous approaches, a local level of National Health Care System for the creation, of the data to be made available at a regional and national Health Care System level;
- Shared methodologies for the building of a suitable balance between quality and cost in the Health Care System.

Eight common elements of the Health Care System considered to be central to the effectiveness and efficiency of the system have been named the “Health Care System Bricks”.

The eight elements or strategic goals identified are closely related to the data macro model and so doing constitute a coherent and integrated system comprised of:

- A system of Integration for individual health information;
- A network for monitoring Assistance requirements
- A system for monitoring the adequacy of Basic Aid Level provision;
- A system for monitoring Expenses;
- A system for the Monitoring of Waiting Lists;
- A system for the Monitoring and Protection of Mental Health;
- A system for the Monitoring of Medicine Usage and Shelf Life;
- An Observatory/Oversight function for Public investment in Health Care.

The unity / coherence of this goal system is ensured by many connections, both functional, because they fulfil the needs of the different levels of the Health Care System, and logical, because they directly relate to the citizen, to the overall health system performance and to the various structures that provide medical assistance.

4. Ecommerce¹¹

The European E-Commerce turnover in 2006 was equal to 135 billion Euros. In Italy the figure is increasing rapidly, particularly in sectors such as Tourism, Electronics and Leisure Time. The following table lists the results of a survey on the state of E-Commerce in Italy and Europe carried out by "Casaleggio Associati", commissioned by Expedia. The study surveyed approximately 2,251 Italian companies that sell their products online.

In 2006 in Italy a turnover of 2,906 million Euro was invoiced indicating that considerable growth potential exists. Tourism is in the first place among the sectors with the best turnovers in Italy, and the most sold products are flights, hotels and package holidays. After Tourism the next most prevalent sector is that of Electronics which recorded one-third the turnover of that displayed by the Tourism sector, with cameras and mobile phone sales representing a larger proportion of this turnover. In third place we find Leisure Time related sales such as sport betting (on-line bookmaking), ticket and sport's gear sales

Italian E-Commerce Turnover

	2004 Turnover	2005 Turnover	2006 Turnover
Tourism	785.641.000	982.051.000	1.571.026.000
Electronics	287.000.000	384.000.000	518.400.000
Leisure Time	245.837.000	357.948.000	437.500.000
Insurances	60.000.000	84.000.000	380.000.000
Food	144.000.000	149.000.000	165.840.000
Publishing	55.811.000	80.405.000	105.000.000
Fashion	43.000.000	58.050.000	75.465.000
Furniture	15.900.000	17.000.000	19.190.000
Health & Beauty	8.494.000	11.041.000	13.802.000

Source: Casaleggio Associati, 2007

A comparison between the principle European Countries provides an understanding that the number of persons logged on to the net is only one of many factors that facilitates e-commerce.

Italy and France, as a matter of fact, have roughly the same number of people logged on to the net at any given time, but Italy has less than one-third the E-Commerce turnover of France. This is due to infrastructural (such as broad band diffusion), legislative (such as VAT and specific sectoral regulations) and cultural (in particular companies that do not want to risk conflicting marketing strategies) factors. A similar comparison between Italy and Spain in terms of e-Commerce turnover would demonstrate a clear difference between both countries, this time the number of network surfers being greater in Italy. Great Britain with a net surfing population two-thirds less than that of Germany has almost double the amount of e-commerce turnover. This is due to strong market liberalization and to the fact that British citizens are more used to home delivery products. If we compare the British market with the Italian one, it becomes clear that British companies provide a wider offer, in fact in Britain almost 130 thousand companies sell their products online while in Italy these kinds of company represent less than a tenth of this figure. Those European countries with greater broad band coverage are also the ones where the offer of e-commerce is better received.

¹¹<http://www.gayalab.it/commerce/statistiche-ecommerce.php>

Casaleggio Associati "e-commerce in Italia2: UN Eldorado latente, 2006 could be seen at: www.casaleggio.it

In Italy credit cards are used as payment instruments 62% of the time , followed by cash on delivery in 24% of the cases and bank transfer in 16% of cases.

In 2007 70% of online purchases were carried out by credit card (97% in Tourism), 10% via PayPal, 7% via bank transfer, while 7% of purchases were paid with cash on delivery. Payment systems such as PayPal are not very common in Italy but are increasing.

Operators are proposing lots of solutions such as prepaid credit cards (3 million cards in 2006) and new security protocols that require a password for online payment (Verified by Visa etc).

5. digital culture¹²

In the organizational Regulation of the Ministry for Culture and Heritage (Decree n.173 of the President of the Italian Republic effective from 1st August 2004), issued on 10th June 2004, are laid out the functions and tasks of the Department relevant to Research, Innovation and Organization. In addition, are detailed general Directives for technological innovation and the promotion within a developmental environment of strategic units for experimenting with new technology and for supporting the adoption, and promotion of quality standards as part of the communication plan involving the Internet system employed by the various institutions under the auspices of the Ministry for Culture and Heritage. The primary objective is one aimed at improving the services provided by the administration, including those provided to the citizens. This has created a need for the Ministry to increase the usage of innovative tools, in particular for the digitalizing of contents, of communication and promotion via the Internet of projects and websites developed by Ministerial institutions and for the creation of digital contents and the survey of digital resources.

The importance of standard quality for the digitalization of cultural heritage has been at the centre of the Minerva Project¹³.

Thanks to the high level of involvement of Dicastero Italiano, Minerva has played a lead role in the coordination of national programs in this sector, and has also established a network of contacts that has pioneered a standardised convergent approach to the common use of new informatics technology. This has involved, archives, libraries, museums and archaeological sites together with national experts (from the Ministry for Innovation, from CNIPA, MIUR, Universities, Companies, and other Research Centres such as the Italian W3C office, CNR and UIC), that work in this field and allowed the relevant groups collaborate and come to agreements in order to integrate cultural programs in the digitalization field.

The Technological Observatory for Cultural Heritage and Activities OTEBAC (Osservatorio Tecnologico per i Beni e le Attività Culturali-) aims to collect and develop at a national level the results obtained from MINERVA, guaranteeing the sustainability of the activities carried out, including:

- Maintaining and extending the network of national experts for the digitalization of cultural heritage;
- Establishing collaborative agreements with similar organizations at national and international level;
- Providing visibility to national and international initiatives;

¹² This paragraph is from Technological Observatory for Cultural Heritage and Activities. <http://www.otebac.it/indice.html>

¹³ MINERVA project has been supported by the European Commission and coordinated by the Ministry for Culture and Heritage and started in 2002 aiming at correlate and hamonize heritage digitisation policies and programs, through a network that involves ministries and institutions that preserve and promote the heritage of European Countries website: <http://minervaeurope.org>.

- Assuring knowledge dissemination and transfer regarding policies and programs at a local and national level;
- Disseminating recommendations, guidelines, tools, and standards on digitalization in order to ensure long term accessibility and availability of digital cultural contents within a common quality framework.;
- Promoting the widespread usage of open source software.

The Observatory will promote the adoption of shared standards to the align and make portals and cultural websites interoperable in order to allow the fruition of the digital Italian cultural heritage in global networks.

Moreover OTEBAC (Osservatorio Tecnologico per i Beni e le Attività Culturali- Technological Observatory for Cultural Heritage and Activities) provides support for public cultural institutions to create accessible web sites.

Project MICHAEL¹⁴, the Observatory provides support to cultural institutions that want to catalogue their digital resources in the field. The catalogued resources will be made available through the Portal of Cultura Italiana.

6. training , research and development¹⁵

First of all, it must be mentioned that the Italian scholastic system underwent a structural change at the end of the 1990s, in relation to school autonomy.

The sites of scholastic provision (school complexes, schools, sites and branches) have been aggregated, because of the autonomy rules, according to a dimensioning criteria relevant to the scholastic population of each school (between 500 and 900 students), creating less than eleven thousand scholastic management institutions. These institutions have received scholastic autonomy and are considered full legal entities with management and organizational responsibility for the relevant scholastic centres under their control. Scholastic institutions may manage other schools of the same level (didactic circles for primary and nursery schools, secondary education institutions of first and second level) or schools of different levels (comprehensive institutions with nursery school, primary and secondary first grade schools).

In the school year 2004/2005, 5 years after they had been dimensioned and constituted by the Regions (1st September 2000) there were 10,780 public schools. Of these 70.16% of them were primary schools (2,598 didactic circles 3,435 comprehensive institutions 1,530 first grade institutions) and 29.84% of them were second grade schools (2,279 secondary grade schools and 938 upper level secondary schools).

¹⁴ MICHAEL is an innovative project that aims at making the entire European cultural heritage accessible. The project is founded by European Commission in the eTen project that aims at promoting the development of trans-European services, based on telecommunication networks. MICHAEL wants to provide a simple and fast access at the digital collection of museums, records and libraries of the European Countries. This project started in June 2004, to built an open source multilingual platform with a search engine. By 2007 MICHAEL platform will allow to procure digital collections all over Europe. MICHAEL will be suitable for a lot of different uses, for example students and researchers could find information about European collections that has always been difficult to have. The services provided will support also cultural tourism and creative industries. At this consortium take part representatives from public, private and research bodies from Finland, France, Germany, Greece, Italy, Malta, Holland, Poland, Portugal, United Kingdom, Czech republic, Spain, Sweden, Hungary <http://michael-culture.org>.

¹⁵ This paragraph is from “L’informatica nel mondo scolastico. Relazione finale”, Jeme Bocconi e Hugony Publisher, Milan January 2006/2005. data provided by , 2005

Teachers

There were approximately 736,738 permanently employed teachers in the public school system.

Technologies

In public schools, the ratio between the students enrolled and the number of available pc's is about 10 to 1.

ICT in didactic and educative practices

Italian teachers generally use ICT as follows:

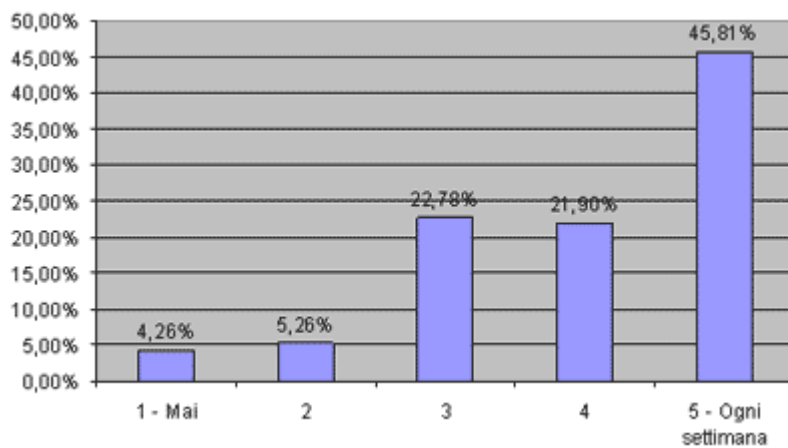
- To communicate
- To update and research information
- For didactical purposes

Communication

With respect to the use of information technologies to communicate with parents and colleagues, the data collected shows a particularly negative situation: 46.18% of teachers interviewed never use technology to communicate with parents or colleagues. Only 11.86% of teachers claimed to use it almost every week.

ITC usage to communicate with Colleagues and Parents;

Frequency Distribution.



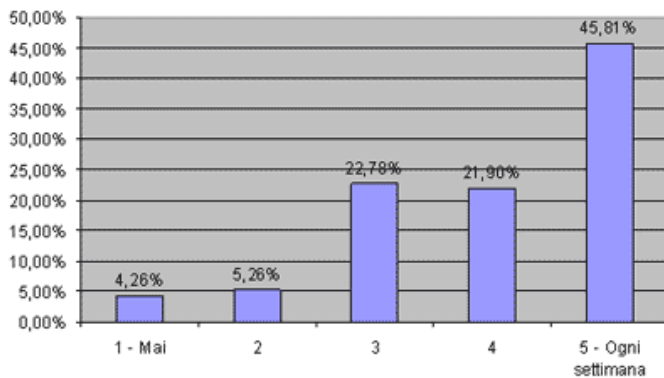
Source: Ministero Pubblica Istruzione, 2005

In the graph above, read “1-Mai” for “1 –never” and for “5-ogni settimana” read “5-every week”

ITC Usage to Update and Research Information;

Frequency Distribution

On the other hand, technology is often used to update and collect information. The 45.81% of the teachers interviewed claimed to use these instruments to do so, while only the 4.26% claimed never do so.



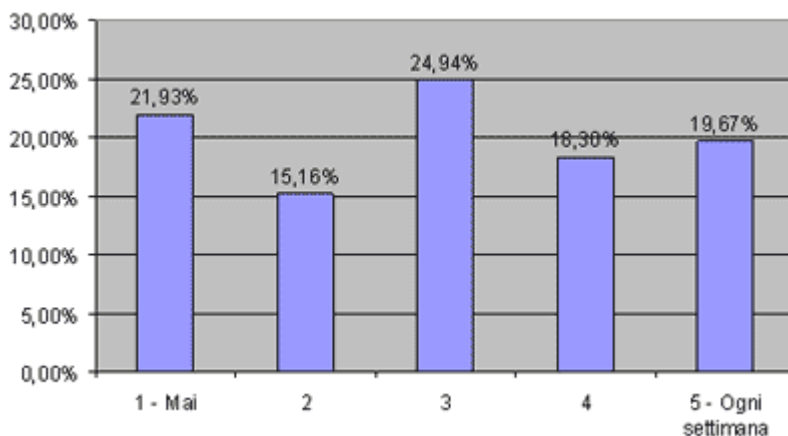
In the graph above, read “1-Mai” for “1 –never” and for “5-ogni settimana” read “5-every week”

Information technology usage in Classrooms.

More various are the answers given to the third question, about using information technology in classrooms. 19,67%, of teachers claimed to use it every week are but at the same time, almost the same number of teachers admitted to never using it (21.93%).

ICT usage in classrooms,

Frequency distribution

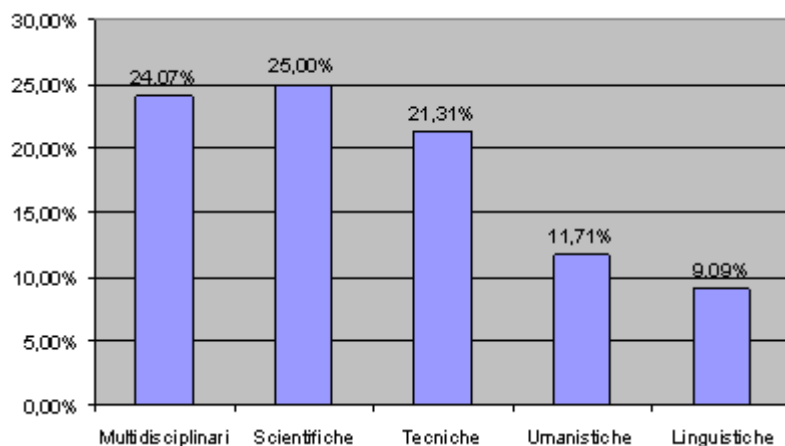


Source: Ministero Pubblica Istruzione, 2005

In the graph above, read “1-Mai” for “1 –never” and for “5-ogni settimana” read “5-every week”

There are notable differences with regard to frequency of ICT usage in the classroom and subjects taught: ICT seem to find much greater use more by multidisciplinary teachers (most of them primary school teachers), and teachers of technical and scientific subjects. The frequent usage percentages among teachers of humanities is very much lower.

Distribution according to subjects taught



Source: Ministero Pubblica Istruzione, 2005

In the graph above, read “Multidisciplinari” for “Multi-disciplinary”, for “Scientifiche” read “scientific subjects”, for “Tecniche” read “Technical subjects” for “Umanistiche” read “Humanities” and for “Linguistiche” read “Language related subjects”

From the analysis carried out it emerged that there was a relatively poor level of ICT usage by Italian teachers. The usage of ICT for didactical and communicative purposes was particularly poor, while it appears that there was a higher usage for research purposes and for the updating of information. Amongst all teacher groups who used ICT to collect information, those who taught technical or scientific subjects or worked in technical-scientific high schools seemed more inclined to use it. As said before, ICT usage by teachers for didactical purposes is still a field not completely explored and, very often, the tools used are limited to those training aids provided with the course books. There was an apparent connection between “gender” and “age”: teachers that are younger than 40 years old were more inclined to use ICT, and, finally, male teachers were more inclined to use ICT than their female colleagues.

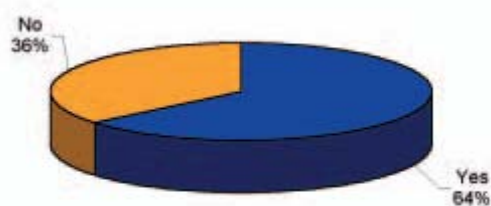
7. Universities and the Information Society

¹⁶CRUI (the Italian Conference of University Rectors) presented the results of a survey conducted within the framework of the ELUE project (E-Learning and University Education) which has provided an overview of the diffusion of e-learning in the Finnish, French and Italian Higher Education sector.

As far as Italian Universities are concerned, the survey¹⁷ launched by the CRUI constituted for some universities a first step towards identifying a profile responsible for e-learning. This fact alone is indicative of how relatively recent the relevance of this phenomenon has become within the Italian university sector. Indeed, the subject of e-learning, which has been developed with increasing emphasis in universities in recent decades, has for the most part taken the form of periodic, stand-alone or detached experiences that are poorly coordinated within the individual university administrative process.

Graph 1, nonetheless, illuminates the situation pertaining to the University sector with a strongly developing trend towards e-learning becoming apparent. with two in three universities moving towards the adoption of specific e-learning policies. This is a fundamental premise for the development of an approach in this field promoted at a unitary level and no longer relegated to individual intra-university experiences. While intra-university experiences still continue to constitute the most extensive of the modalities with which e-learning has taken form, such experiences are progressively being channelled into a form of management which, although it is not yet centralised, aims at a general co-ordination that is ultimately intended to achieve a level rationalisation of the activities of universities in this sector.

The adoption of an e-learning policy in Italian universities
(Percentage of respondent universities)



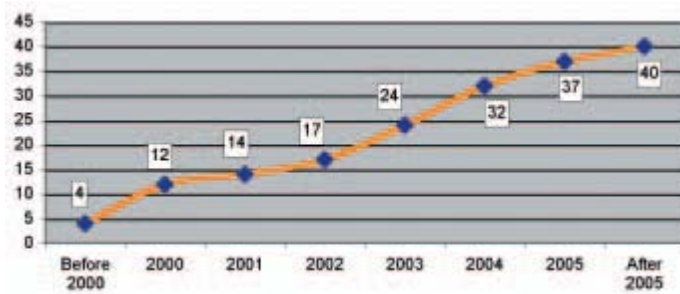
Supporting evidence for this point is provided by Graph below, which describes the the rapid increase in recent years of learning experiences that have involved the co-ordination of e-learning activity and indicates a strong growth of awareness by the university world of the new opportunities for the development of teaching practices which can be supported by various based ICT based technologies.

¹⁶ Fondazione CRUI “Universities towards e-learning: a focus on Finland, France and Italy”, May 2006. The present chapter is taken from the chapter “Italy” written by Cristiana Rita Alfonsi, Massimo Carfagna, Donatella Marsiglia pp.101-134 Accessible from: <http://www.fondazionecrui.it/elue/E-LUE%202006%20ingl.pdf>

¹⁷ The number of Italian universities that compiled the questionnaire, in part or in full, was fifty nine out of seventy seven (with a level of investigation of the universe of reference equal to about 75% of the total). To this, in reality, should be added the small number of universities which, although they did not fill in the questionnaire, justified their choice by indicating the low relevance of e-learning or experiences involving teaching supported by ICT within their structures (were these universities to be added to the total the replies would rise to 83% of the universe under investigation).

The spread of e-learning policies among the Italian university system

Accumulated number of universities per year

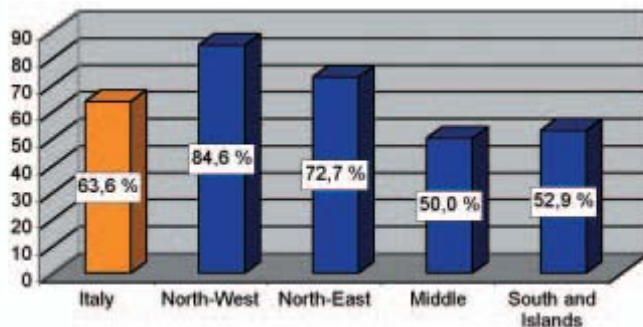


This trend, which has only been apparent since the early 2000's, underwent an evident acceleration in growth between 2002 and 2004, a period when the number of universities that began to set in motion a policy of e-learning for their own structures increased by almost 100%. It is worthwhile remembering that it was precisely during this period that the Campus One project came into being, a project promoted by the Italian Conference of University Rectors (CRUI) that constituted a moment of great innovation for the university system by encouraging the universities to move towards a path of modernisation which, amongst its many features, also involved both promotion within and sensitisation of the academic world towards new technologies and e-learning itself.

A break-down of the phenomenon at a territorial level provides a rather differentiated picture as regards the various geographical areas of the country, with a prevalence of those universities displaying the most dynamic policies towards the adoption of e-learning being found in northern Italy (GRAPH 3). The universities that are most behind on this front are those in the centre and south of Italy where, however, at least half of the universities have decided to formulate a policy in relation to on-line teaching.

Adoption of an e-learning policy in universities by geographic area

(Percentage of respondent universities)



Participation in consortia for e-learning

It is quite usual for Italian universities to take part in initiatives consortia in relation to the world of e-learning as well as those involving other ICT technologies. What this means in relation to the perceived significance of e-learning in particular within the Italian University community is hard to gauge as, it should be remembered that membership of such consortia does not necessarily serve as an indicator of widespread adoption of e-learning policy or indeed usage. In many cases, what we are dealing with here is the broader sensitivity / interest of universities towards emergent technologies that supplement teaching practices through the use of modern digital instruments in general.

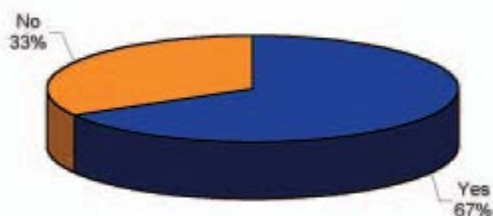
If the participation and the level of involvement of Italian universities in partnerships dedicated to the subjects of ICT is understood as a useful quantitative indicator of the extent of elearning usage within the university sector it does confirm in general terms what had already emerged as regards policy adoption for elearning within the university sector..

Beginning with the results obtained from the survey (graph 4) one can in fact estimate that two-thirds of the University sector is involved with joint cooperative programmes/initiatives, (both formal and informal) relevant to the subject of e-learning through an adherence to initiatives launched together with other universities or with institutions of a different character.

In this respect, significant dynamism may be observed within the sector, given that about forty per cent of the universities mobilised in these kinds of initiatives had taken part in at least two consortia.

The participation of universities in consortia for ICT or elearning

Percentage of respondent universities

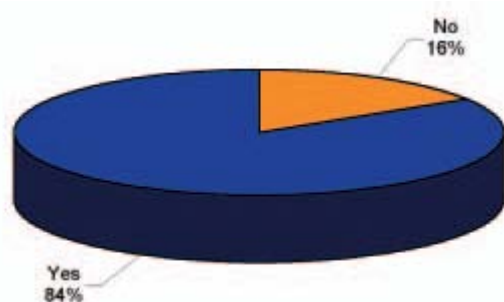


University e-learning centres

A further element that supports the thesis that there has been a progressive and convinced diffusion of e-learning in the academic world is the high presence (over 80% - GRAPH 5) of university structures or organisational units that have functions closely associated with or dedicated to ICT. Almost all of the universities of Italy, in fact, have internal organisational units whose role involves a multiplicity of activities.

University centres for ICT/e-learning

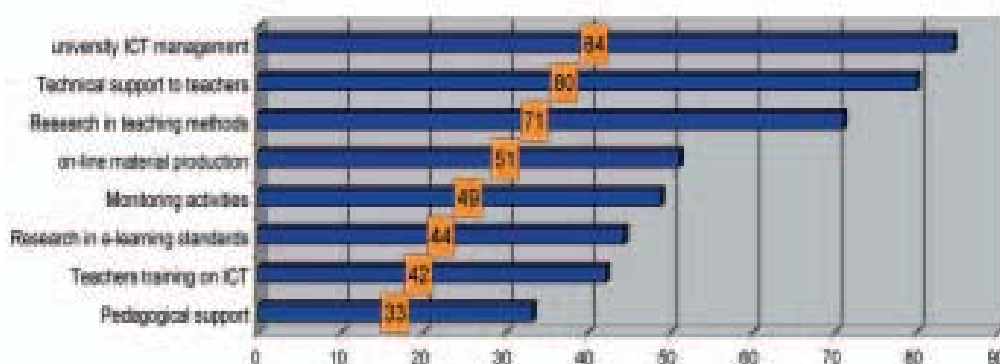
Percentage of respondent universities



One can observe from graph 6 that these units are entrusted primarily with activities involving technical management and support and with a decreasing frequency they deal with aspects that are more strictly connected with on-line teaching. In particular, at least a half of these centres are involved in activities such as teaching research, establishment of standards and support for preparation of on-line teaching material, while their activities in relation to pedagogical support are significantly less conspicuous. This aspect was relevant to only a third of the universities structural units considered in this study and it is indicative of the gap that still has to be eliminated in order to achieve the creation of real and authentic centres for e-learning within the university world. It is, indeed, the joint presence of support for teaching and technological support that bestows upon these centres the necessary pre-conditions for them to be characterised as full structures capable of being entrusted with the development of e-learning activities.

The different functions of the ICT/e-learning centres

(Percentage of respondent universities, by function)



It should also be stressed that, in particular in the larger universities, there may exist side by side, more than one structural unit dedicated to the promotion and development of ICT in its various aspects.

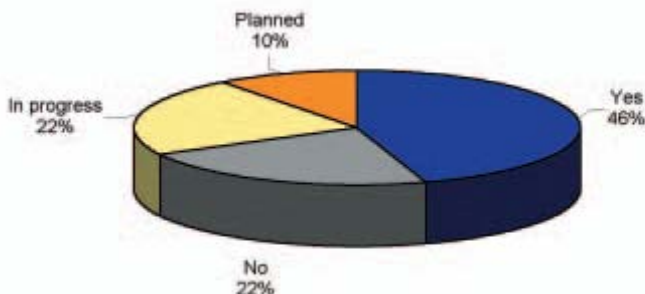
Other Back Office Services

When we focus our attention on the results of the survey as regards the presence of on-line non-teaching services in correspondence to an educational supply which can also be accessed through Internet, a situation emerges that is characterised by a level of coverage that only partially meets the needs of the whole university system. The 46% of universities that presently offer the possibility of interfacing at distance as well with their offices, (graph 8) to those who access their on-line teaching courses, will however, shortly be joined by a further 22% of universities that are currently working on this front. This coverage will be further enhanced by an

additional 10% of universities which have future plans to place the development of these services on their agendas.

The implementation of on-line administrative course management

Percentage of respondent universities



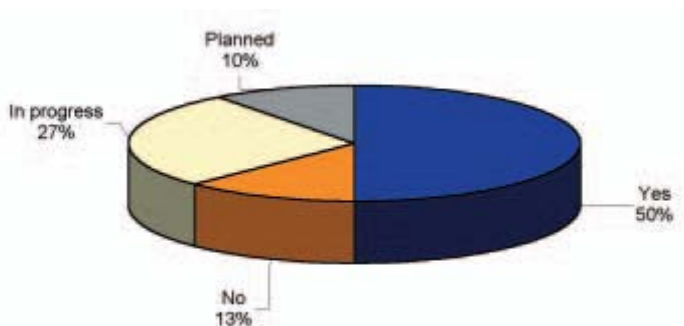
On line contents repositories

Within the context of the processes that support the creation of on-line educational supply within universities is to be included the drawing up of instruments for the storage and cataloguing of the resources used for teaching on the Web. The creation of a repository in which teaching materials required to be accessed through the Internet can be collected and classified is an resource element common to only 50% of those universities that took part in the survey (graph 9).

However, the creation of such repositories is a common objective amongst the vast majority of the remaining universities surveyed and in the future this should help to raise to almost 90% the number of universities that provide this service.

The presence of a repository for the on line contents.

(Percentage of respondent universities)



The significant presence of co-ordinated procedures for the collection and organisation of teaching materials produced for access via the Internet within the University sector is not, however matched, (or rather is only matched to a marginal extent), by the practice of sharing these resources with users beyond the confines of the University set up . the public .

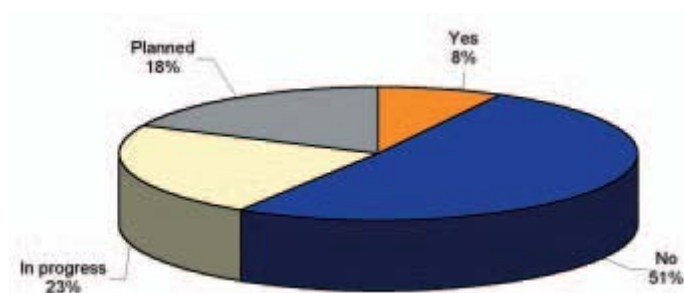
However, it is realistic to assume that the present scenario will undergo modifications in line with a more general process that over recent years has witnessed universities in Italy intensify their relationships with their local areas. Within the framework of these new prospects, marked, as they are, by greater dynamism on the part of the university sector, the circulation of learning objects is seen both as a consequence of, and, on the

other hand, as the manifestation of, the wish for greater openness to strategic dialogue between both universities themselves and forces outside the university sector..

In an approach which sees the role of universities increasingly located within a mechanism of supply and demand in the education market, the market presence of universities prepared to engage in the sharing or exchange of Web resources for teaching is currently somewhere in the region of 8% but based on the responses to this survey has the short-term potential to reach a level of 50%.

The possibility to share on line contents with other organizations

(Percentage of respondent universities)



Research on e-learning

That e-learning is becoming increasingly established within the academic world is not solely deduced on the basis of the rapidly growing supply of on-line education, but is also attested to by the increasingly marked attention that university research pays towards new teaching methodologies.

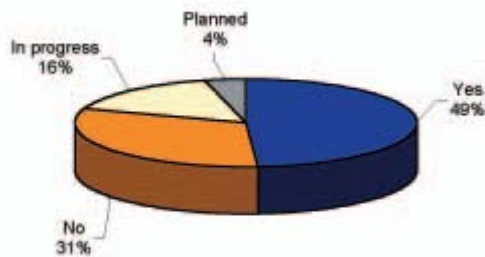
Graph 11 indicates how almost half of universities are already presently active on this front and also provides ample evidence that it is destined to grow further in the future, with e-learning present on the university research agenda of a further 20% of universities surveyed. In intertwining the skills and expertise of both teachers and specialists in information and communication technology, e-learning lends itself to being explored from many different viewpoints, which by necessity will be required to be brought together in an integrated approach.

In fact, it is not unusual today to still encounter an incomplete convergence between the ways of tackling the questions and incongruities that e-learning has generated between those who belong to the humanities, on the one hand, and by specialists in information and communication technology, on the other.

Research on standards, traditionally the exclusive domain of the information sciences, and experimentation with teaching models, traditionally the prerogative of experts in education, are, however, subjects of such relevance for e-learning that only with difficulty can they be placed on a scale of priorities. The action of universities, therefore, should be directed towards solutions involving an interdisciplinary approach that gives equal rights of citizenship to the contributions of both these scientific sectors in the creation of effective research activity.

E-learning as a subject of university research

(Percentage of respondent universities)



E-learning and students

The statistics on the number of students that use university distance education refer to a phenomenon that is still clearly limited. Combining the first three of the four bands identified in table 2, it is apparent that for the large majority (80%) of the universities involved in the survey, the size of the target population receiving at-distance education is less than 10% of the total number of enrolled students.

The involvement of students in distance education

% of students that use distance Number of Universities % of Universities Education

% of students that use distance education	Number of Universities	%of Universities
None	12	30%
Less than 5%	10	25
Between 10 and 25%	10	25
Over 10%	8	20
TOTAL	40	100

The size of the phenomenon is even greater, if one takes into consideration the fact that a quarter of universities that replied to the questionnaire, users of distance education represented less than 5% of the total number of their enrolled students, and that an additional twelve universities (30%) registered a total absence of distance students.

On the other hand, a significant number of students who draw advantage from forms of distance teaching (over 10% of the enrolled students in the university involved) characterises the remaining 20% of the universe considered, a part made up of universities that engage to a more appreciable degree in videoconferences or teaching on the Web.

If, on the other hand, we move to examine the extent to which the new technologies are establishing themselves as instruments with which to support traditional forms of teaching, a markedly different picture emerges.

For some universities, the number of students who have teaching material available to them on the Internet or services that complement the lectures held in the lecture rooms, at most represent 10% of the total of enrolled students.

However, this is a situation that involves only certain universities (17.5% of those who took part in the survey), where flanking teaching in the lecture rooms with resources provided on the Web is available only to a narrow band of students.

An opposing picture is encountered in the case of those universities (equal to 15% of those examined here) where almost all of the students can access the Web to receive information or obtain teaching resources by downloading course supplementary material or study material from the website or by taking part in on-line forums.

One may estimate (combining the third and the fourth bands of table 3) that in about one in three universities (30%), opportunities of this kind are available to at least half of the students.

However, here too there are broad margins for improvement on the part of universities, given that about a half of them provide on-line supplementary services for teaching for a band of students the numbers of which involved while not negligible, do not even reach half that of the total population of enrolled students (the quota observed varies from 10%to 49%).

The involvement of students in ICT enhanced education

% of students who use presence education supported by ICT	Number of Universities	%of Universities
Less than 10%	7	17.5%
Over 10% but less than a half	21	52.5%
At least a half but less than 80%	6	15%
Over 80%	6	15%
TOTAL	40	100%

Recommendations for future research activities

From this report it clearly emerges that eGovernment, health care and education are the most dynamic and developing Information Society sectors in Italy.

Over recent years a lot has been done to promote the Information Society but a lot has still to be done.

New laws, regulations, funding, new infrastructures and the creation of bodies, agencies, and public centres has created the context to allow the real development of the Information Society in Italy.

With regard to education (schools and universities) many exemplars of excellence exist in new technology usage within learning and teaching processes but these initiatives are not widely or evenly spread across all the country and generally involve a limited number of teachers and students.

The Research sector also suffers of a lack of coordination and interdisciplinary dialogue.

A preliminary list of themes that could concern future research activities in the educational sector is:

- How the knowledge and the relationship with the outside world mediated by the net impact on/modifies the “cognitive set” of individuals
- How the Information Society, and Web 2.0 in particular, redefines the rules and the approaches to the way knowledge is accessed and built.
- How the extensive usage of technologies and of new media will allow the integration and the valorisation of new knowledge and non formal and informal learning processes.
- What are the knowledge and competence standards determined by new media integrated usage and advanced technological applications needed for students/citizens growth in the actual development stage.
- Which work methodologies (supported by the integrated usage of the information technologies) do allow reaching the competence standards required by our labour sector.

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