EATT

Equal Access to Technology Training

ITALIAN LITERATURE REVIEW

Encouraging older people of all abilities into IT training

Istituto per la Ricerca la Formazione e la Riabilitazione

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Introduction

A review of the literature on the problem of access to ICT (Information and Communication Technology) for individuals in the 35 to 65 year-old age group, and particularly blind and visually impaired people, does not offer a rich store of contributions. More in-depth study appears necessary, in order to obtain elements which can contribute to reaching the specific objectives set by the EATT project. Elements have been collected that provide a better description of the scenario within which the established objectives are to be accomplished in Italy.

The situation described regards both demographics and the possibility of gaining access to and utilising the training possibilities, particularly on the part of blind and visually impaired people.

The policy of ICT education and training is examined in depth, on both the European and Italian levels.

It is not always possible to restrict the bibliographic review to the specific problems of individuals between 35 and 65 years old, given that many of the statistics refer to other groups.

Demographic situation

In Italy, individuals in the age group between 35 and 65 represent almost 40% of the population, with a slight preponderance of the female sex (Roncati, Cicchetti, 2001, pg. 3), while the percentage of the same age group within the total of 370,000 sight-impaired individuals is only 27%. The over-65 age group accounts for a much higher percentage of the sight-

impaired (65%, compared to its share of 18% of the normally sighted population), while the percentage represented by the under-35 age group is especially low: 8%, compared to its share of 42% of the normally sighted population (I.Ri.Fo.R., 1995).

The literature regarding the education and training of individuals with all the available skills focuses almost exclusively on the under-35 age group, and includes literature specific to the sight impaired. There emerges an undeniable need to achieve further development of education and training throughout the lives of the 92% of the sight impaired who are older than 35.

Information society policy

Among the numerous projects launched by various ministries from 1996 onwards intending to promote innovation and the development of the Information Society, it was noted that the co-ordination and construction of a general, unitary and systematic project was greatly needed. To achieve this aim, the decree by the Prime Minister on 5th February 1999, in which it was stated: "The development of the Information Society is a major goal of the Italian Government", instituted three structures at the Prime Minister's Office: the Committee of Ministers, the Inter-departmental Study and Working Group and the Information Society Forum.

The **Committee of Ministers** has been given the task of ensuring the impetus of government activity and the co-ordination of actions among various administrations, taking into

account the proposals of the forum. It must also approve the **action plan for the Information Society** and identify the instruments to be used in the plan.

Composed of representatives from relevant administrations, the Inter-departmental Study and Working Group offers technical support to the Committee of Ministers. Other responsibilities include collaborating with the forum's activities and promoting the creation of working groups - even on a territorial basis. It also co-ordinates the ministerial contributions to the action plan and the budget.

Headed by the Prime Minister, the **Information Society Forum** can be found at the Prime Minister's Office Department of Economic Affairs. The forum was devised as a working seat open to public and territorial institutions, firms, trade unions, universities and research institutions, associations and citizens and other interested subjects. The forum is fundamentally a support unit regarding the promotion and co-ordination of public policies in the ICT sector.

The recent Prime Ministerial decree from 4th August 2000, instituted the **office for technological innovation** at the Department of Economic Affairs (art. 12, comma 3). Its role is to ensure support to the Prime Minister's Office co-ordination activities and Information Society policy.

In keeping with the eEurope 2002 initiative (Feira 19-20 June), the Italian government has drawn up a **Plan of Action for the Information Society**. The effort involves the following sectors:

human capital (training, education, research, and development), e-government, e-commerce and infrastructures. The purpose of the plan is to facilitate and accelerate this process through a variety of activities, including policies of training and inclusion.

The Forum on the Information Society (2000) has issued an important report: "**e-Italy** - A Project for Italy and Europe, a contribution to the International Community", which provides a reference framework for the policy actions that need to be taken.

In the documents and plans presented on the information society, the numerous references to young people and to areas in southern Italy stand out as points of particular interest. Less evident are the references to adults, the elderly and individuals with disabilities.

Access to learning in Europe and in Italy

Significant contributions have been made in Europe to introduce or study in greater depth the concept of "Life-Long Learning". Though fully supported by the individual member nations, including Italy, the concept and the related life-long learning activities are not given adequate support or European orientation in the Maastricht Treaty. The term "schools" is not found once in the 367 articles of the Treaty, while the presence of words such as "education", "culture" and "training", when not used with regard to European-Community policy, but exclusively in relation to the funding contemplated for specific activities, is also scarce. On the other hand, the terms

"currency", "bank" and, to an even greater extent, "market" appear on countless occasions (Mortellaro I.D. 1999). The introduction of ICT into society cannot be viewed as merely a market consideration, but must represent, first and foremost, an aspect of culture that calls for adequate resources in order to be developed and promoted.

It is the increasingly intensive demand of today's society for ever higher levels of knowledge and relational skills (ability to establish relations with both objects and individuals) that obliges nations, and not only Italy, to face the task of raising the quantitative levels of schooling.

According to the former Minister of Education, Tulio De Mauro (1999), this challenge throws renewed light on the problem of scholastic dispersion, emphasising that the objective of generalising basic education cannot be considered as achieved if half of the adult population in today's Italy has not reached the obligatory level of education. This half of the adult Italian population, finding itself at a de facto level of illiteracy, is not capable of taking an active part in social life, to say nothing of participating in the society of information technology.

According to the former Minister, in order to allow this half of the Italian population to contribute to the growth of our society, there is an urgent need for the development of recurring and permanent education initiatives. The EATT project takes the form of a permanent educational initiative that also includes individuals who are approaching senior-citizen status.

A distinctly European concept of ageing is evolved which includes a wide range of activities, focuses on the whole life-course, is preventative, embodies rights and obligations, is participative, and respects national and cultural diversity. During the Conference on Active Ageing Walker (1999) points out that it is the policy process that mainly determine whether or not countries age successfully. In developing the concept of active ageing, a key principle will be the embodiment of both rights and obligations; thus the rights to social protection, life-long education and training may be accompanied by obligations to take advantage of education and training opportunities and to remain active in other ways.

The Italian legislative framework concerning the rights of learning and of training for blind and visually impairment people is one of the most detailed, comparing to the other EATT project partners (EPS, 1999).

But a right does not automatically produce equality. The data on the following table point to the difference between the educational level of the general population and that of the blind and visually impaired population. This difference could be related to the training possibilities and the ways in which the blind and visually impaired population takes advantage of the process of education and training.

Education	General population (%)	Vision impaired people (%)
Elementary school	41.3%	83%
Middle school diploma	28.7%	13%
Secondary school certificate	24.2%	4%
University	5.2%	0.5%
Source: Istat 2000, I.Ri.Fo.R. 1995		

It should be noted that the data presented are not suitable for direct comparison, given that the great majority of visually impaired individuals are elderly and were not provided with adequate opportunities for scholastic instruction in the post-war period. It may be assumed, however, that blind and visually impaired people in the 35 to 65 year-old age group tend to have a lower level of education than that of the equivalent age group of normally sighted individuals.

On average, the percentage rate of blind people with a poor educational record is higher in southern Italy (with peaks reaching 90%) and on the islands (Sicily and Sardinia) and consists of more women than men (Drydon, Garner, Tillsley, p.43).

In order to develop an introductory course to ICT, adapting its contents and methodology to the needs of the potential participants, it is necessary to consider the level of instruction of the target group.

The clarity and simplicity of the training methodology used in ICT courses should increase with the age of those taking the courses, further rising when the participants are also visually disabled (Meister, 2001). When mainstream centres are used for the technological training of this age group, then, the older the students, the better prepared the teachers must be in instruction and education, while high technology is often of less importance.

Lifelong learning policy

Although the legislative framework has been put in place for the right to vocational training by vision impaired people in working age (Employment Support Practices, 1999), vision impaired people over 35 generally still tend to have a lower level of education in comparison to the sighted population. In particular, a large number of people over 65 did not have adequate educational opportunities available to them in the post-war period, which affects in a negative way both the level of literacy

and the quantitative aspect. On average, the percentage of vision impaired people with a poor educational attainment is higher in southern Italy (with peaks reaching 90%) and on the islands (Sicily and Sardinia) and consists of more women than men (Dryden, Garner & Tillsley, 2000; 43). It is evident therefore that It is not only necessary to adapt the contents and training methods of computer literacy training but the level of education of the vision impaired population in Italy is also an important consideration. Personal development skills as well as technical skills are consequently of equal importance (Meister, 2001).

Spread and use of ITC in Italy

Italy is reducing the digital divide that separates it from the more developed countries. The research of the I-Lab Internet Observatory at the Bocconi University of Milan on the spread of digital technology places Italy in next to last place, ahead of Spain and on the same level as France, but still distant from Germany, Norway, the United Kingdom, Sweden and Finland, as well as the United States and Japan. Growth in Italy can be traced primarily to the widespread use of mobile telephones, while other areas, such as cabling and broad-band operations, remain unsatisfactory (Bocconi University, 2001). In 1999, video cassette recorders were owned by 63% of all Italians, while 48% owned a mobile phone and 23% a personal computer (Roncati, Cicchetti, 2001, p. 8).

At the same time, however, the gaps between Italy's different geographic areas are widening, with northeast Italy showing

continuous growth, while southern Italy remains at extremely low levels. In the central-north area 25.4% of the population owns a PC, compared to 19.0% in the south (Roncati, Cicchetti, 2001, pg. 8).

As regards Internet, the number of users has settled at 12 million (users older than 14), while their behaviour patterns are becoming more systematic and less occasional: the number who use Internet at least once a week rose by 46%, and 69% of those interviewed declared that they hook up from home.

The practice of searching for information on the Web before making traditional purchases, referred to as e-shopping, is fairly widespread, involving almost 27% of the users, while only 12% of all navigators declare that they purchase merchandise on-line (full-fledged e-commerce), and only 2.4% of this group says that they do so frequently. Unfortunately, there is no specific data on the behaviour of individuals in the 35 to 65 year-old age group, nor on individuals with disabilities.

Defining visual impairment

We have two definitions of blindness. Namely, according to the law no. 946/67, art. 2, we consider "legally blind" all persons whose visual acuity ranges from 0 to 1/10 of the normal visual acuity, which corresponds to 6/60, for the better eye and with correction.

The second law dates 3 April 2001. This law states 3 categories of visual disability, according both to visual acuity and to visual

field, combined in a "or" relationship (either of them must be verified).

The following table summarizes the different possibilities this law takes into account.

Definition	Visual acuity	Visual field (%)
Totally blind	0.0	0
Partially blind	<=3/60	<10
Severely visually impaired	<=6/60	<30%
Middle visually impaired	=<12/60	<50
Slightly visually impaired	<=18/60	>60

Use of IT in education and training

In Italy significant attention is given to the use of ICT as a means of facilitating scholastic integration. As a result, there exists a wide-ranging bibliography and ample documentation on the use of ICT and on specific methodologies and educational techniques relevant to schools and integration. The available knowledge, however, regards an especially small portion of the blind and visually impaired population (8%). In the case of the remaining 92% of blind and visually impaired people, no data is available in Italy on the use of ICT, on their opinions regarding the new technology and on specific training methodologies.

European data on technology and Internet as part of scholastic instruction are provided by a recent publication of the European

Commission (2001). The research does not supply data on learning and training among individuals between the ages of 35 and 65, but information of relevance to the EATT project can be extrapolated all the same, especially on the subject of teaching.

The age of 80% of European teachers falls between 35 and 65 years old (EC, 2001, p. 29), which is the same age group as that of the EATT project. A teacher can be a user of ICT, a trainer or even an individual with visual impairment. In Italy 9% of the gainfully employed sight impaired are teachers (I.Ri.Fo.R., 1999).

The majority (71%) of European teachers now use computers, but there are important discrepancies from one EU country to another. Concerning the EATT partners member state there are the following differences for off-line and on-line computer use (CE, 2001, p. 14):

	DK	**F**	**IRL**	**I**	**UK**
Off-line	88%	76%	97%	65%	100%
On-line	69%	28%	82%	27%	56%

The EATT project contemplates the development of a model of introductory training courses for individuals with visual impairments. The training model must take into account not only the differences in the ways ICT is used in the various countries, but also the differences in the development of the technological culture connected with its use. In efforts to spread the awareness and use of specific training offerings, diversified approaches must be developed for France and Italy, especially

in the promotion of Internet access and use, in order to eliminate the gaps between off-line and on-line use.

Major importance in determining computer and Internet take-up is age. The percentage of teachers who use off-line computers declines as the age of teachers goes up, from 75% for the 20-29 age group down to 60% for teachers aged over 50. Similarly, the level of Internet users plummets by a fourth from 44% to 33% (CE, 2001, p. 15).

The survey demonstrates that age is a discriminating factor in terms of the use of the PC and Internet among the target group of teachers. It can be presumed that this is also true for the general population, as well as for the sub-group of blind and visually impaired people. This result confirms the wisdom of the objectives chosen for the EATT project.

Another major factor in determining use of computers is the gender of teachers. The difference is rather limited regarding off-line computers, which are used by a majority of male and female teachers (69% and 62% respectively), but becomes substantial regarding the use of the Internet: 44% of male teachers use the Internet compared to only 31% of female teachers.

The gender difference must be taken into consideration in drawing up the project, both when it comes to heightening awareness of ICT and as regards the contents of the training programs, which should also stimulate the specific interests of the different sexes.

Over half of Europe's teachers have been trained in the use of computers and over a third have been trained in the use of the Internet. There is of course room for improvement as 45% of EU teachers have received no training at all (CE, 2001, p. 17). Also concerning this argument there are some differences between the member states:

	DK	F	IRL	I	UK	EU
Computer training	68%	44%	74%	58%	74%	54%
Internet training	59%	29%	49%	33%	56%	36%
No training	31%	53%	25%	42%	24%	45%

It can be assumed that the differences between the various member nations in terms of the training of teachers can also be identified in the area of on-going training for adults, as well as in the training of individuals with visually impairments.

Teachers who use the Internet with their pupils seem very convinced of its usefulness. On average, 52% of EU teachers who use the Internet find it useful and 46% occasionally useful. Only 1% of EU teachers do not find it useful. These results are independent of level and type of education, gender and age, which strongly suggests that appreciation of the Internet comes with actual use. There are some differences according to the main subject taught. Not surprisingly, appreciation of the Internet is higher amongst computing teachers (59%). Conversely, the less enthusiastic users are sciences and humanities teachers (respectively 47% and 43%).

The professional background of operators engaged in the re-education and rehabilitation of blind and visually impaired people is often humanistic. Based on the data indicated above, it can be presumed that this category of professionals will show less enthusiasm than will specialised technical personnel. Greater technological training of these operators, as well as increased use of ICT supports in the management of their own professional activities, could, at length, directly modify their enthusiasm towards ICT while indirectly increasing the motivation of the blind and visually impaired individuals they are assisting as regards the eventual use of the computer.

On the other hand it is indispensable that the specialised technical personnel, who tend to be highly motivated with regard to ICT, receive adequate humanistic training, allowing them to understand the possible scarce enthusiasm for ICT on the part of future blind and visually impaired participants in the introductory ICT course, and to learn the methodologies for creating interest.

Positive opinions also prevail in all Member States, though there are substantial differences from one EU country to another. The most enthusiastic Internet users tend to be found in the countries that have the lowest equipment and usage levels. For instance, the percentage of teachers who find the Internet useful is particularly high in Portugal (81%), Greece (77%) and Spain (66%). A possible explanation is that Internet enthusiasts may be early adopters, and therefore the proportion

of enthusiasts may be higher in countries in which Internet take-up remains low.

The differences in the use of computers and Internet in the various countries have not necessarily had a negative impact on the promotion of ICT, given that the less advanced countries can draw on higher levels of motivation among their teachers than can the better equipped countries.

Achievement of the objectives of the eEurope initiative will automatically facilitate the culture of eLearning and education throughout one's life.

ECDL in Italy

In Italy, the ECDL patent is managed by the AICA, the Associazione Italiana per l'Informatica ed il Calcolo Automatico (Italian Association of Informatics and Automated Calculation), which grants to individual informatics facilities the title of Test Centre. The AICA is a member of the Information Society Forum and of the Council of European Professional Informatics Societies. In 1999, the AICA assigned to DIDACTA, which operates under the auspices of the ASHPI, the status of a Test Centre operating under a special set of regulations and authorised to issue ECDL exclusively to the disabled. DIDACTA has been allowed to make operational modifications in the standard procedures of the training program, following experimentation and notification of the AICA. There is no separate ECDL for the disabled, but rather information on how to adjust the training phase and the examination.

Since 2001, on behalf of the AICA, the Association to Develop Information Technology Projects for Handicapped People (Associazione per lo Sviluppo di Progetti Informatici per gli Handicappati) (ASPHI), has become the only organisation, on a national level, that provides information to every IT training centre and to individuals with all forms of disability on accessibility issues relating to the ECDL. I.Ri.Fo.R (Istituto per la Ricerca la Formazione e la Riabilitazione) was created by the Italian Union of the Blind, the main organisation of people with vision impairment in Italy. A visually impaired person can take his / her examinations directly from I.Ri.Fo.R. or from ASPHI, which are recognised test centres. In addition to the I.Ri.Fo.R., the organisation Professions of Milan in Support of Solidarity (Le Professioni Milanesi per la Solidarietà) offers specific courses to prepare vision impaired people for the ECDL (http://www.corsi-zotti.it/indice-i-Inglese.html). At present, no information is available on the profiles of the individuals who have undertaken an ECDL course.

Like Denmark and Ireland, a Technical Aids Grant is also available in Italy to facilitate vision impaired people to obtain assistive devices and software for their personal use at home.

IT courses for the sight impaired

From 1994 to 2000, the I.Ri.Fo.R. held 194 specific IT training courses for approximately 1850 individuals with vision impairment. The participants ranged in age from 18 to 80 years. Many of these courses were introductory, while others were more advanced or specialised. These courses were

successful because the trainers had experience in providing training to vision impaired people and were familiar with the adaptive technology options available. Training was offered in small groups so that individual needs were taken into account. Participants also had the opportunity to exchange ideas and experiences and help each other. Between 1998 and 2000, Le Professioni Milanesi per la Solidarietà, in collaboration with Retinitis Pigmentosa Italia, held courses in IT for approximately 340 vision impaired people. These special courses were either free of charge, or required a small fee. A number of sales outlets that sell specific technical aids for vision impaired people also offer courses at different levels at a charge. Unfortunately, there are no data available on the age of the participants in the courses.

Conclusion

There is marked expansion and development of communications and information technology in the political and social life of Italy, with a number of differences between various geographic areas and sectors. The technological development of northern Italy proves particularly rapid compared to the south.

As regards differences between sectors, development is less intense in the education and training of the middle aged and the elderly, as well as that of the disabled. In particular, numerous problems can be observed in terms of creating the underlying principles of an information society through pragmatic offerings custom-designed to meet the various demands of an integrated life.

As regards offerings meant specifically for blind and visually impaired people, much has been done through associations active in this area, and especially through the Unione Italiana Ciechi (Italian Union of the Blind) and the I.Ri.Fo.R.. The use of special funds has made possible wide-ranging informatics literacy initiatives throughout the country, often featuring top-quality activities provided free of charge. Underlying the success of such activities are training offerings which are custom-made for individuals with visual disabilities, and which often employ blind and visually impaired teachers.

Nevertheless an additional effort must be made to integrate the offerings and the knowledge specific to the training of blind and visually impaired people into mainstream ICT, in order to achieve greater cultural penetration of the technology. To reach this objective, additional in-depth study must be carried out on the needs of blind and visually impaired individuals in the adult and senior-citizen age groups.

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