

Schoolnet Report - Spain

What is a Schoolnet?

Schoolnetworks offers a great variety of different services and they work like an information centre, library and press agency. It provides a connection of more than 450 secondary school centres.

The schoolnet is a central service for schools and educational institutions. In Spain, it is the Centro Nacional de Información y Comunicación Educativa. <http://www.cnice.mecd.es/>

On this website young people find practical search tools and services that provide recent information about current events, conferences, courses and other activities. It is also a useful on-line forum and offers the possibility for teachers as well as for students to have a net of contacts and to start discussions with other teachers or students around the globe. It leads users even to interesting convocations, forums and activities. Furthermore it offers a wide range of services.

It is a platform in order to develop new educational issues, using the Internet and new information and communication technologies. The acquisition of the required practical knowledge is inspired by creativity, already existing skills and offered tools. Once being familiar with the basic technology, teachers and students can proceed as they like.

In our autonomous region the Red Averros is the digital and educational network from Andalusia <http://www.juntadeandalucia.es/averroes>. It aims to spread knowledge, to dissolve boundaries and to enlarge tolerance between people.

Averroes net provides a connection to the Internet using TCP/IP protocol. It offers access to Andalusian educational institutions of children, to elementary and secondary education, to institutions of special needs education, to institutions of adult education, to teams in the educational sector, to 32 teacher training centres (CEP) and to other services throughout Andalusia. And@red is the educational plan concerning the society's demand to have access to knowledge.

Schoolnets and policy

On 18th March 2003, the Andalusian government published the **Decreto de medidas de impulso a la sociedad del conocimiento en Andalucía**, (Decree on acceleration of introduction of an information society in Andalusía), a singular and pioneering law concerning philosophy, content and area. The decree's fundamental aim is to establish all necessary measures to ensure that Andalusia can completely incorporate itself into knowledge society in order to gain an increased quality of life of its people, an increased social and territorial balance and furthermore to extend the Andalusian textual production and to improve its competitiveness.

With the decree Andalusia implements an input to be a pioneer in technological development and to participate in the development of a knowledge society. In

education, these measurements are realized through the And@red plan that provides access to ICT (Information and Communication Technologies) in the whole education region of Andalusia.

The policy developed by the Advisory Council of Education, which aims to ensure equal conditions of access for the whole population and the usage of free software. This pioneering input has been transferred into legal texts. We know the fact that incorporating into knowledge society is as much important as the way in which this incorporation is carried out. Therefore they decided to use the free software Guadalinux, in order to incorporate itself in a common and cooperative way with the focus on freedom and equality.

The decree regulates public access to institutions like museums via the net as well as the creation of Andalusians virtual library (largest digital collection of documents of the Andalusian bibliographic patrimony accessible through the Internet).

And@red is the concrete measure in the educational field to fulfill the Decree on acceleration of measures for becoming a knowledge society. The Andalusian Advisory Council of Education facilitates access to ICT for the whole Andalusian educational community via diverse measures, offered by the Plan And@red:

- The equipment and connection of public educational institutions
- Providing of educational materials in informatics that is preferably based on free software.
- Promotion of the use of information and communication technologies in teaching and the creation of digital on-line educational institutions offering integral care services for parents and for the rest of the educational community.

Finally we can summarise the aims of the educational politics for a knowledge based society released by the government of Andalusia. The Government of Andalusia and the Education Office quoted concrete objects:

- To increase use of ICT in public educational institutions
- To create a virtual learning environment that will be opened soon by/for schools
- To change the way of obtaining knowledge
- To establish new ways of relations within and with the Andalusian educational community
- Appropriate training for teachers how to use ICT for educational purposes
- To Teach students in new professional fields
- Intervention in the society's model of information, articulating sustained values for the shifts in education and the economy's development.
- To amplify the textual production in Andalusia and improvement of its competitiveness.
- To initiate and intensify a digital alphabetisation process.
- To provide a better quality of life for all habitants of the Andalusian community.
- To produce a better social and territorial balance.

Who are Schoolnets designed for?

Schoolnets are designed for:

- Students
- Teachers
- Parents
- Librarians
- Counselors
- Directors of educational centers
- Service and management staff

What do Schoolnets contain?

The National centre of information and educational communication offers the following services:

- **Educational resources supporting primary and secondary schools and higher secondary education courses**
- Languages
- Science and mathematics
- Social Science, Humanities and Communication
- Arts and physical education
- Multidisciplinary (image bank, thematic web pages, thematic blogs)

- **Educational resources supporting vocational training**
- Trade and marketing
- Management
- Graphic Arts
- Socio-cultural services for the community

- **Education for adults**

- **Training for the teaching staff**
- Supporting materials
- Training materials

- **Networks of educational centres**

- **Thematic Networks**
- Attention to diversity
- Educational guidance
- Communities of partners
- School libraries
- Multicultural concerns

- **Curriculum materials**
- **Image banks**
- **Services for users**
- **Free accounts and information of interest for users**
- **Digital Magazine** <http://reddigital.cnice.mec.es/5/index.html>
- **General information on scholarships, courses and projects**

In Averroes net we can find:

- **Services of free access:**
 - Technical forums
 - ABIES programmes (school libraries)
 - Technical aspects
 - Averroes Chat
- **Services for the teaching staff**
Mailbox for electronic mail
- **Services for centres**
 - Technical support (hotline, e-mail)
 - Web sites on the Averroes server
 - Counters
 - Advice in creating web sites
 - Guestbook
 - Site of data bases on the Averroes server, based on HTML
- **Educational resources**
 - Connections to didactic units, publications, uploading of programs, etc.
 - Possibility to call for help when elaborating digital educational resources
 - Programs and educational performances
 - Publications
 - Virtual Library
 - Connections of interest (dictionaries, news, educational institutions, activities, NGOs, visits to museums, universities, performances in ICT...)
- **Programs and Performances**
- **Announcements and Calls**

Who is involved?

The National centre of educational information and communication is managed by the Education and Science Department. The Averroes network is affiliated to the Education and Science Office of the 'Junta de Andalusia'.

Cisco Systems is the worldwide leader in network and infrastructure solutions related to the Internet. Together with the Telecommunication Corporation (ETC), it has developed a network infrastructure of optical fibre lines, which permits voice transmission in high quality, data and multimedia services between administrations, companies and the population in general.

The new optical infrastructure for transmission based on *Cisco® ONS 15454* and based on the protocol IP/MPLS regarding to the governmental initiative to build national networks that unify administration of educational and sanitarian institutions and the centres of agricultural investigation.

The users of the network will get technical help and support at their disposal (Helpdesk).

Addressed on the supply with information and tools, the schoolnet can observe teachers, computer scientists, parents, administrative personnel and others who are involved and are assigned to renew and update the whole content of the network. Every single school has there own technicians and resources to maintain its web pages.

What research has been done about Schoolnets?

- **“Theory and practice in teacher education”**.
Josefina Ferrés I Font / Faculty of Sciences of the Education. University of Girona. http://www.ieev.uma.es/edutec97/edu97_c3/2-3-09.htm

This article is about the necessity of analysing how new resources are integrated in school education. It is focused on the use of networks, for example the use of communication channels and the collaboration between school centres.

- **“New European school centres. The Euro-network of the centres.”**
M^a Concepción Álvarez García. University of Oviedo.
<http://www.sav.us.es/pixelbit/articulos/n13/n13art/art135.htmlt>

It provides a detailed analysis of technologies in the information sector within educational centres. It informs about networks of centers and the networks within centers and how European networks of centers contribute to the social development, to the productivity and competitiveness of Europe.

- **“Edutec: Electronic magazine of educational technology”**
<http://www.uib.es/depart/dceweb/revelec.html>

Eduotec is an electronic magazine concerning educational technology. The website provides a complete archive of articles published since 1995.

- **“The network as an instrument of education. Basis for the design of didactic materials.”**

Julio Cabero Almenara (dir).
Juan Antonio Morales, Julio,
Barroso, Pedro Román y Rosalía Romero
University of Sevilla
<http://tecnologiaedu.us.es>

- **“Development, quality of education and new technologies.”**

Antonio Rodríguez Martínez, Jorge Soto Carballo y José Manuel Touriñán López
<http://tecnologiaedu.us.es/edutecc/paginas/98.html>

The authors analyse the relationship between development, quality of education and new technologies in the information society, advocating the recognition of access to the networks as a social right.

- **“Potentials and educational resources of the Internet: systematisation and presentation of an educational program connected to the network for the use of Internet for students of secondary education “**

Jorge Jiménez Rodríguez, E.U. Magisterio "Ave María"
University of Granada
<http://www.edutecc.es/edutecc01/edutecc/comunic/EXP05.html>

Description and analyse of certain contributions concerning the possibilities offered through the Internet for education of our students. The intention is to systematize them and thus to develop a programme from a hypertext. Elaborating the hypertext, the objective is to obtain support in the educational process and offering students literacy through their own activity on the Internet with help of a webpage that facilitates access to information, practice and simulations. A tutor or guide will monitor and evaluate the process, programmes of activities, solves doubts and address new questions.

- **Information of the present situation of Spain concerning the access to the Internet.** <http://social.internautas.org/html/108.html>

- **“New technologies applied within education.”**
CABERO, J. (ed), SALINAS, J., DUARTE, A. y DOMINGO, J. (2000):
Madrid, Synthesis
ISBN: 84-7738-788-5.
- Main guidelines for the use of so called new technologies are offered. It deals with analysing their possibilities, analysing television and the video, videoconferencing, computer science, hypertexts and multimedia as well as networks.
- **“Educational multimedia materials on the net. A guide for its design.”**
CABERO, J. y GISBERT, M. (dirs). (2002):
Seville, SAV of the University of Seville.
ISBN: 84-95454-68-8.

A proposal is offered to design educational materials for the network.

“Communication networks in education.”

MARTÍNEZ, F. (comp). CABERO, J., SALINAS, J. PRENDES, M.P., SOLANO, I.M., DE BENITO, B. y PÉREZ, A...(2003):
Barcelona, Paidós.
ISBN: 84-493-1399-6.

- **“Education in Red. Internet as resource for education.”**
AGUADED, J.I. y CABERO, J. (dirs). (2003): Málaga, Aljibe.

In the book the authors analyse the possibilities of Internet in education from a general point of view, and from a specific (design of materials, tools of communication, collaborative work, evaluation through the Internet) point of view. The authors is offering possibilities available via the Internet in different subjects.

Schoolnets in Schools

ICT is used as supplementary tool in the learning process and the networks are used as a possibility for communication and cooperation beyond any differences or boundaries.

Schools use the network for announcements of educational activities, the enrolment of these activities and, if characteristics will permit it, for distance learning courses of teachers.

On the other hand schools have the possibility to integrate themselves in the educational administration. This facilitates teachers and students the usage of any kind of application from the own school and improves the communication and information flow in both ways.

Thanks to the networks because it is easier to overcome barriers, differences and inequalities. We can offer means of communication and access to information to the whole population under same conditions. In the same time it reinforces education in a European context, contributing to increased knowledge and establishing relationships within educational communities of the different European regions with common interests.

TEACHERS

- Professional information: For example information concerning legislation.
- Sharing experience, ideas and information with other teachers through e-mail, newsgroups, chat, announcements and meeting points.
- Participating in European educational collective projects and distance learning.
- Access to new tools and educational resources.

STUDENTS

- Communicating with students from other fields, practising languages, discovering different cultures and contrast ideas.
- Searching, selecting and evaluating information obtained from the web, the most extensive encyclopaedia, varied and up to date, and using this information as educational resources.
- Working in collaborative projects with students from other regions and countries in the same lecture room.
- Learning how to use new tools and new media to communicate with each other and how to publish information to potential and unlimited audiences.

EDUCATIONAL INSTITUTIONS

- The institutions improve communication between teachers, students and families spreading the educational offer (stages, options, formative cycles, internal information). The Plan de Centro gives information on activities outside of school.
- They facilitate the understanding between different classes of the educational community, improving communication and favouring meeting points as well as promoting other common projects with the aim to raise participation.

- They modernise and speed up its management. Concretely they grant consultations and they accelerate the access to titles and the acquirement of licenses for the teaching staff.

Financial aspects of Schoolnets

Red.es is an “Entidad Pública Empresarial” (public business entity), assigned by the Ministerio de Ciencia y Tecnología de España, (Science and Technology Ministry of Spain) which has approved a series of functions to contribute to the development of communications and the information society.

Red.es informs about the pilot stage concerning the Internet connection of Spanish schools via high-speed Internet: The Public Business Entity Red.es displays the tests that are running during the pilot: Thirty-one local spots will be connected to the Internet through satellite and broadband connections. [...] Regarding this pilot run, twenty-nine schools and a telecommunication centre have been selected to obtain data, which facilitates planned and extensive installations for the stage of general implementing. The participating schools are distributed across the whole territory. [...]

Organizational aspects of Schoolnets

The variety of interests leads to the creation of different networks. We consider ideological, pedagogical and economical factors affecting cooperation and diverse aspects, resources and (punctual and more structured) proposals. In some cases representation is the major objective; administration is not the main goal of initiatives.

Other schoolnetwork with other goals like cooperation or economical issues (in this field we consider ourselves networks that coordinate private educational centres, professionals, etc.), the majority is based on objectives of the possibility to create autonomous networks in order to exchange knowledge, in the broadest sense.

Most networks are like the mentioned autonomous networks and are not organized by any hierarchic structure and they develop also educational administrative processes.

Examples of Schoolnets

- **And@red**

<http://www.juntadeandalucia.es/averroes/~andared3/tic/modules/news/>

Within the framework of the second modernization and the decree of accelerating the introduction of communicational measures to become a knowledge society, the Council of Education developed the educational Plan [AND@RED](#).

This was necessary in order to advance the quality of life of people, to adapt the social and territorial balance and to facilitate the growth and competitiveness of productive patterns.

http://www.educacionenvalores.org/article.php3?id_article=155

<http://www.edured2000.net/news.asp?id=86>

<http://www.eurydice.org> is a network of information concerning education in Europe. Eurydice is a part of Socrates, the joint programme for education and training of the European Commission.

<http://www.educa.net> is an educational network, which has the intention to provide technology and pedagogical resources to educators, so that they are able to use new technologies applied in the educational sector.

Proyecto Atlántida reunites centres of several independent communities with the common objective to share experiences and initiatives concerning school democracy. The association of "Escoles Mallorquines" celebrated its XIX meeting this May in Mallorca. In Valencia there is the Federation of "Escoles Valencianes", which is an organization that consists of more and more associated schools every year. The main objective of these two associations is to defend the rural language spoken in public schools. There is a list of programmes of activities. Important are the activities of pedagogical innovation that are set out and impuled, not exclusively centred for linguistic topics. In addition there are other smaller experiments and case studies. They are also initiatives of the same administration (for example, the Green Schools, caused by the Council of Environment of Catalan Autonomous Government).

Use of ICT in schools

Generally schools still do not work with ICT and the majority of instructors who use ICT do it in a technical and superficial way (work instrument, information source) without any solid developed didactical approach. That is the reason why, far beyond of a certain digital illiteracy, the ITC supported education hasn't caused significant changes in the educational process nor have lead to increased performance of students.

The integration of ICT in education means its use in the learning and teaching process that takes place in and outside of the lecture hall, achieving the planned educational aims.

The adequate integration of new information and communication technologies (ICT) at educational institutions as a further tool depends on a few factors: the physical infrastructure, the programmes and furthermore the available educational resources, the training of the teaching staff and the integration of ICT within the curricula and in the management process in schools.

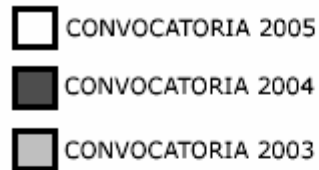
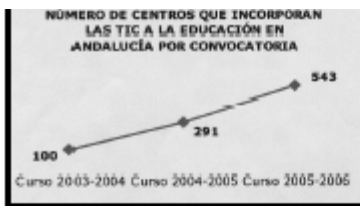
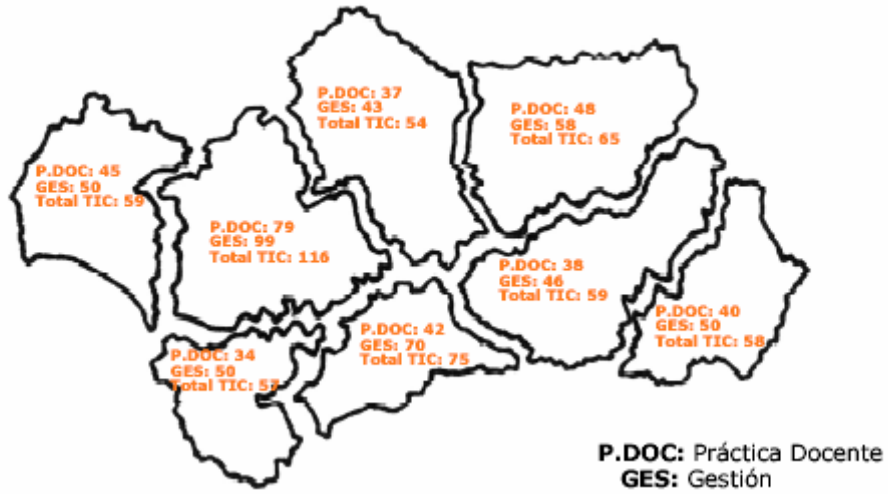
The existence of a good technological coordination in educational institutions or even better, of the educational technology departments, guarantees an adequate maintenance of teams, the technological (and didactic) training of teaching staff and the coordination of computers in lecture halls. This is without doubt very important to achieve integration of ICT supported teaching and thus will lead to an improvement of the teaching practices.

In any case the success of this integration will depend on adequate changes in teaching and in the organisational structure of institutions (every type of organisation implies determinate advantages and inconveniences). The integration of ICT in institutions not only raises the challenge to innovate teaching practice for the teaching staff by working with this media but also involves important organisational consequences (access to computer rooms, maintenance of equipment and installation of programmes...). The organisational aspects are a key element in the whole process of innovation.

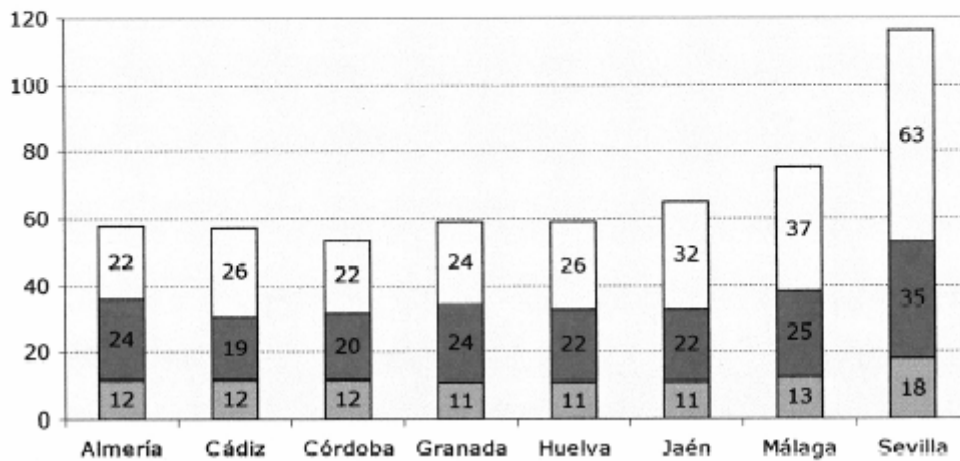
Every autonomous region of Spain has the competence for education and therefore the the autonomous government of each region is responsible for the educational use of ICT in institutions.

The displayed results are from Andalusia and are assignable to other regions since the mentioned region exemplifies:

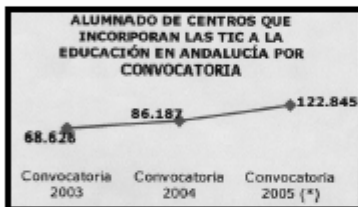
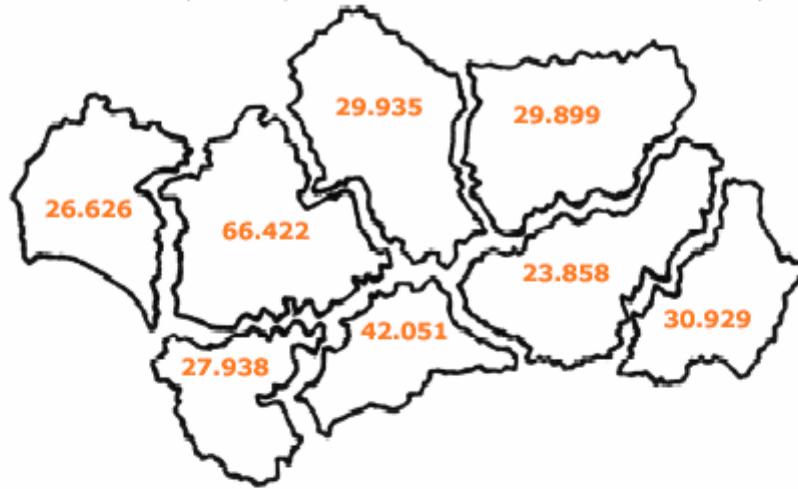
Centros que incorporan las TIC a la educación en Andalucía (2003 / 2005)



Centros que incorporan las TIC a la educación en Andalucía por convocatoria

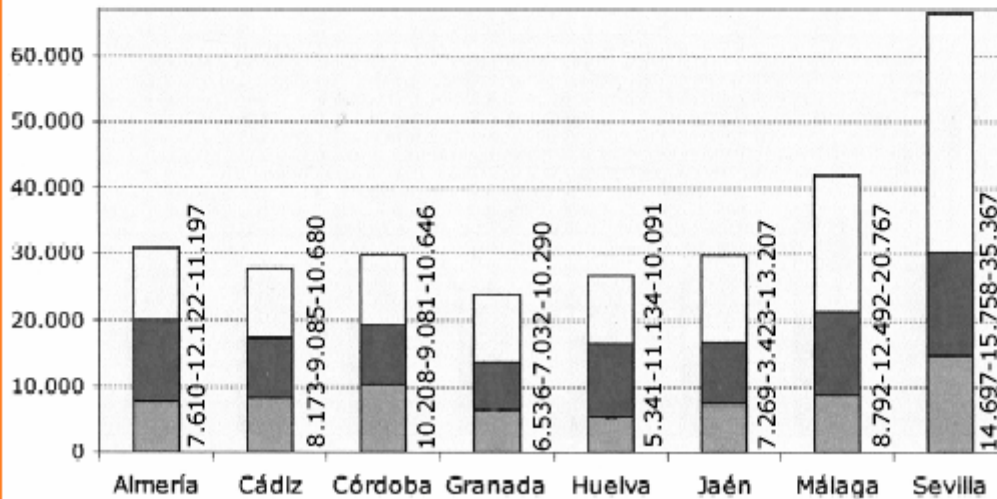


Alumnado de centros que incorporan las tic a la educación en Andalucía (2003/2005)

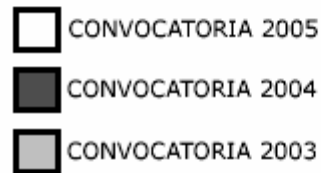
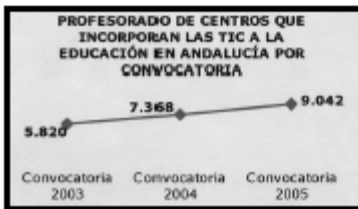
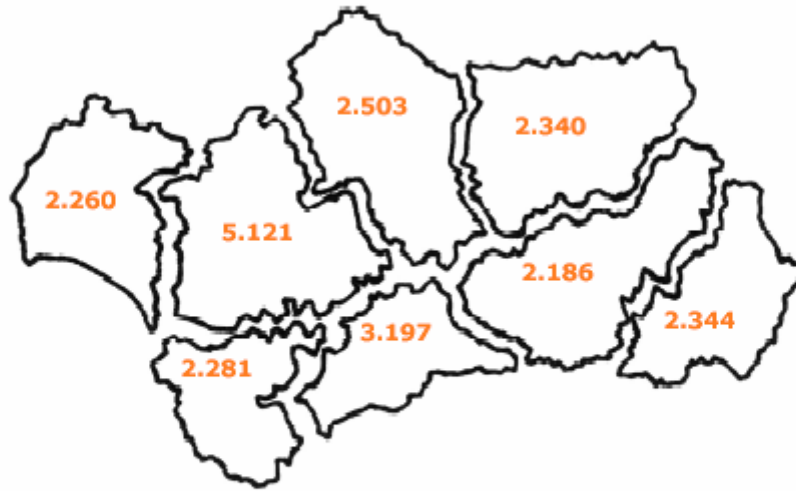


- CONVOCATORIA 2005 (pendiente de resolución)
- CONVOCATORIA 2004
- CONVOCATORIA 2003

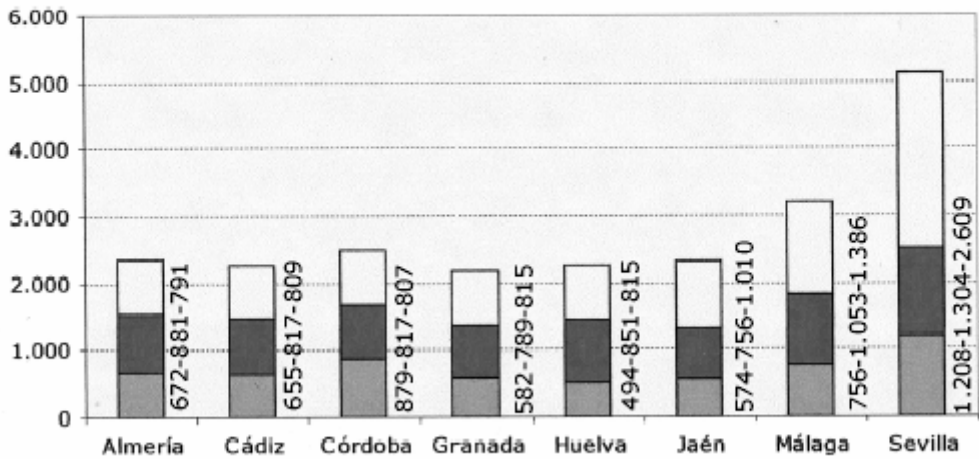
Alumnado de centros que incorporan las tic a la educación en Andalucía



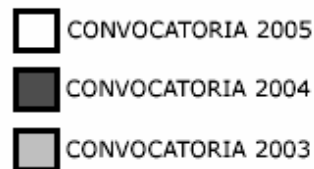
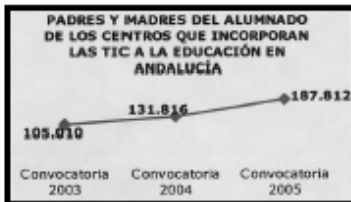
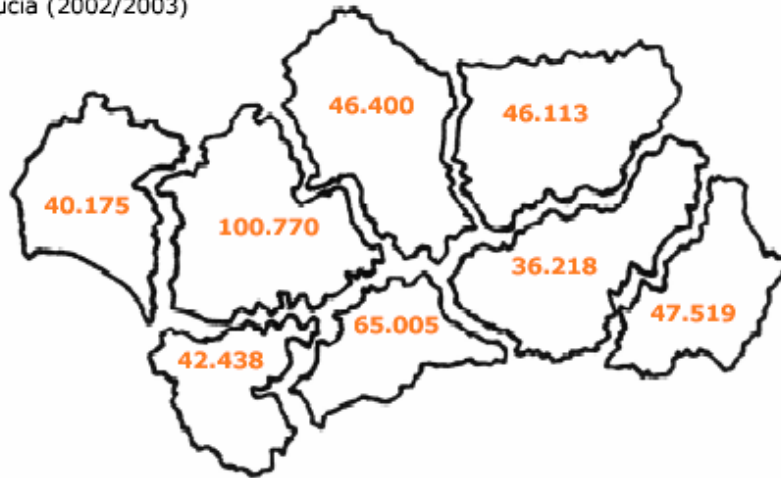
Profesorado de centros que incorporan las tic a la educación en Andalucía (2003/2005)



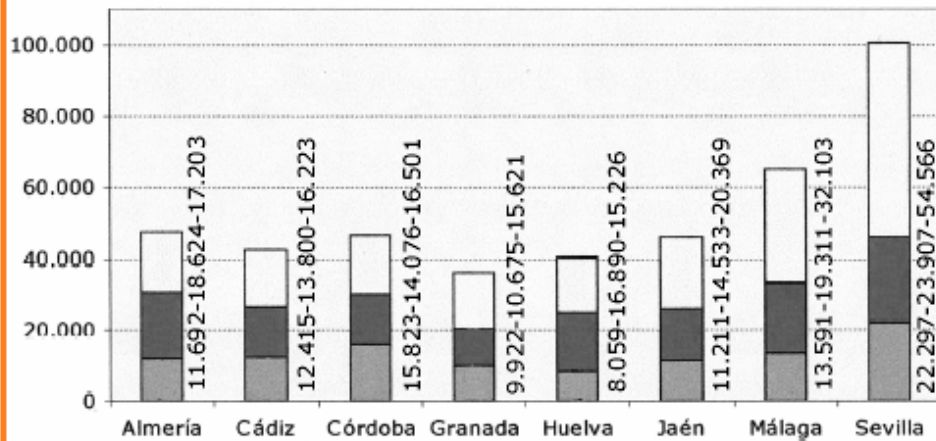
Profesorado de centros que incorporan las tic a la educación en Andalucía



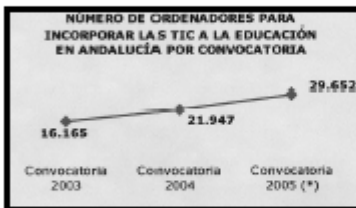
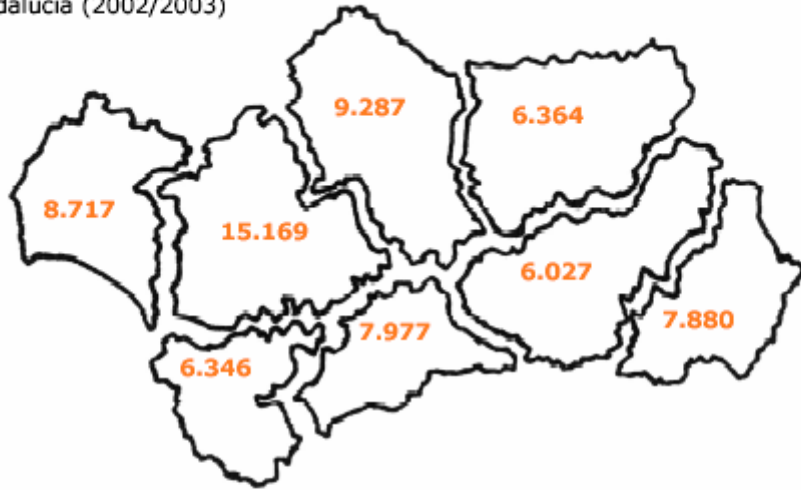
Padres y madres del alumnado de los centros que incorporan las TIC a la educación en Andalucía (2002/2003)



Padres y madres del alumnado de los centros que incorporan las TIC a la educación en Andalucía

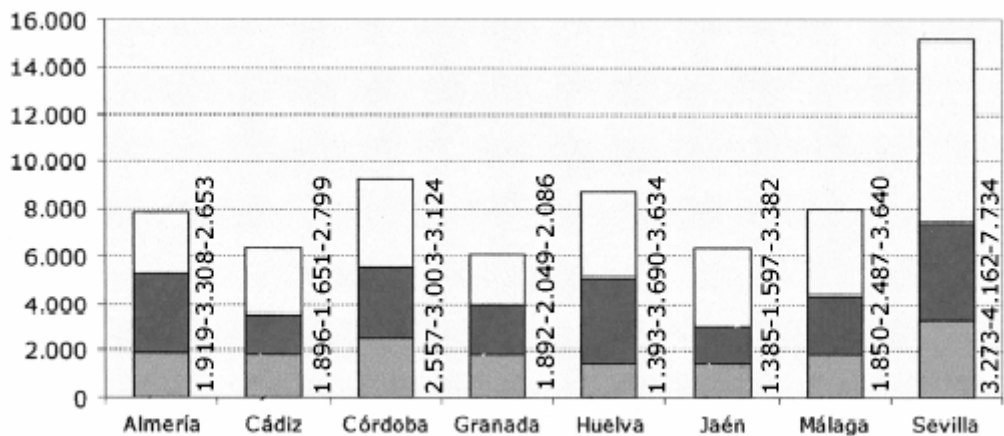


Número de ordenadores en centros que incorporan las TIC a la educación en Andalucía (2002/2003)

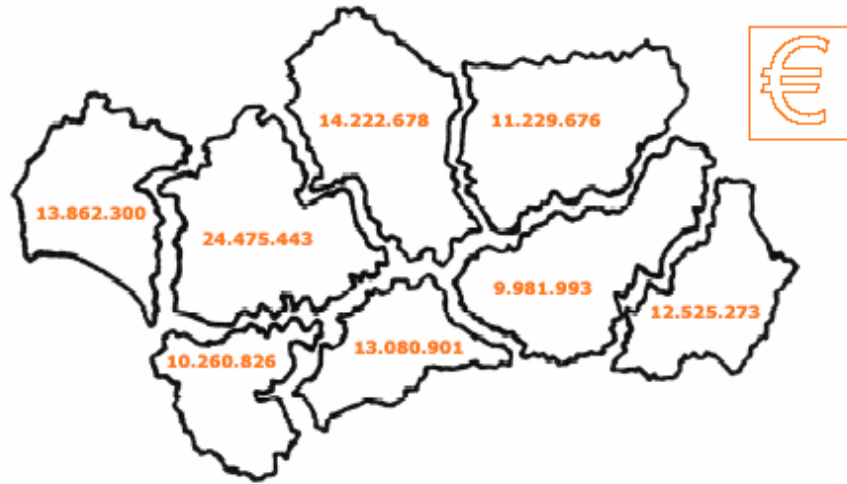


- CONVOCATORIA 2005 (pendiente de resolución)
- CONVOCATORIA 2004
- CONVOCATORIA 2003

Número de ordenadores en centros que incorporan las TIC a la educación en Andalucía

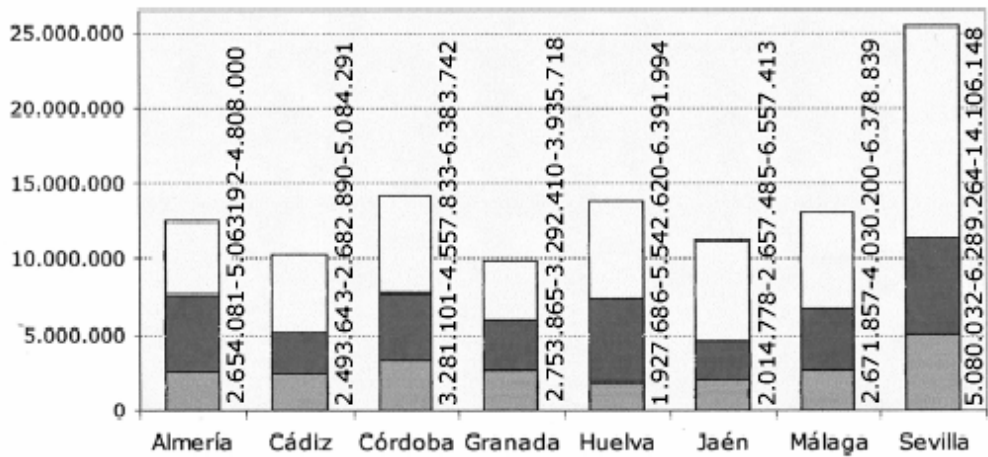


Inversión en centros que incorporan las TIC a la educación en Andalucía (2002/2003)



- CONVOCATORIA 2005 (pendiente de resolución)
- CONVOCATORIA 2004
- CONVOCATORIA 2003

Inversión en centros que incorporan las TIC a la educación en Andalucía



Why should we have Schoolnets?

We have to adapt the educational methods used in our institutions, to the information and communication society of the 21st century and the new media. Without doubt this contributes to an improvement in communication and to an increase in tolerance. Furthermore there is a better understanding between people. Distances become shorter, boundaries dissolve and any kind of differences decrease.

These facts indicates it easy to convince the local school associations, provincial communities and extra communities, in which a great number of teachers, students, directors of school centers and supporting personnel can be involved at multiple levels and in multiple disciplines.

Two school centres of two different countries can form a relationship with the objective to work together in a common project and sharing ideas and experiences.

It is possible to get in contact with any centre in the world via the Internet and the information and communication technologies.

For school centres it is possible to work beyond national borders and to take advantage of the pedagogical, social and cultural benefits of other centres.

There is a development and reinforcement in the use of networks and in collective learning. It is possible to work in the curriculum in a cooperative and simultaneously way, which offers young people the opportunity to learn about society and culture of others. Furthermore an improvement in computer science and in their linguistic abilities is noticeable.

Examples of European Schoolnets for schools

<http://www.edcities.org>

International Association of Educating Cities

<http://www.eduso.net>

Social Education Portal

<http://www.myeurope.org>

http://www.guiafc.com/ficha.asp?ld=41&ld_f=221

Iniciative R3L

European networks in order to promote local standing and regional networks for Life-Long Learning.

<http://www.elearningeuropa.info/>

<http://www.gsn.org/>

It is a network of educational resources that serves as a worldwide connection point for teachers.

References

<http://www.cnice.mecd.es>

<http://www.juntadeandalucia.es/averroes>

<http://www.program-nesquik.com/tic/castellano>

<http://www.us.es/us/enlaces>

<http://www.aulaintercultural.org>

<http://www.educa.madrid.org>

<http://www.gijon.es/rece>

<http://www.bon.es>

<http://www.cent.uji.es/octeto>

<http://www.eduteka.org/SeisElementos.php>

<http://www.eurydice.org>

http://www.cervantes.de/es/05_lehrerfortb/links.html

<http://www.edcities.org>

<http://www.elearningeuropa.info/>

<http://www.gsn.org/>