

The following article has been adapted from the report written by a group of ICT education specialists from overseas following their observation of ICT classes in several schools here. Brief details are included at the end of the ICT-Education set-up in the various home countries of the visitors and the report begins with an account of the debate they had on the motion that "IT is not a subject" and includes a brief account of their visit to the BETT exhibition. A list of the participants who contributed to the report is included at the end. I am most grateful to the organisers for their permission to publish this very interesting document. "O wad some Pow'r the giftie gie us ..."

As Others See Us

An adaptation of Andrea Bedo's report of the ARION STUDY VISIT
including contributions by other overseas educationalists.
(full list included at the end)

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Scope of Report

The whole visit was very well organized. We followed our planned agenda and the arranged visits covered a wide range of education establishments. We found staff and organizers very open and friendly and everyone we met took the trouble to give full answers to our many questions. So all attendees expressed the view that the visit had been extremely valuable and thought provoking. The truly European group felt that one week was too short to gain more than a brief overview on all the issues involved. As a matter of

fact this report cannot give an analysis and fully comment on all the special items of our visit.

The whole group felt that the opportunity to get to know how ICT is used both as a tool and as an important subject in all different types of school will be of great benefit for our future work back home. We all thank Peter and Carol Gossage once more for this excellent study visit.

Monday 10th January 2005

In addition to a getting-to-know-you session and a presentation on the

English Education System, the delegates took part in two debates.

Debate one: This house believes that IT is not a subject.



Those who proposed this motion presented a strong argument. IT is basically a tool and not a subject in its own right. It is more like a key to the door; an enabler. If something is used across the whole curriculum, it cannot also be a subject in its own right. A cynical view could also be taken in that the first computer was introduced as a status symbol in a school. As the numbers of computers in school increased, a room had to be found for them and so this was done and a subject invented in order to describe the activity of using them. IT must be used in all subjects when it is appropriate but does not exist alone and without content.

Those who opposed this motion maintained that IT is too important not to be dealt with in isolation. It has such an enormous influence on all we

do and this extends beyond education to the development of society, to communication and narrowing the gaps in the world between rich and poor. The enormity of this demands that it is treated as a subject in its own right in our education systems. Students arrive in schools with different IT capabilities and it cannot be assumed that they all have the necessary IT skills. Subject teachers do not have the time or may not have the skills to teach IT at the same time as their own subject. It is necessary to explore the varied and complex possibilities of IT in order to discover more about it. This was compared to learning to drive a car before using the skill to travel and explore.

The debate was opened to the floor where there were strong feelings on either side. Some believe that IT is most definitely a subject in its own right and that in a modern world it is essential to treat it as such. Others argued strongly that, as a tool, it must be incorporated appropriately in all that we do. It was also pointed out that it could not be a subject if pupils knew more about it than their teachers, as is often the case. The idea of working across the curriculum led to a consideration of breaking down further the notion of teaching in compartments and to innovations in entire education systems. There were still those who believed that IT must be treated alone, at least in the early

stages but a third way emerged in that eventually the inclusion of IT would



be inevitable and no longer a subject in its own right. This was reflected in the final vote.

There were 9 in favour of the motion, 0 against and 6 abstentions.

Schools Visited

There is a short summary of the visits to each school written by one of the visitors.

Ellen Wilkinson School for Girls, Queen's Drive, Acton London, W3 OHW

Seven members of our group Andrea Bedo, Fijbe Kruizinga, Gisela Lohbeck, Ibra Ba, Ismail Demir, Olimpia Bottalico, Viera Blahova had the great opportunity to visit the Ellen Wilkinson School for girls, one of the most outstanding public school of 1400 students in the London area, famous for its special use of ICT in

most subjects. Our visit lasted from from 9.00 a.m. to 4 p.m.

First of all we have to thank for most informing and warmful reception.

There was not only given a class to different schoolwork. We were included in a whole school day work.

1. Program

The purpose was to get to know the different pedagogical methods to integrate ICT tools within the different curricula.

After Mr. Bob Sanders, chief of the ICT department together with Ms. Liz Paice, Assistant Head, had given us an introduction speech, we visited the whole school area and attended several special ICT classes.

2. Output

ICT must be provided in sufficient hardware condition so that every pupil could explore by herself the benefit of the ICT tools that had been acquired in basic ICT courses. If ICT should have a chance not only in the core subjects but all the others, too, the government or who ever gives the money has to provide sufficient financial means!

Our group opinion

Regarding the outstanding means the Ellen Wilkinson School for girls can put into their ICT work by their own decisions remarkable results are achieved:

Normally ICT in normal schools is hardly integrated in all the core subjects, at Wilkinson School for girls

ICT is also used to compose and produce music of high quality from pupils of KS3 and KS4.

The same quality of ICT integration was shown to us in the art department, where students printed their own design products on a colour laser A3-printer.

This visit will be of benefit for all of us.

**Vittoria Primary School,
Half Moon Crescent, Islington, London,**

Participants: Hugo Cristovão, Jørgen Nielsen, Jörg Schumacher, Maria Perez Pintado

In Wednesday morning we visit the Vittoria Primary School. It is a school that seems a bit like an oasis in the middle of the desert, because it is placed in the centre of a neighbourhood that has many of disable problems. About 80% of the students are Moslems* from several different countries, and for 70% of them English is just the second language.

Still, they are normally very interested in education, because their parents see in it means to improve their children's lives.

There are 8 classes in this school, and there are 12 teachers, plus 10 teaching assistants, and 2 learning mentors.



The school really seems to work very well.

Every classroom already has a Digital White Board, and teachers use it a lot. They use it for all kinds of subjects, like Literacy, Mathematics, or Music, for instance, but still, maybe they don't use a big part of its potential yet.

The school also has a large classroom filled with computers that they use for especial classes and for the developing of some skills in the use of them.

All the schools of this area are connected by laser link, so they all can access Internet that is installed in all classrooms too.



Notre Dame RC School for Girls,
118 St George's Road, London E1 6EX,

Aim: To get acquainted with ICT in a Roman-Catholic school in London and with HW and SW and the use of it.

Participants: Viera Blahova, Ibra Ba, Olimpia Bottalico, Fijbe Kruizinga, Ismail Demir

Introduction: The school is a specialised school in modern foreign languages, fully funded by local authority, and sponsorships and grants. The school has 650 students, KS3 and KS4 secondary school age group 11-16.

60% are of African origin, most of the students are of various origins, multicultural school 45-50 teachers, 3.5 men, they are also of many nationalities (Caribbean, Portuguese, Spanish, Irish, Scottish, Indian, Uganda, Colombian, English) The school has outstanding results in GCSE.

The school provides three vocational subjects to students: leisure and tourism, health and social care and applied ICT. ICT in school:

HW: 150 computers (4 students per computer); there are 20-24 computers in the ICT laboratories, then 7-8 rooms with computers for languages and other subjects, and 15 computers in the library, 2 separate networks one for the educational use and the second for the administration, 20 smart white boards with PC and beamers 30-40 notebooks, every teacher gets one, if he wants; it is a loan.

SW: the school has plenty of SW for many subjects, PP presentations from BoardWorks Ltd Resources on the school intranet developed by teachers London Grid for Learning SIMS – Schools Information on Management System OMR – Optical mark reader

Use of the ICT: The separate subject ICT is provided one lesson per week in KS3 schedule:

9AM Arrival, Coffee and introduction to school by Mrs Town, Deputy Head, and Mrs Hutchinson, Deputy Head.

Then we split into two groups and each observed two lessons.

Viera and Ibra observed the ICT lesson with the use of spreadsheets,

Viera and Fijbe observed the lesson on Communication with the use of Wordprocessor, Fijbe,

Ismail, and Olimpia observed the Geography with the use of Internet and whiteboard on the Tsunami

disaster. Ibra has observed the HW and SW resources and the information on the final examinations,

Olimpia observed the use of ICT in administration, especially in financial program and management of the reports and description of administrative work.

We were provided with lunch. In the afternoon there was some time to discussion and questions. The school is running a School Development Plan which means that teachers are forming 5 strategy groups of interest: Assessment, Teaching and Learning, Accelerating learning, Emotional intelligence and Peer observations

Then we had a tour through the school in two groups accompanied by a teacher and a student.

Output: The school is very well equipped with high-tech and does not focus on ICT as a subject but as a tool for education. For the development of staff the training was not as successful as the recent initiatives with notebooks and whiteboards. Every student has an access to computers on the daily basis.

Tomlinscote School,

Tomlinscotes Way, Frimley, GU 16 8 PY

The Arion study participants at school: Luis del Pozo del Olmo from Spain, Gisela Lohbeck from Germany, Andrea Bedo from

Hungary, Blanca Banos Polglase from Spain and Grzegorz Kotrych from Poland .

The school has about 1500 students from 11 to 18 years old and 70 teachers. During the visit we had possibility to observe how the ICT s used at school during lessons and outside lessons. The organisation of the school was introduced by Mr Tom Paes who works as ICT Manager at this school. We are very much impressed with the way and importance of using ICT: the level and quality of ICT equipment such as wireless points used for security, database of staff and students, the management of the school. We met the Vice Principal who is responsible for resources and the Principal who explained the basic points of management of the foundation school focused on teaching foreign languages and exchanging students from different countries having more money for this project. Finally we met the Director of Language College. We hope to start organizing language projects together exchanging students or teachers.

Strand on the Green Junior School,

Thames Road, Chiswick, London, W4 3NX

Blanca, Maria, Luis, Grezgorg, Hugo, Jorg, Jorgen

In our all day visit to the school we were welcome by the Headmaster and

the teacher in charge of the IT devices. They gave us a tour around the different school playgrounds, computer labs, etc.

The school has 312 pupils from 7 to 11 years old, three classes of each group; 75 % from affluent families, 25% from social deprived ones.

They explained us that the ICT equipment is bought directly from the school but that they get some extra budget for this regarding a lot of papers. They have a person hired for the whole year coming one day each week to fix any technical problems. ICT equipment was 1 ICT classroom, small rooms with several laptops for special teaching instruction or personal work, computers-projector-ActiveBoard in each classroom.

We had the opportunity to attend whole class periods of different subjects and to see the role of the teacher.

All teachers of the same group age teach the National Curriculum through a shared scheme.

The teacher normally uses the Active Board software to introduce an objective of the curriculum, and that means interacting activities for the children to understand the task which is the main point of the lesson. After that the teacher may give extra explanations in a Blackboard and then has different worksheets or activities to work for gifted pupils, normal, and underachievers. In this way all the

students received a common instruction and then work in groups to meet their special needs. The pupils are sitting normally in groups of 4 to 8 depending on their abilities, underachievers sitting nearest to the teacher.

We were impressed with all the ICT equipment, how they combined ICT and classical instruction (methodology) and also the familiarity and comfortability they have using all the Active Board equipment.

**Edward Wilson Primary School,
Senior Street, London W2 5TL**

Participants: Hugo Cristovão, Jørgen Nielsen, JörgSchumacher, Maria Perez Pintado

In Wednesday afternoon we visit the Edward Wilson Primary School. In this school 80% of the students came from all around the world and there were only two or three English students by class. The school is well equipped and is integrated in a very nice residential area.

Two students made us a guided tour to the school and afterwards we had the occasion to see some lessons in different classes. We also had the opportunity to see the use of the Active Board in a Mathematics and Literacy classes.

The Head of the ICT Department explained us her projects and ambitions for the use of it in her

school. She told us that a part of the



teachers are already using very well the possibilities of the Active Board, but others still need technical training. They do seem very interested in exploring more of the ICT possibilities and aiming for better and deeper use of it.

Conclusions of group 3:

All primary schools are equipped with interactive white board systems. Some of these schools were fully equipped others partly.

The teachers were starting using new technologies in the class.

- Most of the teachers adapt the new tools to their traditional styles of teaching. Frontal teacher led instruction is still the most common style in the classroom.

They discover step by step the new possibilities.

Very often ICT was still considered as a subject but while getting more and more used to the use of new media teachers discover the need for integration of ICT in the subjects as a tool.

BETT

Thursday, January 13

BETT 2005 -Europe's largest and most prestigious education technology event of the year.

For an ICT co-ordinator, subject teacher, school leader or LEA officer, ICT is no longer a topic that we can choose to take an interest in. Technology now plays such a pivotal role in education that we must all take an active interest.

Developments in the ICT sector move at a rapid pace and an annual show like BETT is a platform for

Filling both the National and Grand halls at London's Olympia, BETT is a truly impressive sight.

BETT 2005 has shown us a selection of brand new features including:

Over 550 leading educational ICT suppliers covering all curriculum areas and all levels of education

Over 100 seminars and workshops from industry experts focusing on current issues in ICT



Teachers' TV – the first television channel for people who work in schools, launching early 2005

Dedicated areas for Special Needs, Software, Publishing, Library Resources, Film Production and Engineering

Every member of our group could find out how to embed ICT into his/her own subject area!

During our school visits we noticed that the schools had all a number of 'active whiteboard'. So at the BETT-exhibition we all were very interested in getting detailed information on 'active whiteboards'. For us matters not only the product details, but evenmore the possibilities that 'active whiteboards' can provide within our own educational methodologies.

There were a lot of demonstrations and in many cases sellers of other products used of active whiteboards. Visiting BETT has been an excellent way to continue discussions between members of the group about the use of ICT within education.

ICT in Educations Systems

ICT in HOLLAND

In all types of schools in The Netherlands ICT is considered as an important tool to improve education. Most of the schools are well equipped with hardware, software and internet access. A problem is the production of software in the Dutch language. A number of programs that are used are only available in English. The government provides each year a large amount of money for innovation-projects. Several schools have to work together with not-educational organisations to obtain a part of these funds. The government also took care of a general educational website for students, teachers and parents: www.kennisnet.nl.

Expecially in vocational education the use of ICT has been enhanced. These colleges and schools for higher vocational education focus on software for distance learning, digital

portfolios, web based testing and professional software. The teachers were obliged to train their own ICT-skills; all the schools got designated money for this purpose and most of the schools offered the teachers possibilities to follow the courses of the ECDL (European Computer Drivers Licence). There is a lot of criticism by the teachers about this approach, but nearly all teachers have basic ICT-skills.

ICT in FRANCE

The purpose of the implementation of ICT in primary and secondary schools which was undertaken as of September 2002, is to ensure better adaptation to learning, to take hold of the future. Pupils must acquire basic knowledge and skills in ICT so as to be prepared either for further education or professional world. As early as the central cycle (see previous document; class age 12-14) each student is provided with a laptop which may be taken home. Main figures in FRANCE 12,17 million pupils 59,000 elementary schools 6,940 junior high schools 2,620 senior high schools 1,750 vocational high schools State 30 districts "academies" 1,314 000 state employees among which 866,000 teachers Local authorities (regions, departments, towns) High school (autonomy,

project based development..) Three technological priorities; "Assistance aux utilisateurs"; a helpdesk to answer IT related questions (technical as well as pedagogical) for any school staff "ENS" : a content portal providing schools with basic educational content at low cost (encyclopediae, new archives..) "ENT": virtual learning environment (VLE) for schools

ICT in TURKEY

Turkish Education System in numbers:

In Primary, Secondary, Vocational and Technical High School, Open Education School

Students : 17.491.124

Teachers : 633.835

Schools : 53.556

ICT have been used approximately for 50 years in education system in those areas: „Teach To Future” Teacher Training Programme: A teacher education programme was initiated by the Ministry of National Education (MONE) titled „Teach to the Future” which gives priority to pedagogy by using technology classes to provide teachers with opportunity for integrating technology to their classes and help them to learn how to carry out educational activities based on interrogations and student-centred. In the framework of this programme

sufficient numbers of master formators were trained. Within the teacher training programme titled „Teach to the Future” in 2004 in nation wide 15.000 branch teachers planned.

Education All Materials

Education materials (CD/VCD/Audio CD, VHS video cassettes, audio cassettes, printed materials, films, film strips, etc) have been produced, broadcasted, distributed and documented for all levels and ages since 1951.

Open Education Institutions:

Distance education activities have been conducted at the primary and secondary level to meet their needs of disadvantaged citizens who couldn't complete their formal education due to different reason in this frame work, diploma oriented education has been provided at the Open Primary School and Open High School, and certificate programmes have been conducted at the Open Vocational and technical School. As of today, 1.000.000 students take advantage of educational services given at the open education schools.

Information Technology Classes For Public (Learning Centres) : Apart from student and teachers, it was ensured that citizens can benefit from ICT means in a more effective, efficient and intensive way of the schools which have ICT classes in some parts of Turkey.

Foreign Language Teaching Via ICT

One of the projects developed within the on-line learning is Foreign Language Teaching. In this project, a content developed as web based will be submitted to the students via internet throughout Turkey.

Vocational Education Activity

Within the framework of „Distance Education Programme with Certificate” an implementation of certificate on the subjects of „Computer Programming and Computer Information Management” was initiated in coordination with the Ministry of National Education and universities.

Basic Education Programme:

Within the studies for ensuring to improve efficiency and quality in education to enable individuals that graduated from current education system to improve their skills on the use of contemporary technologies, to access information, to produce information and to spread knowledge, significant steps has been taken in creating knowledge society.

Education Portal

Ministry of National Education (MONE), with the support of contemporary knowledge and communication technologies has been making great efforts to realize educational portal, a system providing continuity, lifelong learning in informal education and supporting formal education.

Broad-Band (ADSL) Connections:
In Cooperation with Ministry of National Education (MONE) and Turk Telekom Corporation and within the „Internet Accessing Project” in 2004. MONE will provide ADSL internet accessing and related services to totally 42.534 schools in four phase throughout Turkey. With the establishment ADSL at schools, teachers, students and administrators will be able to watch live web TV and video broadcast at high quality levels, music broadcast will be listened to at CD quality, downloading and uploading at high speeds, tele conference, e-Education possibilities and easily access to private networks and video catalogues will be available. For more information:
<http://www.meb.gov.tr/indexeng.htm>

ICT in SLOVAKIA

The aim of the Infovek project is to change through information and communication technology the traditional school to a modern school of the third millennium. Within the horizon of five years 1999-2003 there was the intention: to build up in all secondary schools and basic schools in Slovakia (about 3300 schools) Internet multimedia classrooms connected to Internet, to prepare a modern curriculum for individual subjects, to contribute to a great

extent to introduction of new concept of education and teaching, to train thousands of teachers for the use and application of latest ICT. The infovek project has four basic pillars:

Infrastructure – hardware, software and connectivity

Educational content– CD Roms and programs to download and educational portal www.infovek.sk with resources from teachers to teachers

Teacher training – ICT basic skills and a first information on pedagogical use

Digital enlightenment – opening the ICT laboratories in schools to local communities The aim of the Infovek Project is to prepare the young generation in Slovakia for life in the Information Society of the 21st century, in order to prove competent in the knowledge economy, and to create the preconditions for the young generation to be competitive on the global labour market, especially in comparison with the young people of the same age from the European Union. The Infovek Project provided Internet access to 1/3 primary and secondary schools by the end of 2003. All schools are already connected to the Internet and received 6 IBM PCs during the year 2004 due to the donation of Deutsche Telecom. In addition to the Internet connections, teachers are being trained to use ICT and integrate it with teaching and

learning process using multimedia materials and digital content. All pupils of Slovak schools should have a real possibility to work with the Internet in the near future, from the large cities up to small villages; not only the children from rich families in private schools but also the children from poor families that would not have otherwise a chance of access to a computer and Internet. The basic goal is to secure that all children have equal opportunity to find a placement in the information society

ICT in ITALIAN SCHOOLS

In the last three months, the Italian school system has made great leaps forward in ICT. In a short space of time, it has caught up with the European average in terms of equipment. In all schools, there is now a wide range of technology available. PCs are now widely present, having increased from 1:28 in 2001 to 1:10.9 in 2004. Internet connectivity is over 85% in the majority of schools. There are over 23,000 dedicated computer rooms across all the phases with over 700 establishments having wireless connectivity. This increase is spread across all schools. This equipment will fully support the introduction of ICT. New legislation, 53/2003, has

required that the new technology is to be used across all subjects.

New optional courses based both in and outside schools have been prepared for teachers in order to use the new technology. These are also aimed at administrative staff and are, indeed, more popular in this area. It is expected that IT will be used in all areas of the curriculum, including extra curricular activities. At the age of 15 there should be 1 PC to every 20 students. In technical schools, this should increase to 1PC for every 8.3 students. The average of this provision is 1 PC to every 10.9 students.

ICT IN POLAND

ICT in Poland as in other countries take very important role and is also introduced in the school curriculum in primary and secondary education for students from 6 to 16 years old. Children during primary education have at least 2 hours of computer science in 4th fifth and 6th Years. Additional lessons are also possible and paid by the government from the hours left to the school head's discretion. This means that the governing body and the head decide how to realize these lessons. 9 lessons for three years. Students in lower secondary education Gimnazjum also have at least 2 hours of computer

science and additional lessons are possible depending on the decision of the governing bodies at schools. Every school in primary and secondary education has computers distributed by the Ministry of Education. It does not work in small schools in the country where the ICT is not introduced properly. We believe that as in the most countries in Europe also in Poland schools will have free access to the Internet. Now it is only partly paid by the government.

ICT in DANISH SCHOOLS

You can find a shortly descriptions of the Danish school system in English here

<http://eng.uvm.dk//publications/factsheets/fact2.htm?menuid=2510>

Denmark has come a long way in the attempt to ensure a sufficient integration of ICT in education. From first embedding ICT in all curricula via focusing on the access to computers and educational software, through national action plans to ensure high speed internet access in all Danish schools, the Danish Ministry of Education now focuses on teacher training. The ICT in education action plan of the Danish Minister of Education states that by 2003 all Danish teachers must possess adequate, relevant, measurable and homogenous pedagogical ICT skills to

ensure a sufficient ICT integration in all subjects at all educational levels.

The development of the Pedagogical ICT licence has helped push this development, and its decentralised model has ensured local commitment while still maintaining a sufficient degree of national quality control.

Pedagogical ICT Licence:

A pedagogical boost to schools

A Pedagogical ICT Licence is a comprehensive, flexible and efficient in-service training in the pedagogical integration of ICT in education. It focuses on ICT and learning, Relevant ICT skills, The use of electronic resources and the Internet The planning of good practice It combines Workshops with flexible learning and face-to-face teamwork Theory and practice on ICT and learning with the acquisition of basic ICT skills Peer to peer collaboration with assessment from a facilitator Key objectives of the Pedagogical ICT Licence The Pedagogical ICT licence must substantially contribute to meet the needs for ICT-pedagogical competences of the educators · Contribute to improve the pedagogical practice of the participants in relation to the integration of ICT

Contribute to an increased use of e-learning that meets the needs and qualifications of the individual educator

Philosophy and Basic Assumptions

One of the key objectives is to give

each teacher the opportunity to take his point of departure in his working and social context. Another one of the founding principles of the pedagogical thinking of the Pedagogical ICT licence is that knowledge and competences do not arise through the transport of information from one person to another, but that learning is a result of collaborative learning through contributing, creating and acting. Each Pedagogical ICT licence is controlled by a political steering committee with representatives from the Ministry of Education and all central actors in that particular field of education. The steering committee is responsible for the overall development, implementation and maintenance of their Pedagogical ICT licence. The existence of this committee means that all discussions about whether this is a relevant course in terms of content, about the terms of teachers' participation etc. are dealt with on a political level during the development of the course. Thus, when the course is ready for delivery, the educational community is immediately ready to adopt it. A Pedagogical ICT licence is developed with central public funding, where as the implementation and use of the course is paid for locally. Thus the owners of the schools (either self-governed, municipality, county councils or the state itself) pay for teachers' participation in the course –

paying both the tuition fee and a reduction in teaching hours for the teacher. Some areas have used a model where educators receive a pc as compensation for (part of) the time spent following the course. Often the teacher does not get a one-to-one reduction in teaching hours but will have to spend some amount of spare time following the course. The teachers generally accept this as they realise the immediate benefits of attending the course, both because they accept the need for re-qualification in this area and because they can use the result of the assignments in their teaching practice. Junior Computer Drivers License.

The Ministry of Education is launching the Junior Computer Drivers License for compulsory education. The Junior Computer Drivers License is to develop and strengthen the pupils' competences within the area of IT and media. Now the pupils in compulsory education can get a Junior Computer Drivers License. The Junior Computer Drivers License has been developed as part of the project IT, media, and the Folkeskole. The purpose is to teach pupils in the Folkeskole how to use IT and media in everyday life. Minister of Education, Ulla Tørnæs, believes that it is important for the pupils' future approach to new technology that they learn about the possibilities within IT and media early on in their

schooling. “The purpose of the Junior Computer Drivers License is to teach the pupils to employ IT and media and to understand and reflect on how they are used appropriately and in keeping with the times. It is our goal that IT shall have a special place in the educational system and that IT shall be integrated into subjects in all forms and at all levels where it is natural”, she explains. The Junior Computer Drivers License is launched, as a part of the Government's action plan for IT in the Folkeskole and the teaching of IT and media shall be an integrated part of the school's subjects. The content of the teaching is divided up into five main areas: learning processes supported by IT and media; gathering of information; production and analysis; communication; and computers and networks. In the years 2004 to 2007, a total amount of DKK 495 million has been earmarked for the purchasing of computers for 3 rd form and increased use of IT in all forms, including special education, in-

service training of teachers, development of new forms of organisation and teaching, and diffusion of the Junior Computer Drivers License. This is how to get started on the Junior Computer Drivers License A school can issue the new Junior Computer Drivers License to its pupils once it is registered as a Junior Computer Drivers License school. The schools can register electronically from 1 April 2004. Participation is free of charge for the Folkeskoler in 2004 and 2005 after which there will user fees in the area. Furthermore, in 2004 and 2005 the Folkeskoler can receive a grant for training a Junior Computer Drivers License coordinator who can introduce the concept to his/her colleagues at the school and assist in carrying out evaluations of the pupils' competences and issuing Drives Licenses. 40% of schools are in January 2005 JPCCK/schools.

The table below shows how many pupils there are for each computer in

	1992	1996	1999	2002	2002 ¹⁾
	Antal elever pr.:				Antal computere
- nyere computer ²⁾	63	28	10,8	9,8 ³⁾	60.400
- computer i alt	35	13	8,8	7,2	82.000
- computer med internetadgang	-	-	17,7	9,0	66.200
Eksempel: Antal computere på en skole med 350 elever					
- nyere computere ²⁾	5-6	12-13	32-33	36	-
- computere i alt	10	27	40	48	-
- computere med internetadgang	-	-	20	39	-

the schools in Denmark. In 2002 there was 9 pupils per computer connected to the Internet. (In November 2004 the number are 5-6 pupil for each computer)

The national educational network for Danish schools you will find at

www.emu.dk

In Denmark we have about 50 schools that are member of ENIS-network – www.enis.dk In my town Randers, Krstrup School are ENIS-schools.

<http://www.krstrup-skole.dk/>

Most of the schools in Denmark have an Intranet for teachers, pupils or parent. For both teachers and pupils there are some learning facilities:

Teacher's intranet

Example of “virtual learning room” in pupil’s intranet



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Pupil's intranet



ICT in PORTUGAL

In Portugal ICT had started to be used in schools a few years ago, and it is now part of the curriculum. In Primary schools there are computers but there is a rate of something like 10 students by computer, so we still have to improve that. There has been a big effort to make that all schools could have their own web page, and that every student in the last year of primary school (about 9, 10 years old) already use their e-mail's. Of course there are cases of more advanced use of ICT, doing work groups, web researchers, presentations, etc. ICT are starting to be introducing to pre-

school to. In the other levels of school things are better, there is a large use of some ICT potentials, but sometimes its impossible to do more because schools are not yet well equipped. Even so, there is a big consciousness of the ICT potentials in the transformation and improving of education, and the teachers and the education authorities are doing big efforts to make their use more natural and possible. Teachers have being trained in the use of ICT and children also have a lot of skills that they naturally bring to school, because there are a lot of things that they do out of school witch enlarges their interest in computers and all around it.

ICT in EDUCATION /BADEN-WUERTTEMBERG/GERMANY

ICT in secondary education In Germany every country (Bundesland) is autonomous in the domain of education and has its own educational authorities and realisations. In Baden Wuerttemberg ICT is mainly found in secondary education. In the past ICT was considered as being a subject in the three forms of secondary schools (Hauptschule – general secondary school, Realschule – middle schools and Gymnasium – grammar school). With the introduction of new curricula for all schools in september 2004 this situation will be changed. ICT will be part of subjects and more considered as tools for communication and learning. ICT in primary education

Until now ICT played a minor role in primary education. This was mainly due to economic and conceptual reasons (educators found it more reasonable to prevent children from using media in school !!). Schools were not hindered or discouraged from using technologies but there was no special budget available for purchasing hard- and software. At the moment the Ministry of Education tests and evaluates the use of ICT in 30 primary schools and a decision will be made afterwards.

Introduction and support The introduction and integration of ICT in schools is accompanied by a 5 years programme called the “Medienoffensive Schule 2”. Within this programme the followings goals are considered:

- Development of ideas about the integration and use of ITC in various subjects
- Gathering of best practices examples
- Information on media and the use of media in education
- Provision of special networks (Windows 2000, Novell and Linux) for schools as well as hotline and support services
- Virtual distribution of media via the internet which will have a tremendous impact on the methods of teaching (Sesam project).

In addition to these efforts it is foreseen that schools should prepare a media development plan (Medienentwicklungsplan) in a three steps approach: Description of a pedagogical vision (How do we want

to develop and how do we want to use media in this context?) Description of the technical infrastructure needed to realise this vision Description of the steps of realisation and financing of these. This approach started recently and is still voluntary. It is considered as a mechanism that allows schools to define their needs in terms of · technical infrastructure, · further education of teachers (ITC, new methods of teaching and learning, didactical issues). · And it allows to plan development paths(technical, economic) for both the schools and the school authorities.

All these activities are supported by the network of public media centres (Landesmedienzentrum Baden-Wuerttemberg and Kresimedienzentren).

ICT IN SPANISH EDUCATION

ICT in Spanish education started in the eighties, when the Government responsible for sll the schools in the country decided to send some PC's to some Secondary Schools under a project called ATENEA. This computers where mainly used for teaching Basic and MS-DOS by teachers who voluntary decided to reach as a optional subject in the curriculum of 14-15 years old pupils. The Government also established a department who was in charged for

ICT technologies in schools (Hardware, software, training for pupils enrolment) called PNTIC (Programa de Nuevas Tecnologias Informacion y Comunicaion) now CNICE. This department is the whole beginning of the ICT school development. Due to political changes in our country (Constitution have transferred educational responsibilities to the Autonomous Communities).

We know have different political ICT and department in charge of ICT. We will taklk about how is this is in our communities but all of them had been helped to develop it by PNTIC (CNICE) and inherited in the philosophy already established. CNICE

www.cnice.mecd.es The objectives of this Web site are: · Help to use the New Technology · Training through Internet · Development of software and material for schools · Help and coordinate the Autonomous Communities about ICT · Educational TV It is very interesting to know the area that is called the “observatory”. It was designed in 2003.It has four items: · Informatics' technology · Software · Documents · Technology sources

The curricular integration of the ICT The strategy focus on curriculum enhanced by using ICT rather than ICT as a subject or and isolated tool no t related to the different topics

taught. We intends to focus not only on integrating ICT in school, but on changing school itself, by using the resources as tools (not as targets) for adapting objectives, contents and methodologies to the new social situation our pupils are surrounded by.

Educational Aims:

- Developing learning through the development of the pupil's own cognitive universe
- Developing collaborative work (short and long distance)
- Developing the use of new means of expression
- Promoting the integration of information of different sources: analogical (including written) and digital
- Changing the way knowledge is transmitted in our school

Equipment

ICT Classroom

Pre-school Classrooms

Teachers' room and Departments

Ordinary classrooms

Specific thematic projects

1. ICT Classroom in Primary and Secondary Education · With one computer for two pupils · Specific furniture, which promotes team work and grants and ensures pupils space enough for handling printed materials · Net connected and with its own Internet access no cost for the school · Connected through an interactive multimedia network · A multifunctional device which integrates net scanner and net colour printer · A digital photo camera

- Videotape recorder
- Video capture tool
- Handwriting capture tool
- Camera for opaque bodies and slides
- A Linux user server, with tools for communication and group work, as well as more net security
- Classrooms computers will have a dual start system, so that pupils can progressively approach to Linux, according to their own needs
- And with the required specific software

Pre-school Classrooms · In each Pre-school classroom integrates a "Computer Corner", with a computer, a scanner, a colour printer and the appropriate software · The initial resources will be completed through the following interventions:

Teachers' room and Departments ·

Some computers, depending on the number of teachers in the school · In High Schools, Departments will be progressively provided

Ordinary classrooms A more restricted number of computers will progressively be incorporated to ordinary classrooms, as far as there are specific projects focusing on exploiting these resources in such situation

Specific thematic projects·Specific resources for the development of thematic projects on Music, Arts, Laboratory, Technology, Mathematics

The use of networks and resources

At the national level:

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

- At the regional level:

- o Castilla Leon

<http://www.educa.jcyl.es>

- o Madrid

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

- o Castilla La-Mancha

<http://www.jccm.es/educacion/althia/alhia.htm> <http://www.althia.net>

The rest of the Autonomous websites can be found in the national website (CNICE)

ICT in HUNGARY

In Hungary, the development of basic ICT skills is a top priority, in order to facilitate the progression of students in the information society, their entry to the labour market, and their participation in LLL (life long learning).

In 2002, The Minister of Education revealed the government's educational ICT strategy, Schoolnet Express (SULINET EXPRESSZ). The main objectives of the strategy are the following:

Providing internet access for all schools by 2005

Achieving better student per computer ratio (1 computer for every 5 secondary and every 10 general school students)

The initiation of ICT education in the 5th grade (opportunity earlier)

Free computer skills examination



(ECDL) for final grade students of secondary schools and teachers

- The promotion of digital content and curriculum development. The PHARE-funded E-learning (Internet-based education) programme also serves this latter goal. The programme consists of tenders for general schools requesting the transformation of existing teaching content into e-learning materials, or the adaptation of educational software for use on internet etc. The government has taken further measures to narrow the information gap between different social classes. Customs fees for ICT equipment have been reduced and households with school-aged children may apply for an annual 250 € tax benefit when purchasing computer equipment as of 2003. In spite of all these efforts, no successful solution have been found so far to provide for cheap access to the internet.

Continuation of Contact

All group members were in favour of maintaining contact. The group expressed the wish to cooperate more closely in the future in COMENIUS or LEONARDO projects. The experience of the week was very positive: sharing views, expertise and ideas of different approaches to ICT integration in education.



The British Council is the UK's national agency administering the EU's Socrates education programmes, of which Arion is one. Each year in April/May, they take applications from UK education specialists to attend study visits in other countries. In October/ November each year, they also recruit hosting organisations to publicize best education practise in the UK. If you would be interested in participating in the Arion programme of in hosting a visit, please contact the European Educational Services team:

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<http://www2.britishcouncil.org/socrates-sfe-study-visits-for-decision-makers.htm>

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