Calimera Guidelines

Cultural Applications:
Local Institutions Mediating Electronic Resources

Learning (formal and informal)

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Lifelong learning is “all learning activity undertaken throughout life, with the aim of improving knowledge, skills and competence, within a personal, civic, social and/or employment-related perspective”.\[1\] It may or may not involve obtaining a formal qualification. It ranges from pre-school years to post-retirement, from formal learning in schools and universities, through vocational training in workplaces, to informal learning such as parents learning ICT (Information and Communication Technology) skills from their children, and includes “edutainment” such as watching television and visiting museums.

Learning is not confined to institutions such as schools and colleges. New technologies can offer all members of society the opportunity to match learning to their specific needs and circumstances. For example, the home is becoming more important as a learning environment for many people, including disadvantaged groups such as the unemployed, people with special needs and those in remote locations.

The European Union is committed to lifelong learning as an integral part of its aim to make Europe the most competitive and dynamic knowledge-driven economy in the world.\[2\] In July 2004 it published “An integrated action programme in Lifelong Learning” \[3\], and has set up PLOTEUS (Portal on Learning Opportunities throughout Europe) and The Learning Citizen to provide information. \[4\] Many national governments also have learning policies and targets, for example on basic skills and language learning for all citizens.
Many museums, libraries and archives are proactive learning institutions, using their storehouses of learning materials for the benefit of their users. However, all cultural heritage institutions need to respond to policies and developments which are acting as drivers for change. These include:

- EU and national targets as already mentioned;
- government agendas which are increasingly “joined-up” (for example education is no longer solely the responsibility of education departments, schools and colleges; crime prevention is not only the province of the police);
- technological developments which are making possible the delivery of education through a growing range of interactive and mobile devices;
- the emergence of a generation of students, and teachers, who expect learning to involve technology in an interactive and exciting way;
- the demise of many old traditional industries and the growth of new knowledge-based industries requiring new skills;
- the need for all active citizens to be digitally literate;
- the expansion of the EU and the opening up of labour markets across national boundaries, increasing the need for language skills etc (see the guideline on Multilingualism);
- the growth in migration and asylum seeking, increasing the need for knowledge of world cultures (see the guideline on Cultural identity and cohesion).

**GOOD PRACTICE GUIDELINES**

Museums, libraries and archives need to build a learning culture into their policies. Making themselves into “learning organisations”, which involves encouraging and facilitating the learning and skills development of staff (see the guideline on Staffing), will impact on the delivery of services to end users. A learning policy could include:

- providing effective learning opportunities (by consulting teachers, students and employers within the community, and by building partnerships with schools, colleges etc);
- creating an environment which is conducive to learning (by providing study facilities, education spaces, staff support for learners, IT equipment etc);
- responding to political initiatives relating to learning, including applying for funding;
- promoting the organisation as a place to learn;
- evaluating the impact on learning of all services provided.

For a detailed framework on becoming a learning organisation in its widest sense see *Inspiring Learning for All*.[5]

**Children and schools**

Museums, libraries and archives can contribute to the development of children’s intellectual, emotional, social, linguistic and motor skills, help them acquire an aesthetic sense, foster an interest in literature, science and the arts and stimulate creativity.
The report *What did you learn at the museum today?* showed that “through the enjoyment, engagement and surprise that pupils experience during their museum visit, they are inspired to learn more, to broaden their aspirations and to feel more confident about themselves as learners”. [6]

*Inspiring Children: The Impact of the Summer Reading Challenge* (held annually in UK public libraries) gives evidence that children enjoy reading and want to read more, that it broadens their horizons and instils confidence. [7]

*Raising educational standards in schools and beyond* contains several examples of children using and learning from archives. [8]

Cross domain projects such as CHIMER show how creative children can be given the resources and tools. [9].

In many cases museums, public libraries and archives have privileged relationships with local education authorities, which presents an opportunity to enhance their role in support of the school curriculum. They often have educational departments which provide services such as:

- the lending of books, objects and copies of documents etc. to schools for project work;
- homework clubs;
- an education room, or even a small area, where classes or groups of children can engage in activities like handling objects, making models, cooking, dressing up to “live the life” of people from a different time or place, and using technology to do research on the local area;
- an online networked learning environment aimed at children, teachers, parents and carers and accessible in schools, homes, clubs, etc.;
- links to specially designed homework help websites which can be particularly useful in remote areas;
- specially created online learning packages and directories of resources to support national and local curricula;
- support for children who are taught at home, either from choice or necessity, who might otherwise feel isolated. [10]

Support for children’s learning can also be provided in less formal ways, by for example:

- providing safe meeting places. “Safe” in this context should be extended to online services (see below);
- providing opportunities for shared enjoyment between children and adults involving for example using computers, games, story-telling, exhibitions, film, music and other cultural activities which increase the potential for constructive use of leisure time;
- providing services attractive to client groups associated with children, such as parents, grandparents, carers, teachers, childminders and playgroup leaders;
- ensuring that opening hours are family friendly;
- having interactive exhibits which are especially attractive to children;
- organising holiday activities to ensure skills are not lost during time away from school.
**Online services for children**

Children enjoy using ICT as is evidenced by the popularity of computer games. When ICT is used in teaching they are often more likely to be interested and engaged, especially when the systems are interactive and/or enable them to be creative. The UK National Archives *Learning Curve*, an online teaching and learning resource, is very popular with both teachers and children.[11]

The provision of Internet services to children however requires decisions to be made regarding filtering, and whether access to services such as chat lines should be allowed. Careful consideration must be given to the use of filtering software and/or acceptable use policies which require parents or guardians to give permission before their children can access the Internet. Filtering or blocking is the process of preventing access to sites. For information on European initiatives on filtering, particularly on filtering in different languages, see Net Protect, supported by the European Safer Internet Action Plan [12].

In some legal settings the publicised use of filtering software may create an implied contract with users that they, and especially their children, will not be exposed to harmful or offensive Internet material. No one is in a position to guarantee this and users of terminals on which the software is installed should be made aware of its shortcomings. On the other hand, some jurisdictions in Europe, like some in the USA, may not permit censorship of the Internet. Acceptable Use Policies (AUP) are a way to address these issues: such policies should be made known to both staff and public and should be in line with any national policies such as those produced by national library associations. In some circumstances, the formal acceptance of AUPs is a condition of membership of the institution or of using its facilities. (See Earl issue paper: *Internet Acceptable Use Policies*. [13].)

**Adults**

Education for adults can be formal or informal. Formal education leads to a qualification and usually takes place in colleges and universities, but can take the form of distance learning linked to a college or university. Cultural institutions often work closely with educational institutions to support formal learning by, for example:
- providing study space with books and IST equipment for distance learners;
- making their collections available for research purposes;
- liaising with teachers in order to provide relevant and timely support for course work;
- outreach work, such as providing expert staff to give talks to students;
- contributing content for the creation of “learning objects” and Virtual Learning Environments (see e-Learning below).

However, museums, libraries and archives are more often associated with informal learning. This often begins with someone pursuing an interest. Cultural institutions contain resources which can provoke curiosity, stimulate discussion and inspire creativity. They can meet the learning needs of many different kinds of learner. Ideas for services and activities which stimulate learning could include:
- theatre, drama and dance workshops;
- short courses;
• reader development through book lending, reading groups, author events and provision of appropriate literature for beginning readers;
• web-based book selection tools;
• book delivery schemes for ethnic minorities who may not find it easy for cultural or social reasons to visit a library;
• reminiscence therapy for older people, including the loan of archival boxes to groups, or outreach events such as film shows, to stimulate memories, conversation and interaction;
• art exhibitions;
• guided tours;
• handling of objects;
• using archives to teach interpretation and deduction skills;
• provision of facilities for people to create and/or add content to community websites, including the loan of recording equipment and/or digital cameras to local groups to record events.

The desire to pursue an interest can lead on to the acquisition of basic skills.

**Basic skills and key competencies**

Basic skills are usually understood to mean literacy and numeracy, but the Lisbon European Council in 2000 identified five additional areas of basic skills for the knowledge-based economy:

• ICT (Information and Communication Technology) skills, or digital literacy (see below);
• technological culture;
• foreign languages;
• entrepreneurship
• social skills.

These have developed into three areas of key competencies [14]:

• personal fulfilment and development throughout life (cultural capital): key competences must enable people to pursue individual objectives in life driven by personal interests, aspirations and the desire to continue learning throughout life;
• active citizenship and inclusion (social capital): these key competences should allow everybody to participate as an active citizen in society;
• employability (human capital): the capacity of each and every person to obtain a decent job in the labour market.

Museums, libraries and archives are well placed to contribute towards equipping citizens with all these skills and competencies, as well as more advanced skills (see the guidelines on Social inclusion, eGovernment, and Social and economic development).

**Digital literacy**

The e-learning programme [15] promotes digital literacy as one of the basic skills of all Europeans and also addresses the contribution of ICT to learning in general, especially for those who, due to their geographical location, socio-economic situation or special needs, do not have easy access to traditional education and training. The use of ICT provides new learning opportunities, but conversely it can also increase the risk of creating a digital divide which can lead to the social exclusion of those who, for whatever reason do not have, or do not choose to have, access to ICT. New
learning environments, often involving a combination of e-learning and traditional teaching methods, are needed to combat this. Personalised approaches can be very effective (see the guideline on Personalisation). Research shows that museums, libraries and archives can be particularly effective in working with communities and individuals at risk of exclusion, drawing them back into the learning cycle and improving their quality of life. Examples of good practice in this area can be found in the Links. One of the goals of the eEurope 2005 action plan [16] is for all museums, libraries, archives and similar institutions to be connected to broadband networks so that they can play a key role in spreading digital literacy. Many are now providing instruction in this area leading to qualifications such as the ECDL (European Computer Driving Licence) [17].

There is now a need to go beyond ECDL in order to foster the acquisition of related skills, e.g. a European Information Literacy driving licence has been mooted. The European e-Skills Forum has identified a skills gap and recognised the need for more advanced ICT skills including e-business skills. [18].

**Employment-related skills**  
Another aim of the eEurope 2005 action plan [16] is to equip everyone with the key skills needed to improve their employability. Many new jobs are being created in the IST sector. Cultural Institutions can provide services ranging from information for job-seekers (newspapers, commercial information etc.) to online learning centres. They can also liaise with local firms to provide specific work-related courses, and can provide knowledge management strategies for small firms, voluntary organisations, charities etc. LearnEast, funded under the EQUAL programme, "is an innovative and stimulating project piloting new ways for public libraries to work at a community level supporting employment for disadvantaged groups [19]." The final report [20] was published in August 2004 and concludes that most success can be achieved through partnership working with formal education providers.

**Accreditation**  
Relatively few cultural institutions yet provide structured or accredited learning, e.g. involving tutors or mentors. However, accreditation must be considered if museums, libraries and archives are to be taken seriously as learning providers. This includes accreditation for their own staff for the skills needed to support learners [21], as well as accreditation for learning undertaken by users. Certificates of learning enable comparability between formal and informal learning, are an incentive for learning, and a proof of skills valuable for jobs. This is particularly the case if the qualification is widely recognised like the ECDL [17]. Accreditation can also act as a measurement of impact. Museums, libraries and archives should explore the creation of formal links with accredited educational providers with a view to being able to offer certificates of achievement which would have national and international recognition. with other learning providers (colleges, universities, distance learning organisations, and workplaces) to facilitate accreditation.

**Impact**  
Accreditation can also act as a measurement of impact [22]. Impact measurement is an important tool in finding out if local management is effective in achieving its objectives. It can also be used to provide evidence of meeting government and other
targets, and also to present to funders when necessary. However, many users of museums, archives and libraries have unfocused and undeveloped agendas for learning and in these cases measurement of impact will usually be a combination of statistics and anecdote. Users make their own judgements about the success or otherwise of their visit (whether on-site or on-line) and surveys can reveal whether they feel that they have increased their knowledge and understanding; improved their intellectual, practical or professional skills; or changed their attitudes or values as a result of their visit. Statistical evidence can take the form of numbers of people reporting that they have moved on to do a formal course, have obtained a job or a better job, or have gained a qualification, etc.

**e-Learning**

New technology has increased opportunities for learning and changed the way learning is delivered. Most cultural institutions now have websites, many have set up virtual reference and enquiry points, and communities of interest are being created regardless of geographical location of the members. However, simply displaying objects (taking “objects” in its widest meaning to include books, documents, audio-visual formats, pictures and any other digitised resource) on a website is only the beginning of providing an e-learning experience. An “object” needs additional information to enable it to be understood; for example a picture of a household appliance becomes more useful if information about what it was used for is added. As more museums, libraries and archives are digitising their collections they are emerging as storehouses of “digital objects”, or durable digital resources which can be combined together to create “learning objects” usable in a wide variety of learning scenarios. If these “objects” are to be re-usable in many different combinations they need describing using standard metadata schemas. There are various schemas and local museums, libraries and archives may need to seek advice from regional and/or national agencies or professional associations, or from parallel educational agencies, regarding which one to use. They include:

- IMS Learning Resource Metadata Specification [23];
- IEEE Learning Object Metadata Standard [24];
- Dublin Core Metadata Initiative [25];
- CanCore (Canadian Core Learning Resource) [26];
- ISO/IEC JTC1 SC36 [27];
- SCORM (Sharable Content Object Reference Model) [28];
- UK LOM Core (UK Learning Object Metadata Core) [29].

The use of digital content brings up issues of copyright, authenticity and integrity (see the guidelines on Legal and rights issues and Security). These matters could be dealt with by incorporating metadata about rights issues into the descriptions.

Work is ongoing on standards and specifications for LOM (Learning Object Metadata). For a description of research in this area see the Digicult Report *Learning objects from cultural and scientific heritage resources*. [30]

Adults as well as children can be motivated and inspired by using ICT. The European Commission set up Netd@ys to raise awareness of new media, sounds and images as resources for learning and teaching. Netd@ys provides an open platform for all those who are willing to display their experiences of educational and cultural
networking and who wish to develop international links with the creative use of new media in day-to-day learning. [31]

**Virtual Learning Environments**

VLEs manage and deliver “learning objects” and administer communication between teachers and students. Their objective is to guide a student through a course of study and they are typically made up of elements such as:

- details of the course/curriculum;
- details of “learning objects”;
- guidance, advice;
- assessment, tests, accreditation;
- student details, including tracking the student’s progress;
- teacher details;
- communication methods, e.g. e-mail, online tutor support, discussion groups, peer support, etc.

There are commercial VLE packages available e.g. Lotus LearningSpace, COSE and Learn eXact [32]. At the present time however it is more usual for cultural institutions to provide “learning objects” to educational institutions to be used in their VLEs.

**Managed Learning Environments**

The term MLE is used to include the whole range of systems and processes of relevance to learning within an institution. A VLE may be one of its components, along with student record systems, financial systems, etc.

**Interactive television (“T-learning”)**

Broadcasters are discovering the resources held in museums, libraries and archives to be a rich source of programming content, and curators should seize opportunities to work with them. It may also be an opportunity to make money from the collection (see the guideline on Business models).

Watching a television programme can stimulate visits to a museum, library, archive, gallery or heritage site. Often programmes will advertise links to websites, which will lead to increased virtual visits, or publish booklets to which the cultural institution can contribute, and maybe sell from its gift shop or website.

Digital television is making more channels available so there is more programming time to fill and more choice for viewers. It is also interactive so viewers can take part by answering questions etc., and can personalise it for their own learning use. New ways of storing content mean that much larger amounts of content can be stored than on a video or DVD. Content could be stored locally in the home or remotely and accessed through a distribution channel when required.

The UK Learning and Skills Council is currently (from Sept.2004) conducting a pilot project looking at the feasibility of using interactive TV as a way of engaging people in learning. The Finnish public service broadcaster YLE’s Teema has a channel with cultural and educational programming and interactive services. RTE, the Irish public service broadcaster, has plans for an interactive learning channel. In Italy RAI, the
public service broadcaster, has expanded its video-on-demand schools service via digital satellite, and Stream, one of Italy’s commercial operators, has introduced a language learning interactive service based on multiple-choice questions. (See Links). For a discussion on this subject see Atwere, Daniel and Bates, Peter: Interactive TV: a learning platform with potential [33]. See also Bates, Peter: t-learning Study: a study into TV-based interactive learning to the home. Final Report. pj Associates, 2003 (This study was carried out with funding from the European Community and includes an overview of developments in European countries) [34].

Mobile learning (“M-learning”)
This is learning through a mobile or wireless device. Already many students have access to laptops, and nearly all have mobile phones. Mobile phones are very prevalent among young people, even those at risk of social exclusion, who have not succeeded in the education system, are not currently involved in any education or training and may be unemployed, under employed, or even homeless. Soon it will be common to own a PDA (Personal Digital Assistant) which will allow even greater flexibility in terms of where it can be used and how much content it can store. A PDA could for example be used on location in a museum, gallery, archive, library, field centre or heritage site to link with learning modules created by tutors or by the cultural institution. Online seminars and tutorials could be conducted with all students and tutor connected. The e-Innovation Centre in Birmingham, UK, held a workshop in June 2004 on the potential for handheld computers in universities and colleges. [35].

FUTURE AGENDA
The experience gained from projects such as LearnEast [19] needs to be shared across domains and countries to enable the development of similar innovative approaches.

The role of museums, libraries and archives in the learning process needs to be established and recognised by policy makers, the formal education sector and the public.

Museums, libraries and archives need to raise awareness in the education sector of their digital resources. More co-operation is needed between the two sectors.

Research needs to continue into cross-sectoral standards to co-ordinate cultural metadata standards with educational ones. Cultural heritage professionals need to continue to be involved with this.

The creation of reusable “learning objects” will enable resources from any organisation regardless of geographical location, domain, size, etc, to be linked together for educational purposes. For example information about World War II from all over Europe could be brought together, including documents in archives, militaria in museums, books in libraries, reminiscences on websites and in sound archives, popular music of the time, films, etc.
The spread of broadband connections, interactive TV and mobile technology is opening up learning opportunities.

Content from TVs, websites etc. can be downloaded onto mobile devices. As the capacity of PDAs and mobile phones increases people will be able to learn on the move, e.g. on the train.

Broadcasters and those in mainstream education and training need to work together on ways to utilise the range of interactive digital TV technology solutions that are starting to emerge. They should aim to move the focus from broadcast/scheduled programmes to interactive personalised TV.

Cultural heritage institutions, as content providers, should aim to produce digital content that will work with the full range of digital delivery technologies

In the future people will be able to access VLEs whenever and wherever they want to. Content in cultural institutions will reach wide audiences without wear and tear on originals.

Technology is already enabling museums, libraries and archives to deliver exciting informal learning experiences such as personalised guided tours and virtual tours. Future developments in this area will be limited only by imagination.

The challenge facing society now is to bring together teachers, service providers and the developers of course content, including cultural heritage institutions, in order to make available to everyone relevant, stimulating, affordable and high-quality learning services.

REFERENCES


The Learning Citizen http://www.learningcitizen.net/

http://www.mla.gov.uk/documents/id1185exec.doc

http://www.readingagency.co.uk/


[9] CHIMER 
http://www.chimer.lt/index.en.htm

[10] See for example Education Otherwise 
http://www.education-otherwise.org/

http://www.learningcurve.gov.uk/

[12] Net Protect, supported by the European Safer Internet Action Plan 


http://www.cede.it/ri2003/moe/sito/docCD/Altri%20documenti%20Commissione%20Europea/key%20competencies_27_03_02_en.doc

http://elearningeuropa.info/doc.php?lng=l&id=4552&docLng=1

[16] eEurope 2005 action plan 

http://www.ecdl.com/


[19] LearnEast: Public Libraries Supporting Employment 
http://www.learneast.com/


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[21] See for example the UK Guidance Accreditation Board http://www.gab.org.uk/


[25] Dublin Core Metadata Initiative http://dublincore.org/groups/education

[26] CanCore (Canadian Core Learning Resource) http://www.cancore.ca

[27] ISO/IEC JTC1 SC36 http://jtc1sc36.org/

[28] SCORM (Sharable Content Object Reference Model) http://www.adlnet.org/

[29] UK LOM Core (UK Learning Object Metadata Core) http://www.cetis.ac.uk/profiles/uklomcore


[31] Netd@ys http://www.netdayseurope.org/


International

*Intel Computer Clubhouse Network*
This is an after-school learning environment for young people aged 10-18. The aim is for young people from disadvantaged communities to become technology literate. Members have access to state of the art computer technology to create animation, music, videos, graphic and Web designs, robotic constructions and computer programmes. Volunteer mentors come from Intel, the local community, IT facilities and colleges to support club members in their work. The first club was created in 1993 by the MIT Media Lab and the Computer Museum, now part of the Museum of Science, Boston, USA. There are now more than 60 Intel Computer Clubhouses in 10 countries, including Denmark, Germany, Ireland, Italy and the Netherlands. [http://www.intel.com/education/icc/](http://www.intel.com/education/icc/)

Europe

*The Learning Citizen*
EC sponsored initiative with the specific objective of facilitating and enhancing lifelong learning for all members of society. [http://www.learningcitizen.net/](http://www.learningcitizen.net/)

*m-learning*
This EU IST 5th framework project was set up to develop and test mobile communications systems for the education of young adults, specifically those most at risk of social exclusion. The aim of the project is to investigate how the technologies popular with these young people might be used to engage them in learning activities, start to change their attitudes to learning and thereby contribute to improving their skills, opportunities and lives. Trials are taking place in Italy, Sweden and the UK. [http://www.m-learning.org/index.shtml](http://www.m-learning.org/index.shtml)

Austria

*ZOOM Kindermuseum*
This is a place of playful inquiry, learning and discovery for children. It gives young museum visitors the chance to ZOOM in on new situations and use all their senses to grasp the world around them. [http://www.kindermuseum.at/](http://www.kindermuseum.at/)

Belgium

*Stichting Lezen Vlaanderen (Reading Foundation)*
Collaborates with libraries to promote reading through campaigns and projects e.g. “Youth Book Week”, “Fahrenheit 451”, “Read to others Week”, etc. [http://www.stichtinglezen.be/](http://www.stichtinglezen.be/)
Bulgaria

Kids on the web – project of Dobrich Municipality Library
The aim is to introduce children to ICT, and to the opportunities of the Internet for making contacts and for searching for information.
http://www.libdgabe.dobrich.net

Croatia

Zadar City Library website
The children’s department website was designed together with children, and because of its simple maintenance, its interactive content is fed by children. For example children design online quizzes themselves, and winners receive gifts from the library.
http://www.gkzd.hr

Czech Republic

Karlov Vary and Plzeň public libraries
It is possible to get the international certification ECDL (European Computer Driving Licence) in the Educational Centres of the Libraries in Karlov Vary and Plzeň.

Knowledge for everybody (Mudrc pro každého)
Special websites for children and young adults with information adapted to their needs.
http://www.knihovna.kvary.cz/Portal/UVOD/MUDRC.HTM

Memory Institutions in Kromeriz - Competition for Children
Competition organised by all memory institutions in the town (archive, library, castle and museum). Each institution contributes a few questions and the children must visit every institution and use their online catalogues etc. to find the answers.
http://www.knihkm.cz

Univerzita Volného Času
University of free time in the Regional Library of Highlands in Havlickuv Brod.
http://www.kkvysociny.cz/UVC/default.htm

Finland

ELEF : North Karelia
Co-project of three main Joensuu libraries, the polytechnic, the city and the university, to help customers and staff learn new skills (e.g. information literacy) and the knowledge needed in the information society.

Tiedonhankinnan taidot
The material on this site, which is part of ELEF Northern Savo, is suitable both for private study and for the teaching of information retrieval skills.
http://www.uku.fi/elef/tiedonhankinta/
YLE Teema
Digital TV channel dedicated exclusively to culture, science and education. http://www.yle.fi/teema/

France

CARIBAL-ÉDIST
Funded by the EQUAL Programme and a partner in the LearnEast Project, this project aims to improve lifelong learning opportunities, particularly among older workers in Martinique, by training library staff to benefit the communities served. http://malavoi.martinique.univ-ag.fr/caribal-edist/index1.php

Ireland

LifeSteps
Public libraries initiative which provides the general public with instructions for using the Internet to achieve particular life goals, e.g. shopping, travelling, preparing for a driving test, planning for retirement, etc. Backed up by support from library staff and the availability of public-access Internet PCs in every library, the project aims to encourage the day to day use of the Internet and overcome the digital divide. http://www.lifesteps.ie/

Italy

Abside
Project within the framework of the EQUAL Programme, launched by the European Union to facilitate the inclusion of disadvantaged people. The project aims to test how new models based on training services offered by libraries can support activities targeting discrimination and exclusion problems. The project targets both librarians and end-users. http://www.amitie.it/; http://www.britishcouncil.org/tisa_abside.ppt

Macedonia

Heritage Education on Web Sites
This web application arose from a 3-month project of interactive heritage education involving the Museum of Macedonia and groups of high-school students from Skopje and Norway, within the framework of European Heritage Days 2002. Works created by the students were displayed on the site so that they could be seen by many more young people in both countries. The web-application was chosen as a completely new way for young people to learn about the heritage of another country without spending money on travelling and accommodation. http://edkn.com.mk

Norway

Terra Buskerud
This is a web-based tool developed mainly for educational purposes aimed at strengthening interaction between schools and the cultural sector. The county is cooperating with archives, libraries and museums to develop an extensive database about the history of the county of Buskerud. Pupils are also producing content. This
is a new way of publishing historical content covering a long time span as a multimedia presentation. The service also has a version for users with a visual disability. It is part of a Scandinavian project, Terra Scaniae, (http://www.ts.skane.se/), and there are plans to extend it to the Baltic countries. http://www.historieboka.no

**Portugal**

*Project BiblioiCiência*
To contribute to the fight against low performance levels of Portuguese students in science and mathematics, the Department of Libraries and Archives from Lisbon Municipality visit schools with a bus equipped with a laboratory. The bus is linked with five municipal libraries. Schoolchildren are invited to visit these libraries in order to play games about science and do scientific experiments as well as to borrow books and other library documents about science. There is also an Internet site to which teachers and library staff can upload contents to use during classes and to support homework. http://www.bibliociencia.cm-lisboa.pt/

**Romania**

*Ethnographic Museum of Transylvania Cluj-Napoca*
The museum has developed a multimedia CD about Ion Creanga, a famous Romanian writer, for use in schools which do not have access otherwise. Because of the audio-video features, children with disabilities can use it. Also used in the City Prison.

**Russia**

*Local Studies School for the Young*
The Central City Children’s Library of Ozyorsk has developed and implemented a local studies project, which includes a programme of additional education for schoolchildren. The programme contains lesson scenarios, tests and event scenarios. http://ch-lib.ozersk.ru/projects/enc/krai/index_kr.html

*Obruch*
The Central Children’s Library of Kamensk-Uralsk has developed and implemented this programme under which the Infancy Problems Information Centre has been established. Targeted at child readers and adults involved in childcare, the programme aims to develop a wide range of intellectual, social, ethical and basic life skills. http://k-uralsk.ru/bazhov/bazhov2.shtml

*Program of Establishment and Development of a Virtual Children's Centre of the Northern Administration District of the City of Moscow on the Basis of Children’s Library N 149*
The Central Library (the Gorky Library) of the Northern Administration District of Moscow has developed and implemented this project, which is aimed at developing the intellectual and cultural potential of teenagers. http://www.big75.org.ru/v_center.doc

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Slovenia

Slovene book quiz for children
Multimedia reading project for elementary schoolchildren. Its theme is traditional (a Slovene author and his/her native region), but its form is very modern (an interactive literacy project that makes schoolchildren use libraries and look for information sources (books, periodicals, audio-visual material, internet pages, etc.).
http://www.lj-oz.sik.si/kviz/

Spain

Gabinetes Pedagógicos de Bellas Artes of Andalusia
Museums, libraries and archives have benefited from the work carried out by these organisations which work with children and schools to open local memory institutions to the community.
http://averroes.cec.junta-andalucia.es/gabinetes/

Internet para todos
This is an initiative of the Ministerio de Industria, Turismo y Comercio, whose aim is to foster Internet literacy in the population at large. A network of centres cooperates in the project to provide the ECDL (European Computer Driving Licence).
http://www.internetparatodos.es

TUNE Project (Training of library users in a new Europe)
This project, developed by the Regional Library of Castile-La Mancha, the Public Library of Helsinborg (Sweden) and the Public Library of Randers (Denmark), and funded by the EU programme Culture 2000, promotes digital literacy for library users.
http://www.jccm.es/bibliocl/}

Sweden

Arkiv och skolungdom i Värmland (Archives and School Children in Värmland)
School learning package that introduces pupils to archives.
http://www.ra.se/vla/index.html

Kunskapskanalen (The Channel of Knowledge)
An interactive channel established in co-operation with Swedish public libraries through the e-service “Ask the library!”
http://www.kunskapskanalen.se/

United Kingdom

Ask Chris
This is an online and interactive source of reading advice. The “Quick Reads” section is a unique feature developed in conjunction with Basic Skills tutors in the Adult Education Department of Essex County Council to support emergent readers.
http://www.essexxc.gov.uk/askchris
**Be Websmart**
This project developed by Dumfries and Galloway Libraries, Information and Archives promotes safe and responsible use of the Internet, by demonstrating a creative and positive use of Internet resources, in particular chatrooms. It has raised awareness of the positive contribution to be made by local libraries in addressing community safety issues.
[http://www.dumgal.gov.uk/ia](http://www.dumgal.gov.uk/ia)

**Cambridgeshire Libraries - Ely Learning Centre Courses**
Ely Learning Centre is accredited by the British Computer Society to offer ECDL, and by the OCR Examinations Board (University of Cambridge Local Examinations Syndicate) to offer New CLAIT and CLAIT Plus, and is one of relatively few public library services in the UK offering learning leading to a qualification.

**Curriculum Online**
An online catalogue which gives teachers easy access to a wide range of multimedia teaching and learning resources, all linked to the school curriculum in England. Museums, libraries and archives are among suppliers of content, and there is a special section of the website for them dealing with how to prepare content etc. There are also examples of good practice.
[http://www.curriculumonline.gov.uk/culture](http://www.curriculumonline.gov.uk/culture)

**'Hands-On Learning' with Reading Museum Service**
A service for schools based on the use of real museum objects. It is a collaborative project supported by museum curators and devised by teachers and includes interactive online services as well as more traditional visits and loans etc.

**I Can Read You Like A Book**
An online book group hosted by East Lothian Libraries, Scotland, for people who don't have the time, opportunity, or confidence to attend a group in their community. Members are welcome from anywhere in the world and can post and read messages about books on a different theme each month.
[http://www.icanreadyoulikeabook.org.uk/index.html](http://www.icanreadyoulikeabook.org.uk/index.html)

**KickstartTV**
The Learning and Skills Council is conducting a pilot project looking at the feasibility and effectiveness of using interactive digital TV as a way of attracting adults to learning. In the pilot phase (6 months from September 2004) it will be aimed at improving literacy and numeracy through activities, quizzes and games in subjects such as job skills, DIY, gardening, shopping, money matters, health and cookery.

**Metadata for Education Group (MEG)**
MEG is considering the implications for metadata to support Managed or Virtual Learning Environments (MLEs, VLEs).
[http://www.ukoln.ac.uk/metadata/education/](http://www.ukoln.ac.uk/metadata/education/)
**SCRAM (Scottish Cultural Resources Access Network)**  
Award winning learning image website with access to quality images, sounds, movies and learning resources, including over 300,000 images from museums, galleries and archives. The full service is available on subscription to schools, tertiary education, libraries, museums, and community and home users. [http://www.scran.ac.uk/](http://www.scran.ac.uk/)

**USA**

**Connecticut History Online (CHO)**  
Provides information, lessons, activities and other resources to help teachers and students use Connecticut History Online as a window to the past and tool for discovery and understanding. [http://www.cthistoryonline.org/classroom.html](http://www.cthistoryonline.org/classroom.html)

**Lower East Side Tenement Museum**  
At this museum new immigrants learn English through the letters and diaries of immigrants of an earlier century. [http://www.tenement.org/](http://www.tenement.org/)