Research On Line: Internet for Educational Purposes (IEP)

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يهدف هذا المقال إلى تبيان أهمية الإنترنت بالنسبة إلى الباحثين في الميدان التربوي، إذ أنـه جـاء كنتيجة لتجربتنا الشخصية في ميدان استعمال خدمات محطّات شبكية من أجل اسـتخراج الوثـائق في هذا السياق التي نقوم بتقديم الإنترنت في شكل تعاريف تقنية و تطبيقيـة مسـاندة ببوبليوغرافيـا مـع مجموعة من الأساسيات المنهجية المتفق عليها.

Introduction

The technological boom that has characterised the last decade was behind the emergence of a virtual world called Internet where transactions, be they or not of a commercial nature, are held within a very short time and regardless of the situation of the contractors. Today, people do no longer talk in terms of distance and countries and words such as earth, planet, surfing, e-mail, shopping on the web and online serve the new fashion. So, it is but logical that Education, as a component of modern life, be invaded by Internet as well. The aim of this paper is to demonstrate how useful is Internet for researchers in the educational realm. It gropes for sharing our personal experience in using web sites resources for documentation purposes. To this end, we will introduce Internet in terms of technological definitions and applications. An illustrative webliography together with a comprehensive set of methodological conventions would be made use of as well.

1. Internet :

Internet is a world-wide computer network which ' offers instant access to hundreds even thousands of computer files relating to almost any subject, including articles, illustrations, sound and video clips and raw data' (Lester, 1999: 28). So, we can consider Internet as a sort of technological exhibition of

virtual goods (be they of commercial, educational or informative nature). In other words, it is a technological application of scientific advances in the realm of human communication whereby one is enabled to interact with the whole world outside using one's finger - tips and eyes.

2. World Wide Web (WWW):

It is a group of interrelated computer files displayed in the form of programs we reach thanks to browsers such as Netscape Navigator and Microsoft Internet Explorer. These programs appear on the screen in the form of pages which are constructed through the use of particular complex languages called Markup Languages enabling the computer to decode them. Among these languages we can cite :

- Hypertext Markup Language (HTML) : It uses ' tags to describe how data will be presented on a web page' (Davis-Tanous, 1999 : 1).

- Standard Generalised Markup Language (SGML) : It ' allows a programmer to format documents' (Davis-Tanous, 1999 : 1).

- Extensible Markup Language (XML): It combines features of both HTML and SGML and is characterised by the fact that it is compatible with many browsers and ' capable of formatting data so that information on the WWW is found more quickly and easily' (Dvis-Tanous,1999: 1).

The network of the WWW is opened to access through websites (home pages of libraries, companies, administrations...) which are connected through hypertext links. The latter are '« hot » text or icons that, when clicked, instruct the computer to perform certain functions, such as to go to another file within this vast network (web)' (Lester, 1999 :28).Each file in the network has a particular address which is specified in a particular format called Uniform Resource Locator (URL).

One has to note that the WWW is not the only existing protocol (i.e. technological process) for technological transmission of data. Indeed, other protocols may be used. Among these protocols we can cite:

- Gopher: Unlike the WWW which enables us to move from one site to another, the Gopher protocol investigates layers of information on the same site.

- File Transfer Protocol (FTP) : It enables us to copy files from the site into one's own computer.

- Telnet: It enables us to access a computer in the net and use it as ours. It needs a login and a password.

3. Search Engines:

To access a particular site or document, the researcher should use search engines which are themselves internet sites which can explore and index other sites. Lester (1999) proposes the following ones :

Alta vista: < http:// altavista.digital.com/>
Excite: <http://www.excite.com>
Hotbot: <http://www.hotbot.com>
Infoseek: <http://guide.infoseek.com>
Lycos: <http://www.lycos.com>
Open Text: <http://www.opentext.com/omw/f-omv.html>
Search: <http://www.search.com>
Webcrawler: <http://www.webcrawler.com>
Yahoo !: <http://www.yahoo.com>
Clearinghouse: <http://www.clearinghouse.net>
Internet Public Library :<http://ipl.sils.umich.edu/>
Planet Earth Virtual Library :< http://www.nosc.mil/planet_earth/info.html>
Savoy Search: <http://www.cs.colostate.edu/~~dreiling/smartform.html>

These search engines provide searching opportunities through key-words indexes as well as subject directories. Using them is a very easy and pleasant activity which does not require any particular skill.

4. Research Applications of Internet :

a. E-mail :

It is the most widely used Internet application. The researcher can use a virtual electronic box to send and receive mail. The address looks like :

samia.kara@caramail.com

It includes the form of the name the owner chooses (he may use numbers as well) in addition to the @ and the site which offers the opportunity of creating the mail box. The operation of sending and receiving messages, unless there are problems of disconnection, is very quick (seconds). The E-mail enables the researcher as well to receive / send information in the form of attached files that can be, for instance, imported from a floppy.

b. Electronic Lists and Forums:

The researcher, here, integrates a virtual group of people having similar interests and whereby he ' can participate in a professional dialog and share resources'(Le loup et al,2000 :1).

c. Online Journals and Magazines:

As their names suggest, they are professional journals and magazines the researcher can consult using the computer. They are free, regular but do not exist in a paper form. According to Le loup et al (2000), their advantages are to be seen, mainly, in terms of saving time while reaching a large and diverse audience as well as including links to related background or reference data (on the web) thanks to the hypermedia nature of their articles.

Accessing online journals, periodicals and magazines requires that the researcher uses a search engine. For example, in Altavista the researcher can click on 'education' then 'journals' from the key directories and have access to links to online journals. He can , as well, use a key-word search : 'education + journals'.

Slowinsky (1999) advises us to use as a starting point the virtual library located at URL: <http://www.csu.edu.au/education/library> or the Center for Instructional Materials and Computing Education Journal Annotations located at URL : <http://cimc.soemadison.wisc.edu/resources/anno-AB.html> . These two sources would enable us to access journals as well as web sites.

As to periodicals, Slowinsky (1999) suggests to start the search at URL : <http://www.triangle.co.uk/index.htm>. It would provide us with links with periodicals having different educational foci.

d. Examining Library Holdings:

Consulting library holdings is, today, possible through Internet. Indeed, many of them provide an Online Public Access Catalog (OPAC) which allows for searching on the web their collections.

Lester (1999) advises us to consult :

LIBCAT: <http://www.metronet.lib.mn.us/lc/lc1.html>

LIBWEB: <http://sunsite.berkeley.edu/libweb>

to access an overview of online libraries in terms of holdings and addresses He also proposes to consult :

Carl Uncover: <http://www.carl.org.uncover/>

a site which offers a keyword search of 17,000 journals by author, title and subject.

e. Consulting Up-dated Educational Standards :

This operation allows the researcher to be aware of what is happening in the world of education in terms of renewed standards and norms. One of the best databases is located at URL :< http:// putnamvalleyschools.org/standards>.

f. Browsing Opportunities in Relation to Funding and Grants :

In addition to scholarships which are available through search engines in the form of explanatory documents and application forms, the researcher can find grants and application forms on particular sites designed exclusively for this reason and located , for instance, at URL : <www.ed.gov/funding> or <www.ed.gov/grants app>.

We must note that these sites are American and that almost all universities over the world provide useful data about funding opportunities within their systems. As to Algeria, the site : <http://www.algeriainfo.com> provides useful hot links to ministries, administrations as well as institutions which provide funding opportunities such as the Agence Nationale pour le Développement de la Recherche Universitaire (ANDRU) and the Centre de Recherche en Economie Appliquée pour le Développement (CREAD).

g. Using Sites for Translation Purposes:

It happens that we bump into texts written in languages we do not master. An instant translation can be operated using particular sites such as the one located at URL : < http://babel.altavista.com/translate .dyn->. The researcher can import his document by citing its URL and translate it from and into different languages he has the choice of.

5. Citing Internet Sources:

Internet sources, like any other traditional type of references, need to be cited. However, their specific form requires a specific citing format. The documents I have been consulting until now agree on using the traditional format to which we add the URL.

Lester (1999) pinpoints in details the Modern Language Association (MLA) and the American Psychological Association (APA) styles which deem it important to add the date of the researcher's access to the documents before the URL. The APA specifies that this date has to be preceded by the word « retrieved ».

Lester (1999 : xi) goes on advising us to consult the following sites for an up-to-date guide to internet sites and documentation format in relation to more than twenty disciplines :

<http://www.apusu.edu/~lesterj/lester.htm>.
<http://longman.awl.com/englishpages/>.
<http://www.apa.org/journals/webre.html>.
<http://www.apa.org/journals/faq.html>.

6. Evaluating Web Sites:

The Web is growing wider and more complex every day (if not every hour). This is to say how much it is important for the researcher to learn the

skill of saving time and energy. Indeed, Internet is so powerful and attractive that many people may get caught in a sort of a trap in the form of addiction. They may spend whole days in front of their screens without being able to realise that they are harming their health as well as their time and energy.

To solve this dilemma, the researcher must learn how to select the sites he works on. This operation requires an evaluation he can make of the web sites. To this end, he can get inspired by consulting comprehensive lists of evaluative criteria among which we can cite the one that has been elaborated by Abdullah (1998). Abdullah (1998 :1) claims that 'not every site makes a good resource' and suggests a checklist made of thirty six items grouped under the headings : technical considerations, purpose, content, authorship, sponsorship, functionality, design and aesthetics. The application of this checklist enables the researcher to classify his sites in terms of value in relation to his research goals, time allotted and focus.

Conclusion

The huge technological revolution that has lately taken place in the world and which has invaded all the aspects of our daily life, makes it urgent for us to cope with the new developments. I would like to argue that we must train our students to manipulate these tools before it becomes late for bridging the gap. It is time, I believe, that we start thinking about future generations in terms of scientific investment. An investment that should prove to be fruitful on the long term which becomes a short one when it comes to Internet terminology.

References:

Abdullah. M.H. (1998) 'Guidelines for Evaluating Web Sites'. In ERIC Digests.

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URL :<http://www.ed.gov./databases/ERIC-Digests/ed437941.html>.

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URL :<http://www.ed.gov./databases/ERIC-Digests/ed99-CO-0008>.

Lester. J. D. (1999) Writing Research Papers : A Complete Guide. Longman (9th edition).

Slowinski. J. (1999) ' Using the Web to Access Online Education Periodicals'. In ERIC Digests.

URL :<http://www.ed.gov./databases/ERIC-Digests/ed430584.html>.

Appendix I

An Example from <http://www.ed.gov/databases/ERIC-Digests/index>

2000/10/25 -- List of 41 new ERIC Digests

ED437766 Rights and Responsibilities of Parents of Children with Disabilities: Update 1999. ERIC Digest #E575.

ED437767 Curriculum Access and Universal Design for Learning. ERIC/OSEP Digest #E586.

ED437941 XML: A Language To Manage the World Wide Web. ERIC Digest.

ED438010 Computer Literacy for Community College Students. ERIC Digest.

ED438011 A Review of Community College Curriculum Trends. ERIC Digest.

ED438147 The School-within-a-School Model. ERIC Digest.

ED438148 Postsecondary Financial Aid for American Indians and Alaska Natives. ERIC Digest.

ED438149 Cultural Resources for Mexican American Education. ERIC Digest.

ED438150 Promoting Reading among Mexican American Children. ERIC Digest.

ED438151 Multicultural Issues in Outdoor Education. ERIC Digest.

ED438152 Attracting and Retaining Teachers in Rural Areas. ERIC Digest.

ED438153 Improving Rural School Facilities for Teaching and Learning. ERIC Digest.

ED438154 Education and Development in Poor Rural Communities: An Interdisciplinary Research Agenda. ERIC Digest.

ED438155 Teaching American Indian and Alaska Native Languages in the Schools: What Has Been Learned. ERIC Digest.

ED438244 The National Assessment of Educational Progress in Civics.

Appendix II

An Example of Results Coming out of the Use of a Search Engine

WebCrawler Search Results for: english language curriculum and textbook

Web Results for: english language curriculum and textbook

(26-50 of 3260) - show titles for these results.

63% eBay Listings: Language

Keep up to date on eBay's new site with the Bulletin! Cool Happenings. Find out what's cool at eBay! Sell your item in the Educational : Language category Similar Pages

http://listings.ebay.com/aw/listings/list/all/category1110/index.html

63% Russian Resources

Open courses at the University of Sussex School of European Studies. Internet resources for teachers and learners of Russian. Language-learning software to download. Similar Pages

http://www.sussex.ac.uk/langc/russian. html 62%

Apply Yourself: English For Job Search and Success

March 1998 Apply Yourself: English For Job Search and Success Lisa Johnson. Lynne Levey. and Elizabeth Chafcouloff (1996) White Plains. NY: Addison Wesley Longman Inc. Similar Pages

http://www.kyoto-su.ac.jp/information/tesl-ej/ej10/r5.html

62% Business Text Review

September 1996 Open for Business: Communication Activities for Students of English Boston. MA: Heinle and Heinle Publishers Pp. ix + 165 ISBN 0-8384-2751-0 (paper) US $14.00 Similar Pages

http://www.kyoto-su.ac.jp/information/tesl-ej/ej06/r1.html

61% Palestine English Paper

Appendix III

An Example of a Collection of Sites

(<http://www.ed.gov/databases/ERIC-Digests/ed439703.html>

* Berit's Best Sites for Children: One of the oldest and most reliable lists of sites for children in primary grades. Compiled by a librarian.

http://www.cochran.com/theodore/beritsbest/

* BJ Pinchbeck's Homework Helper: Compiled by a middle school student who understands the reference needs of his fellow students.

http://www.bjpinchbeck.com/

* Kathy Schrock's Guide for Educators: Home Page--A popular site for teachers.

Compiled by a school librarian who has also created a collection for students.
http://school.discovery.com/schrockguide/

* Kid Info/School Subjects: Another student-created site. Arranged by subject area and linked to many of the best educational sites online.
http://www.kidinfo.com/School_Subjects.html

* PBS Teachersource: Sites selected for curriculum content, arranged by subject areas.
http://www.pbs.org/teachersource/recommended/rec_links.sht m

* 700+ Great Sites from ALA: Compiled by members of the American Library Association. For students, teachers, librarians, and parents.
http://www.ala.org/parentspage/greatsites/

ART:

* Artchive: an impressive group of Web sites and book suggestions for artists and schools of art including Impressionism, Cubism, Photography, and Abstract Expressionism. Try one of the tours.
http://artchive.com/core.html

CURRENT EVENTS:

* CNN Interactive: Read the latest news. Search the archives for information about past events. Choose links to top stories, hot topics, sports, weather, and more.
http://cnn.com/index.html

REFERENCE MATERIALS ONLINE:

* AskA+ Locator: Need to find an expert on a particular subject? The AskA+ Locator will allow you to search for experts by subject area and grade level.
http://www.vrd.org/locator/subject.html

* Atlapedia Online: Contains full-color physical and political maps as well as key facts and statistics about countries of the world.
http://www.atlapedia.com/index.html

* Biography: Search a database of biographies of over 20,000 notable people. Uses the Cambridge Encyclopedia Database and the Cambridge Dictionary of American Biography.
http://www.biography.com/

* Britannica Online: Online encyclopedia information as well as links to selected Web sites.
http://www.eb.com:180/

* "Do We" Really Know Dewey? This ThinkQuest winning site assists with learning the Dewey Decimal System, including quizzes. Made for kids, by kids.
http://tqjunior.thinkquest.org/5002/

* Encarta Online: A concise version of Encarta's CD-ROM. Includes short encyclopedia articles and hot topics.
http://encarta.msn.com/EncartaHome.asp

* Kids InfoPlease: Ready reference combination. Includes Information Please Almanac, Columbia Encyclopedia, and Random House Webster's College Dictionary.
http://kids.infoplease.com/

* Occupational Outlook Handbook: Find out about education requirements, job outlook, working conditions, and earnings for hundreds of careers.

http://www.umsl.edu/services/govdocs/ooh9899/1.htm

* Research and Web Citations from Nueva School-Helps students with the research process, learn how to create bibliographies and how to use search engines effectively.

http://www.nueva.pvt.k12.ca.us/~debbie/library/research/re search.html

SCIENCE RELATED SOURCES:

* ASK-A-SCIENTIST Archive: The information found in these archives is outstanding. Covers many science topics including astronomy, biology, and chemistry.

http://newton.dep.anl.gov/archive.htm

* How Things Work: A physics professor's compilation of his students' frequently asked questions. A rich resource for students explaining why and how things work.

http://rabi.phys.virginia.edu/HTW/

* MAD Scientist Network--Great "library" collections. Search the archives for previously asked questions. Try the labs!

http://www.madsci.org/

* NASA: Visit this site when you have a question or research topic about space.

Link to pages about Mars, the space shuttle, and the MIR space station. Search NASA's hot topics.

http://www.nasa.gov/

* Neuroscience for Kids-Resources about the brain and spinal cord. Written with kids in mind.

http://faculty.washington.edu/chudler/neurok.html

* Nine Planets: Multimedia Tour of the Solar System: Images and information: about the solar system, planets and their moons, and other celestial systems.

http://seds.lpl.arizona.edu/nineplanets/nineplanets/ninepl anets.html

* Periodic Table of the Elements: Los Alamos National Lab provides chemical information including uses, sources, and history of elements.

http://pearl1.lanl.gov/periodic/

* Smithsonian Institution Frequently Asked Questions: Provides the answers to students' questions about common research topics including science and social science.

http://www.si.edu/resource/faq/start.htm

* Science Fair Project Guide: A collection of sites, resources, and project ideas for science fairs. From The Internet Public Library.

http://www.ipl.org/youth/projectguide/

* Sea World/Busch Gardens Animal Resources: Animal Information Database. Presents reliable information about marine and land animals and conservation.

http://www.seaworld.org/infobook.html