



Date : 06/06/2008

Promoting Technological Inclusion: An Experience Between a Parliamentary Library and a Technical Education Center in Chile”

Ana María Pino

Librarian

National Library of Congress

Chile

Claudia Escobar

Librarian

DuocUC, Sede Padre Alonso de

Ovalle

Chile

Meeting:**145. Latin America and the Caribbean****Simultaneous Interpretation:**

English, Arabic, Chinese, French, German, Russian and Spanish

WORLD LIBRARY AND INFORMATION CONGRESS: 74TH IFLA GENERAL CONFERENCE AND COUNCIL

10-14 August 2008, Québec, Canada

<http://www.ifla.org/IV/ifla74/index.htm>

Summary

Libraries, as one of the fundamental supporting axes of one's educative and formative processes, are considered to be places of public access, neutral, transparent and trustworthy, open areas of possibility for people. They have currently begun to take a turn in their form of management, becoming bonding organizations, meeting places, where opinions are exchanged, creating and articulating social networks, using participative methodologies in which the ordinary citizens may learn to interact and broaden their vision of the world, as well as expressing needs, participating with an informed opinion in subjects of interest that concern him/her. Having said this, we may state that libraries deliver, not only information, but also create the capacity in individuals to participate, as protagonists, in the design, execution and control of public policies that affect them.

The experience we are presenting, between the Chilean National Library of Congress www.bcn.cl and the Library of the Technical Formation Center of DuocUC in Chile, was born out of an alliance between two libraries of totally different backgrounds, focusing on different groups of users, designed to motivate different communities, using different technological platforms and making information accessible through products, promoting their use in institutional websites.



The results obtained are the fruit of a multidisciplinary team of librarians, web designers, teachers, IT engineers and others. We describe mainly the development of the module entitled “Connect to the BCN: Online learning” <http://www.eduoc.cl/bcn/>. This online module is an open access tool. The contents were given by the National Library of Congress and developed by the e-learning unit of DuocUC. This is a self-learning tool, in which the user learns how to use two important online resources available in the Chilean National Library of Congress. The portal of the National Library of Congress is among the country’s most visited, with over five million visits a year.

I. Introduction

Throughout the history of humanity there has been a constant need among human beings to communicate. The first communicational message issued forth by humans is the “scream at birth” and the first receptor is the person who receives that being and listens to it. This affirmation which is nothing new, has been around since the dawn of man and constitutes the essence of human relations.

Diverse forms of communication have succeeded each other from the time of primitive man until our time. The changes and transformations have developed at different speeds. Primitive communication was oral and gestural. Knowledge and information were transmitted through oral and/or body language; soon communication through writing was also included.

Today technology permits us to live in a time of vertigo; of instantaneity, of immediacy. There exist no obstacles for the transmission and reception of the message. Information and knowledge surpass the human capacity for comprehension and assimilation. To survive within this current paradigm shift, we must provoke, in each and every one of us, a profound social, cultural and educational transformation.

These times offer a favourable scenario for this personal metamorphosis and the social inclusion of people allows interaction in real time, or without regard to time, with diverse and multiple actors and favors the creation and strengthening of generational, institutional or any other type of networks.

Social inclusion has several components: educational, cultural and technological. The focus of our work points towards technological inclusion, integrating TICs into the communal learning processes and specifically those of the school community. New forms of interaction are created which not only compel users to increase the number of technological resources, but also to develop informational abilities that allow them to really close the digital gap.

In order to flow with the times we must constantly adapt to change, building a society which is alert, agile and able to respond to technological challenges with knowledge and information.

The social sector that is most attracted to and inclined towards the integration of technological innovation in its formation is that of the school community, students and teachers, and in these terms an alliance was forged between a Technical Formation Center, which contributes the human resources and the



technological platform within the mode of e-learning and a government library, which provides the contents and services that are available to citizens, contributing to make access to knowledge more democratic, thereby favouring technological inclusion.

II. Education and Technological Inclusion

Education is a possibility that gives the individual tools to better his quality of life and to face the challenges presented by a world that is in permanent and rapid change. It helps citizens become active members of society.

In recent times, on a national and regional level, policies aimed towards reforming the educational systems have been developed, geared towards narrowing the learning gap and favouring vulnerable and socially disadvantaged groups, placing emphasis on “equality in the quality of education”.

One of the elements that contributes to equality in the quality of information is making the use of TICs, which currently are still used by a small segment of the population, more massive and accessible to the community.

Compared to public education, there is still an important digital gap between students of private and public schools. The Ministry of Education, through the Enlaces (meaning liaison or connection) Program, has implemented a series of initiatives geared towards the digital inclusion of different actors belonging to the educational community: teachers, students, parents, advisers and communities that are meaningful to the educational facilities.

Digital inclusion for today’s youth is a key element in order to function in a world where technology is present in all the facets of personal life: social, cultural and economic.

Chile is a country that, comparatively, in terms of connectivity, occupies first place in Latin America . In terms of access it has advanced significantly, however, it is still far from the reality of developed countries, especially concerning the extension of digital literacy; there is a lack of training in the use of technological resources.

The director of the Center of Computer Democratization (CDI, Centro de Democratización de la Informática), Eugenio Vergara, states: “While the subject of access is practically resolved, I feel that there is still a long way to go before we attain a digital culture in all levels of society”.

<http://www.cdichile.org/articulo.asp?c=20060524115617>

On the other hand, Rodrigo Sandoval, Latin American director of technology development for Intel, affirms that “There is a tendency towards individual consumption of technology, associated to growth in volume, decentralization and production of hardware”. Individuals increasingly seek new vehicles that allow personal access and production: second life, video streaming, youtube, systems 2.0, etc.

<http://portal.educ.ar/noticias/actualidad-educar/industria-tecnologica-y-propue-1.php>

This process, in which young people are participating intensely, creates new ways of socializing among themselves; the building of social relations mediated by technology is a reality that must be taken into account in the educational processes.

In this way approaching the problem of the digital gap with the students has to do with creating, within the educational system, the conditions and contexts in which young people may appropriate technological usages. The Juvenile Digital Inclusion Project (JDIP), specifically oriented to youths with greater risk of social, cultural and educational exclusion, and therefore from access to the possibilities offered by the TICs, having as its challenge the themes of inclusion and equal access to the development and participation in the society of knowledge, is being elaborated.

It will initially be implemented in public high schools that are part of the LPT Program, but also will develop a program to incorporate community organizations that work with young people. Considering Intel's desire to collaborate on a national scale, this initiative translates into a valued opportunity for the Ministry of Education and private enterprise to work together to generate greater opportunities for young people at social risk in order for them to participate in the new social and cultural contexts that the country is facing.

Another project that could be highlighted in the digital field is the "Development of telecommunications for rural schools and centers for social development in highly isolated areas of southern Chile", financed by the Center for Cooperation for Development of the Universidad Politécnica de Cataluña (Spain), and consists of bringing internet to children who study in isolated rural schools in the Tenth Region. "The main objective is technological inclusion in underserved areas, meaning technological intervention with social emphasis and in aid of local development".

http://www.utem.cl/agenda/ver_noticias.php?id=357

Another great contribution to the educational process and inclusion is made by libraries, institutions that fulfil an important role in digital literacy. "They promote programs for digital literacy, mainly because they are the repositories of knowledge, beepers of knowledge in different formats; they have librarians who are experts in information, they are spaces for learning, with access to computers that process and communicate knowledge, they are a bridge to internet". See: " Guide to Digital Literacy for Education for Life", (Lau, 2006).

III. TIC's in Chile and Digital Inclusion

TIC's have produced a transformation in the way people live and their use has become a main condition for entering the global world, have had impact on people, creating intelligence and competition, have made the task of articulating networks easier and opened a way for developing skills that allow the improvement and optimization of the teaching-learning process.

The libraries' roles have become broader with the application of TIC'S, which has led to making digital literacy a duty inherent to libraries.

In Chile, in recent years, there have been two initiatives inherent in generating public policies related to the field of IT. The first was in the government of President Ricardo Lagos, when in 2000 the Committee of IT Ministers was created. As a product of their work, in 2003 the Digital Action Group came into being, whose aim was to “contribute to the development of Chile through the use of TIC’s in order to increase competitiveness, equal opportunities, individual freedom, quality of life, efficiency and transparency in the public sector, while at the same time enriching the nation’s cultural identity.” (Digital Development Strategy, 2007)

In February of 2007 the government of President Michelle Bachelet created a Committee of Digital Development Ministers, which was responsible for generating the Chilean government’s digital agenda for the 2007-2012 period and whose objective is to have a public policy regarding information technology. This committee was presided by the Minister of Economy, at the time, Mr. Alejandro Ferreiro and the result of the work was expressed in a document called Digital Strategy 2007-2012, where the objectives and aims for this period are specified. The document proposes concrete measures for the areas of health, justice, business and education.

We will refer to the challenges and aims proposed in the field of education: To have quality digital infrastructure to support the educational process incorporating pedagogical contents and models that include TIC’s. The availability of a range of online services and contents, public as well as private, that is suitable for the educational process and finally to be able to count on a consolidated network of public libraries, service centers and other community access, in order to promote digital inclusion in the lower income sectors.

<http://www.estrategiadigital.gob.cl/node/122>

Other aspects mentioned in the Digital Strategy document refer to the application of standards, the use of free software, achieving greater public and private online security.

Strengths

Chile currently occupies first place in the development of information technology in Latin America and 34th on an international level, according to the annual report of the Economic World Forum. This report, which has been issued for the last seven years, has become the most trustworthy international evaluation on the impact of TIC’s in national development. For the 2007-2008 period, the report covered 127 world economies. The study covers three different areas: personal, business and government.

In the report it is clearly stipulated that the governmental field is clearly stronger than the personal in the use of TIC’s. These results are the product of the implementation of the Electronic Government, which has been incorporating in the public sector, online procedures, of which there are currently around 500; electronic public purchases, through Chile Compra (Chile Buys), www.chilecompra.cl; the administration of online taxes, with a coverage of 98%, www.sii.cl, etc.

What Must Be Improved

Chile clearly must improve its connectivity and infrastructure, which promotes better technological inclusion in important areas such as education and health.

In relation to public education, there still exists an important digital gap between students of private schools and that of students in public schools.

The Digital Action Plan 2008-2010, published in the month of April 2008, presents concrete proposals and actions tending to continue improving the use of TIC's on a national level. In the first place, better access and connectivity is proposed, narrowing the geographic breaches that exist in the extreme north and south of the country. It also aims to shorten the gap between rural and urban realities by increasing the amount of low cost internet coverage.

The Electronic Government is another aspect that is being considered in the Digital Action Plan, geared towards continued improvements in this area.

The third aspect is that related to incentivising a wider use of TIC's in businesses, shortening the current gap between small and large businesses. This is based on the premise that greater connectivity equals greater productivity. Therefore the wider use of advanced technology in businesses will be promoted, with intensive training for entrepreneurs, which will be subsidized by the Government of Chile, through the National Service for Training and Employment.

In the field of educational technology and digital competency, the idea is to continue to increase the number of computers in public education, in order to shorten the breach between public and private education. Of the 29 students per computer that currently exist, the aim is to have 10 students per computer in 2010. Also, a model for digital competency in teachers will be developed, in order to train them and certify their digital competency.

The Digital Action Plan proposes to strengthen the global technological service industry (offshoring), which will allow Chile to promote itself as a generator of this type of services, with qualified and prepared human capital. Alliances between the public and private sectors will be promoted, which will allow the optimization and consolidation of this industry.

Finally, there exists a proposition to improve the current situation, in order to advance in the tasks mentioned above. This way a legal framework of IT crimes will be strengthened and the use of free software will be promoted in public institutions.

IV. Project Development

The Chilean National Library of Congress recognizes three areas in this mission. The first is that of social responsibility, whose aim is to maintain and divulge Chile's historic legislative and political memory. The second is in the parliamentary area, where a link is created between the parliament and society and finally, in the public sector, where the Library of Congress must collaborate for the comprehension of the legislative process and its actions. The National Library of Congress opens its services to the citizens through its website (over



five million visits, www.bcn.cl), with information in complete texts on laws, codes of the Republic of Chile and bills, being among the most relevant online resources.

DuocUC, on the other hand, recognizes as its mission forming people in the technical professional area, which are capable of being successful in the working world and that are committed to the development of the country. This is an institution that was created by the Universidad Católica de Chile (Catholic University of Chile) and its educational project aspires to high level training, with a teaching mode that emphasizes the practical aspects of each discipline. It is currently one of the most important educational institutions in Chile, with a total of 42.000 students registered as of March 2008 in its different campuses. The Center for Technical Formation currently has 4.700 students.

In April 2007 a strategic alliance between the Chilean National Library of Congress and the Center for Technical Formation DuocUC was created. These two institutions, with very diverse realities, were capable of generating collaborative work that has reached different areas of action.

The objective stated from the beginning was that both institutions were to make available their human and technical resources, as well as their infrastructure, in order to generate a high impact in the immediate community.

The first activity was **Induction Workshops**, done by a team of professionals from the National Library of Congress, for DuocUC students, in order to give information about the online services and resources in the library's information portal.

The second initiative was the undertaking of a **Open Seminar for "Education, Digital Information and Citizenship: looking towards 2010"** with massive participation on behalf of librarians, journalists and educational professionals, with high level speakers, committed to technological changes developed in the country, whose aim was an update concerning the advances on the subject of education and technological inclusion and to show innovating experiences in this field.

Another joint task was the execution of the **Info-literacy Workshops** coordinated by both institutions and directed towards the school community and the citizens.

Finally, as a product of this inter-institutional undertaking, conformed by a multi-disciplinary team of professionals from both institutions, the **Module of Online Self-learning "Connect to the BCN"** was developed, which we will present in detail.

V. Online Module "Connect with the BCN: Online Learning"

<http://www.eduoc.cl/bcn/>

Objectives

- To make a concrete contribution through an open access self-learning module.



- To divulge some of the BCN online services and resources that are open to the public.
- Increase the use of the BCN's online services.

Methodology

Based on the fact that the Chilean National Library of Congress' web site is among the 10 most visited sites, it was defined that through an online open access module it would be possible to make a concrete contribution to the citizens who gain access to this information portal.

An action plan was elaborated; with a Gantt chart, a work team was selected and content and design were defined.

Professional Team

The module was developed by a multidisciplinary team of professionals, composed of librarians, designers, methodological advisors, and information technology specialists.

The virtual unit of e-DuocUC, whose function is to develop e-learning courses that are offered in the areas of education, enterprise and public administration, was in charge of the module's production.

Module Content

The National Library of Congress defined the content to be developed in the module. The selection criterion that was used was related to the need to divulge and teach how to use two high level online services that are offered by the National Library of Congress. The first one chosen was the Legislative Assistant <http://alegislativo.bcn.cl/alegislativo/> which contains information relevant to bills. This includes projects for laws that are being debated in congress, as well as those that are already laws.

The second choice was the Integrated System of Territorial Information <http://www.bcn.cl/siit/>, which is a powerful tool which shows locations and demographic data on a national and regional level, as well as the percentage of adherents to political parties, religious beliefs, etc.

Module Design

The National Library of Congress integrated its logotype and an institutional video, besides choosing the institutional colors to be used in the module. With these elements e-DuocUC was able to begin work, delivering reports every two weeks, which were checked by the Library of Congress. A second video was added, where the Director of the National Library of Congress explained the aim of this open access module.

The module contains practical exercises in each of the developed areas and the user may decide where his navigation begins and ends.

The module structure is as follows:

- Registration card: first time users must register. This register fills a data base of the National Library of Congress.
- Introduction: visitors are welcomed and there is access to explicative videos. Objectives and methodology are also presented.
- Content: where the Legislative Assistant and Integrated Territorial Information system are developed, with practical exercises in each case.
- Closure: with suggestions on how to use the site for teachers, general public and students.
- Evaluation: a poll with two closed-ended questions and one open-ended question.

1st Did you find the site useful? Yes, No.

2nd How would you grade the site? ON a scale of 1 to 7, where the highest grade is 7 (annex No. 1).

3rd Contact sheet for comments if user wishes to do so.

VI. Conclusions

We may conclude that this joint task has strengthened both institutions in their community relations and that great benefits have accrued for the group of citizens linked to the educational world, while promoting social and technological inclusion.

The induction workshops empowered the students studying to be Judicial Technicians in the processes of law and legislation, preparing them to face the future professional world and contributing to strengthening their curricular contents.

From these workshops the idea of starting a program to form monitors arose among the students themselves, who will then replicate the experience among future generations of students.

The seminar “Education, Digital Information and Citizenship”, geared towards IT and communication professionals, where cutting edge experiences in the field were presented by diverse institutions who lead technological innovation in this country, will become a permanent platform, which will be repeated annually, in order to expound on the latest advances and changes in the country’s digital information. This will allow participants to update their viewpoints, as well as create and continue to strengthen digital culture.

The online learning module, designed under the e-learning modality, was an experience that opened new paths. On one hand it spread information about the services available in the National Library of Congress, thus linking the congressional world with the community. The legislative power, in general, is seen by the community as being an entity with which there is no way of communicating.

On the other hand, the BCN’s website visits increased, with a total of 2,171 registered visitors during the first semester since it was implemented.



Many visitors, upon entering the self-learning module, besides seeing the different services that are offered, use it as a way to make inquiries about various topics, ranging from, for example “The sub-contractors law” (Republic Law) to asking about “a separated father’s rights in the education of his children if he does not have custody”.

These questions are then steered to the virtual “reference” who also answers the questions that arrive at the BCN website from other portals.

Finally this example allows us to confirm the importance of strategic alliances between institutions; in this globalized world in which we live, they promote resources, optimize services, allow the exchange of innovative experience, enriching and contributing to future generations of citizens who are developing, opening the door to creativity and inclusion.

It is important that technology be not only available, but that structures and real mechanisms for its use are also provided for so that people become integrated into, learn from, and participate in the society that gives them shelter.



VII. Bibliography

Biblioteca del Congreso Nacional. <http://www.bcn.cl>

Conectarán escuelas rurales de Cochamó.
http://www.utem.cl/agenda/ver_noticias.php?id=357

Consejo Nacional de Innovación para la Competitividad (2007). Hacia una estrategia nacional de innovación nacional para la competitividad. Santiago de Chile. vol. 1 <http://www.consejodeinnovacion.cl/cnic/cnic/web/buscar.php>

Consejo Nacional de Innovación para la Competitividad (2008). Hacia una estrategia nacional de innovación nacional para la competitividad. Santiago de Chile. vol. 2 <http://www.consejodeinnovacion.cl/cnic/cnic/web/buscar.php>

Consejo Superior de Educación (2006). Estadísticas y bases de datos http://www.cse.cl/public/Secciones/seccionestadisticas/estadisticas_sistema_2006.aspx

Correia C., Catalina Conectividad itinerante: acortando la brecha digital a domicilio. <http://www.edicionesespeciales.elmercurio.com/portada/index.asp>

Dalton, P., Elkin, J. & Hannaford, A. (2006). Joint use libraries as successful strategic alliances. Library Trends, 54, 535-548.

DuocUC <http://www.duoc.cl>

Gobierno de Chile. Ministerio de Economía. Estrategia de desarrollo digital : 2007-2012. Santiago de Chile, Comité de Ministros Desarrollo Digital, 2007. <http://www.estrategiadigital.gob.cl/node/131>

Innovar en Chile (2005). Programa de Desarrollo e innovación tecnológica 2001-2006. Santiago de Chile, Subsecretaría de Economía, Fomento y Reconstrucción.

Operación éxito: la revolución en educación on line
http://www.chile.com/tpl/articulo/detalle/ver.tpl?cod_articulo=93709

Raad, Ana María. Exclusión Digital: Nuevas caras de Viejos malestares. Rev. Mad Nº 14, mayo 2006. Departamento de Antropología, Universidad de Chile.

<http://www.revistamad.uchile.cl/14/raad.pdf>



Secretaría Ejecutiva de Estrategia Digital (2008) Plan de acción digital: 2008-2010. Santiago de Chile.

http://www.economia.cl/aws00/Estatico/repositorio/M/0/E/T7sDz1_xdVZv3QnzTrFoQc5E=.pdf

Uribe (2006). Tecnología, capacitación y educación: vía para realizar el potencial país. http://www.dinero.com/wf_InfoArticulo.aspx?idArt=32657

Villalonga, Fernando. Innovación tecnológica e innovación social: aplicaciones sociales de las TIC. En: *Acto de graduación de los estudiantes de formación de posgrado de la promoción 2001-2002 de la UOC* (2003: Barcelona) [conferencia en línea]. UOC. <http://www.uoc.edu/dt/20235/index.html>