# Teleducación
# en las Américas

Unión Internacional
de Telecomunicaciones

Comisión Interamericana de Telecomunicaciones
Organización de los Estados Americanos

# TELE-EDUCATION
# IN THE
# AMERICAS

**International Telecommunications Union
ITU**

**Inter-Americana Telecomunication Commission
Organization of American States
CITEL**

**DECEMBER 2001**

# PREFACE

**Angela Montoya Holguín**
**Minister of Communications of Colombia**
**Chair of PCC.I**

As Chair of Permanent Consultative Committee I – PCC.I, I am very pleased to have the opportunity to present to the countries of the Americas this compilation and analysis of the tele-education programs that have been developed in the nations of the American Hemisphere.

Assembling this complete text and audiovisual reference guide has required a commendable research effort to ascertain the progress that our countries have made in the area of computer literacy. A series of recommendations is also included, premised on a judicious assessment of the process of penetration of telecommunications and computer science in recent years, filtered through the lens of a highly professional interpretation. These recommendations focus on policies in certain areas that must be reinforced to ensure solid progress in the construction of a human and technological platform that will enable us to make a qualitative leap forward in the rhythm of our development and achieve sustained growth to close the current digital divide.

In this context, the approach of the work compiled here is fundamental to the extent that it underscores the importance of conquering new information technologies as tools that genuinely contribute to well-being and prosperity in people's everyday lives. This is true for the field of economic production as well as for deepening universal cultural knowledge. What makes the increasingly widespread use of information technology truly relevant is that the knowledge acquired to use these instruments have a tangible influence on improving the surroundings and quality of life of the most vulnerable social strata of the population in particular.

In keeping with this perspective, I invite the public authorities and all entrepreneurs in the telecommunications sector to move toward a continental consensus over a regulatory policy that promotes technological investment and innovation for convergence, while simultaneously strengthening universal service programs. We must mobilize the human, technological, and capital resources necessary to ensure that communities and individuals have increasingly equitable opportunities to use information technologies to benefit the autonomous progress of communities and individual professional fulfillment.

Collected here are the most passionate and interesting experiences in each of our countries concerning the impact that modern telecommunications are having in the education field. These chronicles offer us better elements for discerning mutual lessons from the areas in which we have made progress with encouraging results, and from the mistakes made in specific cases where it is advisable to intensify our investment efforts to ensure greater equity and social justice for society as a whole.

I want to sincerely acknowledge the spirit and commitment of the group of experts of different nationalities who participated in this research, in accordance with the mandate emanating from the Presidential Summit of the Americas. I also thank the governments who

supported and facilitated the work of their respective compatriots, thereby enabling this research to accomplish its stated objectives.

Finally, I invite my colleagues and citizens of the continent to join together in a common effort to ensure that our countries consolidate their competitiveness in the economy of knowledge, through the mass use of information technologies in the different fields of knowledge and production.

# PREFACE

**Héctor Mario Carril**
**Chairman, Working Group on Basic and Universal**
**Telecommunication Services, CITEL/OAS**

Education is essential for strengthening democracies, fostering the human being and equality among our peoples. Furthermore, it is the key to econo mic growth and poverty reduction. To accomplish these goals, education must be made available to everyone. Without discriminating as to gender or age, including rural inhabitants, the handicapped, indigenous peoples and minorities no matter where they live, whether it be the Pampas, the Andes, the Plains, the Marshlands or the great urban centers in our Americas.

*Tele-education is the use of information and communication technologies to promote Distance Learning.* Thus, promoting the development of projects geared towards fulfilling the telecommunication needs of the most isolated areas and of the citizens with the fewest resources is one of the main objectives of CITEL and of the Universal Service policies in the region. Therefore, basic telephone services and the benefits of the new technologies will be within their reach. Especially those related to tele-education, tele-medicine and Internet Access.

That is how our Presidents understood it at the Summit of the Americas held in Quebec who stated in their declaration: "…Improved education policies and increased investment in our education systems will help reduce income disparities and close the digital divide in our Hemisphere. Our collective hemispheric efforts will be more effective through innovative uses of information and communications technologies to connect our governments and our people and to share knowledge and ideas. Our statement, Connecting the Americas, underscores this conviction..."

The objective for publishing the Book on Tele-education in the Americas is to provide information about developing distance education on the continent. It is our hope that this book will promote access by professors, students, educational organizations and administrators to new technologies applied to distance learning. Collaborate in the preparation of new teaching methods and allow a better establishment of policies that help to reduce inequality in the access to knowledge and the technology gap in our Americas.

I wish to thank CITEL for giving me the responsibility of carrying forth this project; the ITU, the Inter-American Cooperation and Development Agency and the administrations of the Member States for the valuable cooperation that they afforded me; Mr. Juan Jose Cataldo, ITU expert, for his editing, layout and graphics work on the CD-ROM; Mrs. Omayra Parra de Marroquín and Mrs. Kim Mallalieu, CITEL experts for their contributions on the Andean Community and the Caribbean respectively; Ana María Martínez and Sergio Chedid, CITEL experts for writing he print version; and, Professor Saad Chedid, Rapporteur of the Tele-Education Working Group for his help with the Coordination efforts.

We will never be able to bring knowledge to our people if we fail in our efforts to provide them with adequate and ever improving communications available also for access to education. Achieving the objectives of social policy involving universal access/service and

tele-education programs, justify this publication which I hope will be an important contribution to the development of education in the Americas that allows our people to become a part of the information society without exclusions of any kind.

# PREFACE

**Hamadoun I. Touré, Director**
**Telecommunication Development Bureau (BDT)**
**Internacional Telecommunications Union (UIT)**

It gives me great satisfaction to write the preface to this Book on Tele-Education in the Americas, which is the fruit of a cooperative effort between Telecommunication Development Bureau (BDT) of the International Telecommunication Union (ITU) and the Inter-American Telecommunication Commission (CITEL) of the Organization of American States (OAS).

One factor which has motivated our organizations to work together on preparing this book has been the great importance they both attach to tele-education. The First World Tele-Education Symposium for Developing Countries (http://www.itu.int/ITU-D/hrd/events/teleduc/index.html), organized by ITU in June 2000 in Manaus, Brazil, dearly recognized the role that is played by tele-education in the development of remote areas.

If education is the key to economic and social development, then tele-education is the key to bringing that development to everyone, and not only to urban and other privileged areas.. The use of information and communication technologies (ICTs) brings down costs and frees education from the constraints of distance. Tele-education may be considered as a means of expanding traditional teaching methods.

For many years now we have been using ICTs for education and learning. However, recent technical advances are radically changing the traditional landscape. New telecommunication networks and services, including the Internet, are providing us with new possibilities. By being able to access those services over bandwidths previously only available to television broadcasting, we are able, through videoconferencing, to participate from a distance in meetings and forums as if physically present.

The tremendous expansion of the Internet has been and continues to be the engine that drives many services and applications, including tele-education. Developments in the area of Internet2, broadband access, the new Internet protocol and the new generations of mobile telephone (2.5 and 3) are set to drive those applications even further. High-capacity Internet access, already commonplace in organizations and companies, is now finding its way into the home through the telephone line (xDSL) and through cable television networks. These technologies permit interactive access to multimedia services that represent a revolution for tele-education as we currently know it.

Industry believes that e-learning would come to be the next killer application of Internet, surpassing e-mail. This is already happening, but the possibilities held out by the new ICTs are still not being intensively harnessed in the field of education, and new methods and paradigms have to be developed if we are to reap the maximum benefit from this technological potential. Technological development has a bearing on the way we travel), work), relate to another (), and so on. In the same way, we have a responsibility to adapt the ways in which we teach and learn in order to derive the greatest possible benefit from ICTs in education.

The Manaus Tele-Education Symposium also recognized that in developing countries, the State has an extremely important role to play in promoting a comprehensive national tele-education program that draws together various government sectors (eg, education, telecommunications, science and technology), the private sector and international organizations. International organizations in turn are in the best position to engage in a special effort to make governments aware of the importance of developing and implementing national tele-education policies which call on all social partners to participate.

Similar conclusions were reached by a working group of an ITU international conference on "Creating new leaders for e-Culture" (http://www.itu.int/ITU-D/hrd/events/coventry/conf01/index.html), held in Coventry, United Kingdom, in August 2001.

Promoting and developing tele-education is a major commitment for ITU. In addition to organizing the above-mentioned events, ITU maintains e-learning platforms (Virtual Training Centre or VTC) and projects to promote and organize remote courses (Global Telecommunication University or GTU, and Centres of Excellence or CoEs), which are referred to in this publication. ITU is also organizing the United Nations World Summit on the Information Society, to be held in 2003 and 2005, which will feature tele-education very prominently.

Thus, the importance and timeliness of the Book of Tele-Education in the Americas cannot be overstated.

I should like to conclude by thanking all those who have contributed to the preparation of this book, particularly Mr. Héctor Carril, Chairman of the Working Group of the CITEL Permanent Advisory Committee on Basic and Universal Telecommunication Services, and the expert Mr. Juan José Cataldo for the excellent quality of his work.

# PREFACE

**Saad Chedid**
**Rapporteur on Tele-educación**
**Working Group on Basic and Universal**
**Telecommunication Services, CITEL / OAS**

I want to thank the Chairman of Permanent Consultative Committee I, the Communication Minister of Colombia, Dr. Angela Montoya Holguín, and Chairman of the Working Group on Basic and Universal Telecommunication Services, Mr. Hector Mario Carril, for giving me the opportunity to express briefly some thoughts arising from my concern for distance learning and my cumulative experience, to point out the merits of the work accomplished and some thoughts and suggestions for the future.

First, this book aims to fill a void of organized information on developments made in the area of information and communication technologies applied to distance learning in our countries in the American continent.

The survey conducted aspires to present the most complete picture possible of the advances made in this area in the private sector and the state, on an individual, institutional and/or national level by those who have developed projects utilizing these technologies for educational purposes. With the objective of incorporating new communities in the Americas into the sphere of the knowledge society.

Surely this work is so highly useful specifically because it will allow us, based on this survey, to determine in which countries, and in which sectors of education: primary, secondary, tertiary, university, and extracurricular training, we should begin to focus to achieve sustained development. And furthermore, from this perspective of solidarity and collaboration, to exchange studies and research.

Upon carefully reviewing the works received and the information gathered, we can say that laudable efforts have been made and long term proposals and projects have been developed in almost all of the countries of the hemisphere; south, central and north. Some have been more successful than others, but all have been accompanied by the same determination to find solutions to the pressing problems that we face.

We also believe, that it is time for all of us, nation States, international credit organizations, universities, NGOs, businesses and unions, to work together to optimize the use of information and communication technologies applied to education for social purposes. Thus aspiring to begin to incorporate universally into the knowledge society the unprotected and deprived sectors of society. We trust that in this way, through education, we can do what is necessary to assist in raising the standard of living of our people.

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## The Status of Tele-Education in the Americas

## Case Studies in Distance Education

### North America

## The Incorporation of New Information and Communication Technologies in the Tele-Education Systems in the Americas

# Introduction

This work constitutes the synthesis of the *Book of Tele-Education in the Americas*, publication completed upon the request of the Group on Basic and Universal Services of Permanent Consultative Committee I of Public Telecommunication Services I (PCC.I) of the Inter-American Telecommunication Commission of the OAS (CITEL/OAS).

Considering the scope of the *Book of Tele-Education in the Americas*, in its print version, PCC.I resolved, at its XV Meeting held 1- 5 October 2001, in Asuncion, Paraguay, to draft a synthesis of the print version. This would contain abstracts of selected articles and works, to serve as a guide for reading the CD-ROM, digital version of the *Book*.

This synthesis provides an overview of the *Book of Tele-Education in the Americas* contents that will help the reader to select the articles, works, and statistics of interest, consulting them from the digital version of the *Book*.

The *Book of Tele-Education in the Americas* is comprised of three parts.

The first, *Preliminary Analysis* contains the main definitions and points on Tele-Education and Distance Learning.

The second, *the status of Tele-Education in the Americas*, in turn is comprised of two parts. In the first part, Case *Studies in Distance Learning*, we have endeavored to conduct the survey on the principal experiences and projects developed and in progress in each of the Region's countries. The second part is *Significant Successful Experiences in Distance Learning. Program Evaluation* contains information on the programs developed by the International Telecommunication Union (ITU) and by the Inter-American Telecommunication Commission of the OAS (CITEL/OAS) in Tele-Education.

The third called *The Incorporation of New Information and Communication Technologies in Tele-Education Systems in the Americas. Multimedia Strategies in Distance Learning,* constitutes an outline of the Regional and National Policies established by the international organizations and by the national governments, which provides a strategic vision of the Information Society in the Region.

The Book concludes with thoughts and proposals by the Rapporteur on Tele-Education of CITEL/OAS.

**TUTORIAL ON INSTALLATIÓN AND USE OF THE CD-ROM "BOOK ON TELE-EDUCATION IN THE AMERICAS"**

**System Requirements**

| Hardware | IBM PC/AT or compatible |
|---|---|
| CPU | Processor higher than Intel Pentium ® I 100 MHz o compatible |
| RAM | 32 MB or more is recommended |
| Hard Disk | 100 MB |
| Operating System | Windows 95 /98 / NT / 2000 / Millennium Edition |
| Programs | A navigator such as Internet Explorer or Netscape |
| | Acrobat Reader (included in CD in the Components Directory) |
| | Shockwave (included in CD in the Components Directory) |

**Additional Components.**

If you have problems starting the product, try installing it again. If the problem persists, install Shockwave (Shockwave.exe) found in the "components" directory of the Product CD.

In order to view some of the documents on the CD-ROM you need to have Acrobat Reader® installed on your computer. If it is not already installed, it can be found in the "components" directory of the Product CD.

**Installation**

Place the CD-ROM in the reader of your PC.

If "Auto Execute" has not been activated on your CD-ROM reader, execute the "Install.exe" file to install the Product on your hardware.

**STEP 0**

When you begin installing the CD you will see the following dialogue. Wait a few moments as your PC continues with installation.



**STEP 1**

Next, your PC will welcome the installer of the Book on Tele-Education for the Americas

Press the *Next* button to continue with installation.



**STEP 2**

The Installation Assistant will ask you in which folder you would like to install the Book on Tele-Education.

If the choice indicated is correct press the *Next* button.
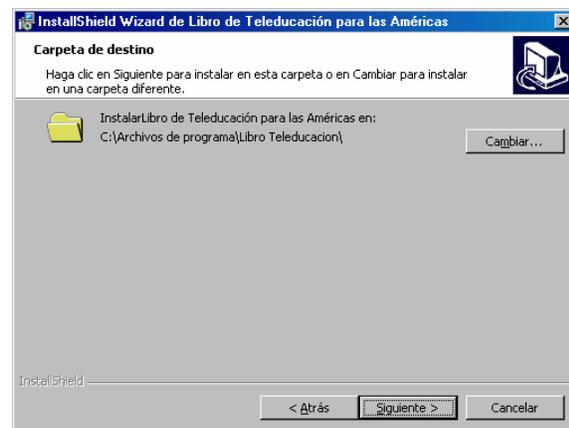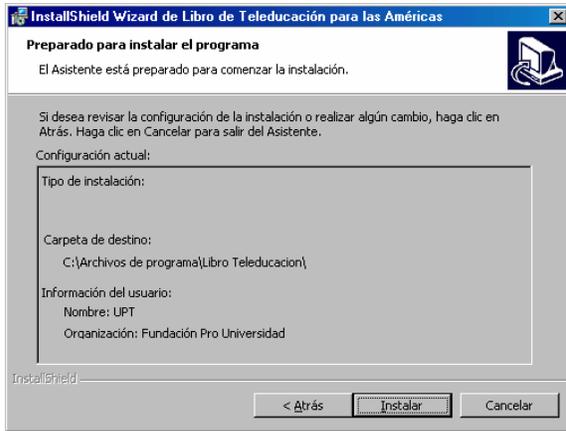
**STEP 3**

The Assistant will indicate that it is preparing to start installation.

The information entered in the previous STEP is indicated in the dialogue box.

**STEP 4**

Wait while your PC installs the files from the CD-ROM.
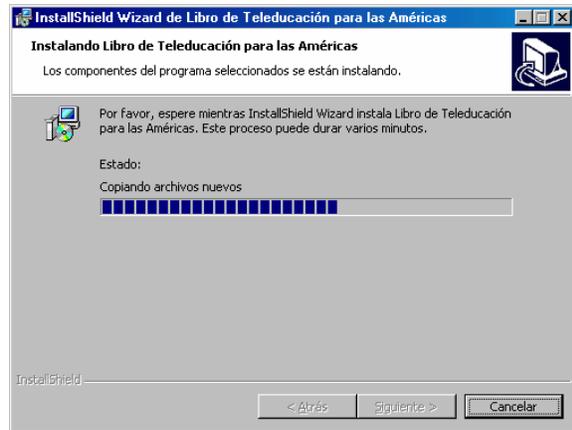




**STEP 5**

You have successfully completed the installation process.

Press *End*.
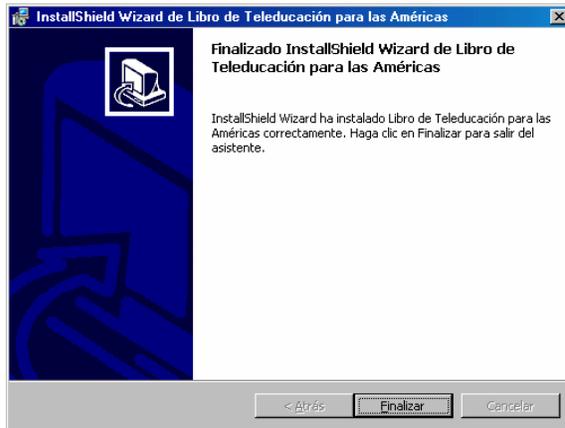
DO NOT FORGET TO RESTART YOUR COMPUTER TO ASSURE PROPER PRODUCT OPERATION.

**RUNNING THE CD ROM**



Upon starting the CD-ROM you will find the following screen.

By moving the mouse on the globe to the right, you will see four sections that light up to select the different options available.
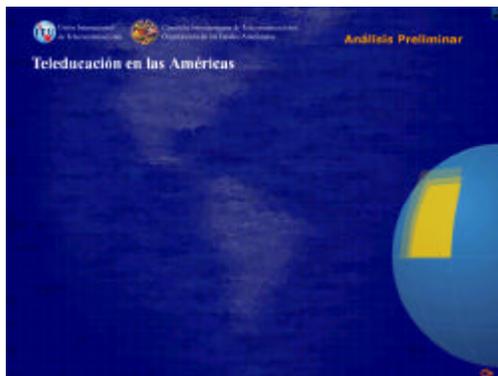


For example, when you place the mouse on the second section, the option *Preliminary Analysis* lights up.

Click there and the titles under this subject appear.

Clicking on the blue squares will allow you to enter the selected topic.





The *Preliminary Analysis* screen provides two additional options with two blue buttons at the bottom of same. One corresponds to *Additional Bibliography* and the other to access to the *Model for Creating a Distance Learning System*. This is developed interactively and allows access to the documents corresponding to the different stages in the development of a Distance Learning project.

Under the *Incorporation of New Technologies to Tele-Education Systems in the Americas* option, by selecting the topic *Institutions of Excellence and Recommended Sites* you access an interactive screen that provides direct access to the web pages of the recommended sites (you must be connected to the Internet).

The design has five music options available that can be selected by clicking on the icon in the upper right margin.

# PRELIMINARY ANALYSIS


## What is Tele -Education?

| Title | *What is Tele-Education?* |
|---|---|
| **Author** | *Juan José Cataldo* |
| **Institution** | *CITEL/OAS - ITU* |
| **Email** | Juancataldo@hotmail.com |
| **Web Page** | www.pleyadessystems.com.ar |
| **Location on CD ROM** | Preliminary Analysis<br>What is Tele-Education? |

The article adopts the definition prepared during the *First Symposium on Tele-Education for the Developing Countries,* organized in 1999 by the International Telecommunication Union (ITU) in Manaos, Brazil, because, in this author's opinion, it is the most comprehensive one:

*"Tele-Education is the use of information and communication technologies to provide Distance Education"*

The definition provided by the General Telecommunication Directorate MOPTMA is also cited:

*"Tele-Education should be understood as the development of the process of distance education (regulated or unregulated), based on the use of information and telecommunication technologies, that make interactive, flexible and accessible learning possible for any potential recipient."*

An outline is provided of the preliminary steps that led to the writing of the first Book on Tele-Education in the Americas:
- The creation of the Tele-Education Rapporteur's Office under the purview of CITEL/OAS Permanent Consultative Committee I on Public Telecommunication Services (PCC.I).
- The development of the First CITEL/OAS Pilot Project on Tele-Education for the Americas.
- The CITEL/OAS PCC.I mandate to the Tele-Education Rapporteur to draft a guide containing an inventory of hardware and software available for Tele-Education applications and the list of projects of this type existing in the Americas, that resulted in important advances for writing this Book on Tele-Education of the Americas.

**Some Clarifications in Terminology**

| Title | *Some Clarification in Terminology* |
|---|---|
| **Author** | *Cirigliano, Gustavo* |
| **Location on CD-ROM** | Preliminary Analysis<br>Some Clarifications in Terminology |

The author indicates that we must agree upon, and eventually adopt, the meanings for some terms that refer to the new modalities and media emerging in the field of Education, given the incorporatio n of new information and communication technologies.

Apparently, this need is due to the requirement of overcoming the terminological plurality for assessment and analysis of proposals and projects by governmental and international organizations responsib le for determining their feasibility.

For Doctor Cirigliano there are two terminology sources in reference to Tele-Education: terms from the field of Education, and those from the field of Technology. He indicates that the greatest difficulties arise from those terms that define, or attempt to define, the modalities and procedures affecting Education. This is not the case of those terms used to describe the technological components or devices, the meaning of which is generally unambiguous.

| Title | *Basic English-Spanish Glossary for Internet Users* |
|---|---|
| | *[Glosario básico inglés-español para usuarios de Internet]* |
| Author | *Rafael Fernández Calvo* |
| Institution | *Asociación de Técnicos de Informática (ATI) [Association* |
| | *of Information Technicians* |
| Email | Rfcalvo@ati.es |
| Web Page | Http://www.ati.es/novatica/glointv2.html |
| Location on CD-ROM | Preliminary Analysis |
| | Some clarifications of terminology |

This Glossary has been included as a good starting point for the development of a common vocabulary for our continent in both English and Spanish. Because in addition to being one of the most advanced and complete, this glossary is frequently updated in its digital version available on the Web.

**Some Topics to be Considered in Developing**

**Tele-Education Programs**

| Title | *Some Topics to be Considered in Developing Tele-Education Programs* |
|---|---|
| | *[Algunos aspectos que deben considerarse al desarrollar programas de Teleducación]* |
| Author | *Several* |
| Institution | *International Telecommunication Union  (ITU)* |
| Web Page | http://www.itu.int/ITU-D/hrd/events/teleduc/index.html |
| Location on CD-ROM | Preliminary Analysis |
| | Some topics that must be considered in developing  Tele-Education Programs |

The Conclusions and Recommendations of the *First World Symposium on Tele-Education for the Developing Countries*, held in 1999 by the International Telecommunication Union (ITU) in Brazil, propose that:

- Tele-Education must be part of the education policy of each country.
- Tele-Education planning and implementation must be a part of the multi-sectorial joint effort to maximize the impact of its use on a national scale.
- The so-called "Tele-Applications" (Tele-Education and Tele-Medicine) must be coordinated on a macro level, since they require a similar infrastructure.
- We must promote special conditions so that the basic and medium level public schools and other similar institutions can be connected to the Internet
- The State has an essential role in the promotion of Tele-Education.
- We must take into account the importance of training and sensitizing agents involved in development and dissemination of Tele-Education programs.
- The international organizations must make a special effort to sensitize the national governments on the importance of defining "National Tele-Education Policies."
- We must promote the implementation of Tele-Education System pilot and prototype projects.
- We must promote the creation of an awareness of Tele-Education for Development," which makes Distance Education with social goals a priority.
- Horizontal cooperation promoted by the international organizations is fundamental to the promotion of Tele-Education.
- We propose the creation of an Internet portal to disseminate projects and activities being conducted globally in the area of Tele-Education.



The presentations and conclusions of the *First World Symposium on Tele-Education for the Developing Countries* are available on: http://www.itu.int/ITU-D/hrd/events/teleduc/index.html
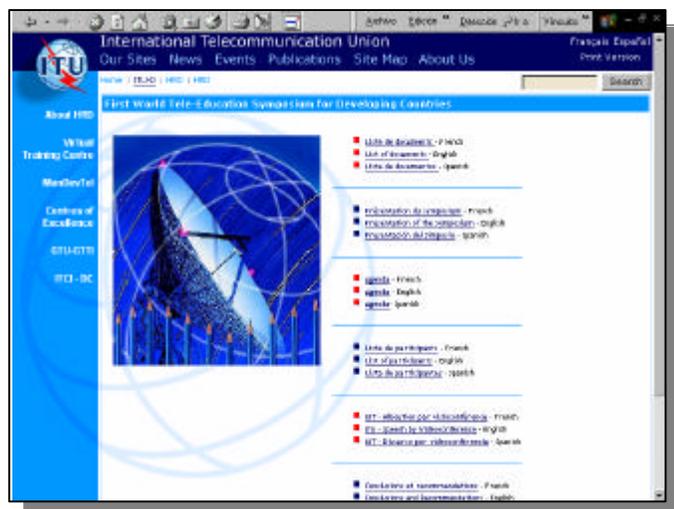
**Challenges in Distance Education**

| Title | *Education for Solidarity in Society* |
|---|---|
| | *[Educación para una sociedad solidaria]* |
| Author | *Saad Chedid* |
| Institution | *Tele-Education Rapporteur's Office - Inter-American Telecommunication Commission - Organization of American States (CITEL/OAS)* |
| Location on CD-ROM | Preliminary Analysis |
| | Challenges in Distance Education |

This article contains thoughts and proposals from the Tele-Education Rapporteur, CITEL/OAS, Professor Saad Chedid, in order for Tele-Education to become the tool which assists in overcoming the obstacles in our path toward building an organized, integral and congenial community.

The author asks what the traffic will be, the content found by inhabitants of the countries on accessing the Internet highways. What effects will it have on the population accessing them. What will they find there? To what extent will they help this inhabitant in flesh and blood to find his or her liberation?

Professor Chedid indicates that both Latin America and Africa are the continents that consume fewer machines and have fewer Internet connections. In a world populated by 6.billion people, only between 15% and 20 % have the privilege of studying.

The author assumes that the field of education in the developing countries still has not used the new technologies to the extent that he believes possible.

For this purpose, he proposes that the State and the social organizations be the ones to make the most effort in developing educational structures to allow all of the members of society to have access to continuing education.

Furthermore, he highlights the attitude of the international organizations, especially the ITU and CITEL/OAS, which collaborate in formulating educational proposals to incorporate the use of new technologies. The ITU by organizing the *First World Symposium on Tele-Education for the Americas* with the explicit objective of: "Creating awareness on the potential of tele-education and the need for the telecommunication and education organizations to work together to implement tele-education services that benefit the inhabitants of the country"; CITEL/OAS by carrying out the *First Tele-Education Project for the Americas*, that to a great extent constitutes the fulfillment of some of the objectives set forth for the area by both organizations.

| Title | *Distance Education as a tool in the struggle against poverty and for strengthening democracy in Latin America [La Educación a Distancia como instrumento de lucha contra la pobreza y de fortalecimiento democrático en América Latina]* |
|---|---|
| **Author** | *Celedonio Ramírez Ramírez* |
| **Institution** | *UNED-CR* |
| **Web Page** | http://www.uned.ac.cr |
| **Location on CD-ROM** | Preliminary Analysis<br>Challenges in Distance Education |

Doctor Celedonio Ramírez Ramírez, who was Chancellor of the State Distance University of Costa Rica (UNED-CR) for more than fifteen years is the author of this work.

For him, Distance Education on a global level is currently in its third generation.

On analyzing the first generation, quoting John Verduin, he sustains that Distance Education has forerunners both in Europe and America since the XIX Century. Prestigious universities of the two continents developed it, limiting their efforts to education by correspondence and radio education. Among the reasons for its poor acceptance, the Author indicates the hostile environment and the general perception of low quality associated with this method.

The second generation began in the seventies in Europe, in Central, South and North America, under the incentive of renowned universities. This second generation saw an extraordinary outcome for the method. It encompassed all levels of the educational system and already in 1990 served no fewer than ten million students. This generation notably influenced the qualitative improvement of the method and at the end of the last century (XX) gave it extraordinary vitality as a quality alternative in response to present and future educational needs.

The third generation of Distance Education, determined by the globalization process and the technology revolution stands out as one of the greatest outcome. It has begun to transform the attendance-based method of education. This generation has opened up cooperation between universities and distance projects. It has raised the prestige level of the method along with its acceptance. Fundamentally, it has promoted the involvement of educators in both modalities.

In Latin America, Distance Education is also important because of its relevance to the democratic future of our nations. All of us know that today's society is characterized as a society of knowledge. Nevertheless, among our people, the population excluded from knowledge is not only growing, but it has important implications for the future of democracy and of social peace because of its relationship with increasing poverty.

Therefore, Distance Education plays an important role in the consolidation of an open and democratic society, facilitating the access to and participation in power of non-traditional sectors and areas.

# Basic Principles of Distance Education

| Title | *Attendance-Based Education, Open and Distance Education [Educación presencial y Educación abierta y a distancia]* |
|---|---|
| Author | *Cirigliano, Gustavo - Velleggia, Susana - Ciamberlani, Lilia* |
| Institution | *National Institute of Public Administration (INAP) Argentina* |
| Web Page | http://www.inap.gov.ar |
| Location on CD-ROM | Preliminary Analysis<br>Basic Principles in Distance Education |

For the Authors, Distance Education is an educational modality.

The Authors highlight as differentiating features of Distance Education five didactic situations:
- Not-Attendance-Based.
- Non-contiguous communication.
- Independent student work.
- Work outside the classroom.
- Less "face to face" contact with the professor.

Nevertheless, they indicate that these five characteristics, as well as the use of technological resources that facilitate bi-directional communication and that promote individual learning, are also present in the attendance-based method. Therefore, the two modalities should not counter each other.

The Authors state that Distance Education offers the following possibilities:
- Tends toward decentralization.
- Guided by educational objectives.
- Leans toward the transfer of flexible contents.
- Based on multidisciplinary teams.
- Provides personalized and self-sustained teaching.
- Facilitates large-scale teaching.
- Requires individualized educational communication processes.
- Combines attendance-based modalities.
- Produces its own didactic support and utilizes a varied gamut of media and technologies.
- Addresses heterogeneous groups whose participation is voluntary
- Is apt for stimulating the capacity for analysis, responsibility, participation, organization and freedom of the pupils.

There are three different organizational models for this method:
- The Mixed Distance System.
- The Self-sufficient Distance System.
- The Partnership Distance System.

| Title | *Distance Learning [Aprender a Distancia]* |
|---|---|
| Author | *Several* |
| Institution | *Pontificia Universidad Javeriana. Open University Center. Colombia* |
| Web Page | http://www.javeriana.edu.co/cua/frame1.html |
| Location on CD-ROM | Preliminary Analysis<br>Basic Principles in Distance Education |

The professionals of the Open University Center of Pontificia Universidad Javeriana of Colombia, state the six fundamental aspects that characterize Distance Education:

- The democratization of knowledge.
- The contextualization of knowledge.
- The objectivization of knowledge.
- Research, which adapts the co ntents to each country's current situation and establishes a basis for its educational programs.
- Organizational format of distance knowledge.
- Systemizing information and communication.

The article cites the general presentation of the Open University Center, Higher Education Institution created in 1972 under the auspices of Pontificia Universidad Javeriana.

At this Center in 1974 the *Javerian Model of Distance Education* was created. Within this framework, the Teacher Refresher Training Program was prepared. This program offers a Licentiate degree in Basic Primary Education, a BA Degree in Teaching, a Major in Religious School Teaching and Catechism, a Masters in Education - In-depth Field Study of Teaching for Marriage and Family Life, a Major in Child Abuse Prevention and a Licentiate in Basic Education with an emphasis on Language.

The Center has its central office in Bogota, Colombia and broadens its national coverage with sixteen Regional Centers.
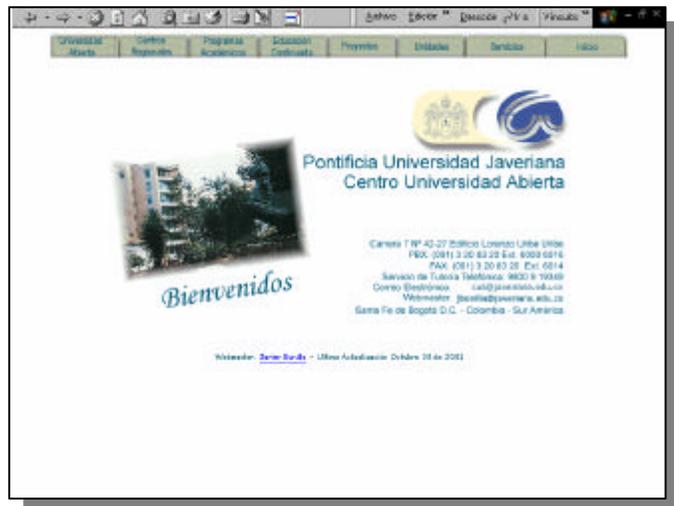
| Title | *Distance Education Facing the Challenges of the New Millennium* |
| | *[La Educación a Distancia frente a los retos del nuevo milenio]* |
|---|---|
| **Author** | *Marta Finardi* |
| **Institution** | *University of Morón - Republic of Argentina* |
| **Web Page** | http://www.unimoron.edu.ar |
| **Location on CD-ROM** | Preliminary Analysis |
| | Basic Principals in Distance Education |

The Author lists the main characteristics of Distance Education:

- Implies a self-learning process.
- Accessible to large groups.
- Permits the unification of large-scale with high quality educational services.
- Allows for self-paced learning.
- Promotes pupils' autonomy and individual responsibility.
- Allows for work-study.
- Avoids uprooting the students.
- Addresses diverse needs.
- Allows a better cost-benefit ratio.
- Permits optimizing resources.
- Combines different didactic media and resources.
- Permits access to education of persons traditionally excluded from the traditional system.
- Permits incorporation of agricultural areas.



The conclusion of the Author is that these characteristics determine that Distance Education contributes to the democratization of Education and to realizing the principle of the right to Education for all with equal opportunities.

The article concludes with a listing of the fields of application for this method.
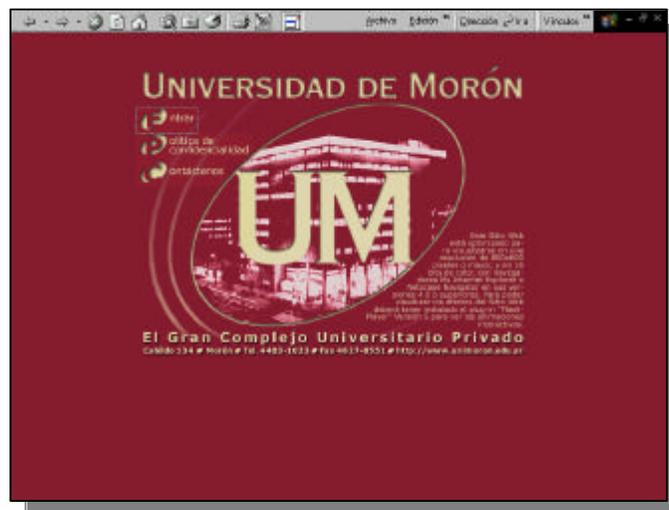
**Developments in Distance Learning Programs**

| Title | *Standard Models for Distance Learning Systems Development [ Modelos normativos para el Desarrollo de Sistemas Educativos a Distancia]* |
|---|---|
| Author | *pro University of Production and Work Foundation - Argentina [Fundación pro Universidad de la Producción y del Trabajo - Argentina]* |
| Institution | *CITEL-OAS* |
| Web Page | http://www.upt.org.ar |
| Location on CD-ROM | Preliminary Analysis<br>Developments in Distance Learning Programs |

This article is an offprint of the *First Pilot Project of Tele-Education for the Americas,* developed by mandate of CITEL/OAS.

It describes the principals of "standard models" for the creation of distance education systems. A standard model is simply a structured and sequenced set of activities to be carried out in order to make the distance method possible.

Obviously, there are many standard models applied by the institutions that utilize the Distance Learning method. Those mentio ned in this article constitute a very useful overview for the adoption or the adaptation of some of them by the institutions that are interested in advancing in the implementation of this method.

Those adopted by the Open University of the United Kingdom of Great Britain are cited. They include thirteen activities for planning and organizing those systems divided into three areas:
- Course System.
- Student System.
- Regulatory and Support Programs.

By the Open University of Venezuela which, in turn, identifies three activities, divided into four phases:
- Planning Phase
- Design-Production Phase.
- Implementation Phase.
- Operations Phase.

And finally, the standard model adopted in the *First Tele-Education Pilot Program for the Americas* of CITEL/OAS is cited, which includes four stages, comprised of thirty-three activities:
- Strategic Planning and Policy  (which is fully transcribed).
- Academic Writing.
- Implementation.
- SED Evaluation.

| Title | *IP Awareness Training Programme Proposal for The Caribbean Sub-regional Centre of Excellence of the Americas* |
|---|---|
| **Author** | *Kim Mallalieu* |
| **Institution** | *University of the West Indies* |
| **Web Page** | http://www.uwi.tt |
| **Location on CD-ROM** | Preliminary Analysis |
| | Distance Education Program Development |

Dr. Kim Mallalieu is Director of the Communication Systems Group of the Department of Electrical Engineering of the University of the West Indies, in Trinidad and Tobago.

In her work she refers to five courses that have been developed *on line* as the first activity of the sub-regional headquarters of the Center of Excellence of the Americas, created by the International Telecommunication Union (ITU).

Complete information about the creation and operations of these ITU Centers of Excellence may be found under Title I, Chapter 2 of this Book.

The five courses developed make up the IP Knowledge Program to which an attendance-based workshop is added. The activities foreseen are the preparation of new instructional materials for the five courses and the administration of courses on several IP subjects. They last approximately six weeks. The themes, contents, and agenda of each of the modules are stated in the article.
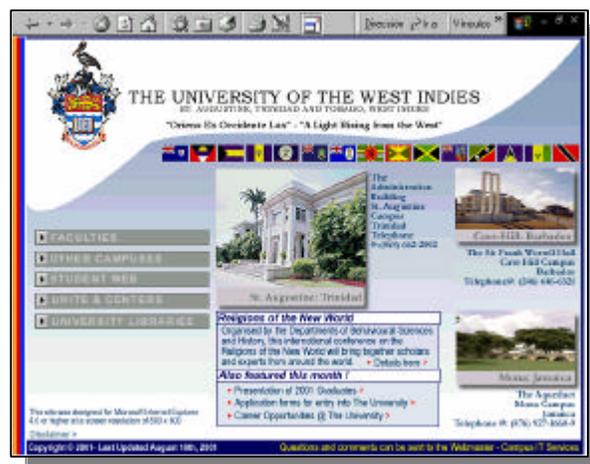
| Title | *Center of Excellence of the Americas Region Course [* |
| --- | --- |
| | *[Cours du Centre d´Excellence de la Région Amériques]* |
| **Author** | *Jaime Herrera* |
| **Institution** | *HRD Division. BDT/ITU* |
| **Web Page** | http://www.itu.org |
| **Location on CD-ROM** | Preliminary Analysis |
| | Development of Distance Education Programs |

In his pilot, the Director of the ITU Division of Human Resources Development comments on the activities of the Center of Excellence of the Americas Region, which include two broad courses of action. For the long term, organization and institutional strengthening; and for the immediate term, improving services provided through teaching courses aimed at the high level telecommunication sector decision makers of the region.

The first three courses organized under the coordination of the ITU, refer to the following topics:

- Competitive Transformation of Companies.
- Telecommunication Regulation
- Administration and Management.

The work contains detailed objectives, contents, and methodology for each one of these courses.
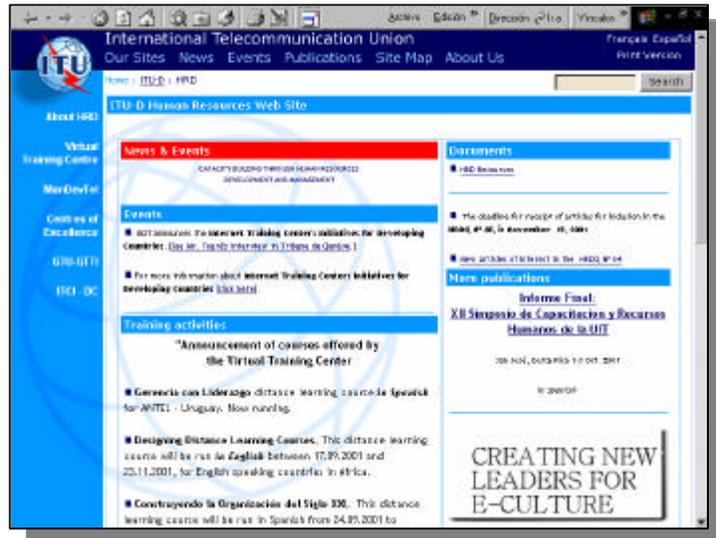
**Didactic Procedures for Distance Learning**

| Title | *Some ideas on education and the computer tools necessary to support their implementation [Algunas ideas sobre la educación y las herramientas computacionales necesarias para apoyar su implementation]* |
|---|---|
| **Author** | *Alberto Cañas* |
| **Institution** | *Institute for Human and Machine Cognition. University of West Florida. USA* |
| **Web Page** | Http://uwf.edu |
| **Location on CD-ROM** | Preliminary Analysis  Didactic Procedures for Distance Learning |

This article develops some ideas on the future accomplishments of education maximizing the use of new technologies, and indicates features that computer tools should provide to implement them.

For this purpose, the author relies on his experience in development and use of computer tools in the educational environment at the Institute for Human and Machine Cognition, University of West Florida.

All of these explanations prepared by the author are based on "conceptual maps," that he defines as two-dimensional representations of a group of concepts and their relationships.

For Cañas, today's technology presents opportunities for creating more powerful environments than just a series of Web pages. Specifically, it allows models to be illustrated in "conceptual maps."

This environment permits the student to navigate through the maps and media according to his or her interests, with out any predisposed sequence. This student can navigate through a hierarchy of maps to a level as deep as he or she wishes. This is made possible by the subordinatio n of those maps.

In addition to this virtual environment, the author proposes:

- The modular organization of themes.
- Greater flexibility in the organization of the modules.
- Greater excellence in the creation of contents.
- Better accessibility to information.
- Better use of interactive resources with the instructor, beyond the use of email.
- Better use of inter-active resources with the student group.

| Title | *A Method for Large- scale Distance Training: Instructional Design of a Workshop on Oral and Written Communication for the Teaching Skills Refresher Program [ Una modalidad de capacitación masiva a distancia: Diseño instruccional del Taller de Comunicación Oral y Escrita para el Programa de Actualization en Habilidades Docentes]* |
|---|---|
| **Author** | *Several* |
| **Institution** | *Instituto Tecnológico y de Estudios Superiores de Monterrey - México* |
| **Web Page** | http://www.itesm.mx |
| **Location on CD-ROM** | Preliminary Analysis<br>Didactic Procedures for Distance Education |

This work reveals the experience developed at the Virtual University of Technological and Higher Education of Monterrey in Mexico in preparing the Workshop on Oral and Written Expression (TOE).

The Virtual University currently offers masters, doctorate, and continuing education programs within the framework of the ITESM university system. These programs are administered at the twenty-six campuses of the system itself and in other locations in Mexico, Latin America, United States and Canada.



The conceptual foundation for the instructional design of the Workshop on Oral and Written Expression is explained along with the methodology used in its preparation.

The authors conclude the work with recommendations and suggestions for the instructional design of distance courses.

| Title | *Academic Preparation of Distance Courses* |
| --- | --- |
| | *[Elaboración Académica de cursos a distancia]* |
| **Author** | *pro University of Production and Work Foundation -* |
| | *Argentina* |
| **Institution** | *CITEL-OAS* |
| **Web Page** | http://www.upt.org.ar |
| **Location on CD-ROM** | Preliminary Analysis |
| | Didactic Procedures for Distance Education |

Offprint of the *First Tele-Education for the Americas Pilot Project*, prepared by mandate of CITEL/OAS, which documents the second stage of the creation of a Distance Learning system: Academic Preparation.

This second stage comprises the activities defined for the Curricular Design of a course (or educational project) and for the Instructional Design of the materials.



In this stage, there is a description of the ways in which the institution selects the media policy, and the main advantages and disadvantages of the media and supports customary to Distance Learning systems, with special emphasis on the media derived from the NTIC.

| Title | *Instructional Design Models* |
|---|---|
| | *[Modelos de Diseño Instruccional]* |
| **Author** | *Sherri Braxton* |
| **Institution** | *George Washington University - USA* |
| **Web Page** | http://www.gwu.edu |
| **Location on CD-ROM** | Preliminary Analysis |
| | Didactic Procedures in Distance Education |

The author develops the concept of the *instructional design model* and describes the six main models in use in the United States:

- Dick and Carey.
- Hannafin and Peck.
- Knirk and Gustafson.
- Jerrold Kemp.
- Gerlach and Ely.
- Tripp and Bichelmeyer´s Rapid Prototyping.

Moreover, she classifies the design models according to:

- Experience Level required for its use.
- Guidance.
- Structure of Knowledge.
- Context.
- Objectives and Uses.
- Theoretical Basis.

She concludes by comparing two of the design models studied: the Hannifin Peck Design Model, and the Gerlich and Ely Design Model.
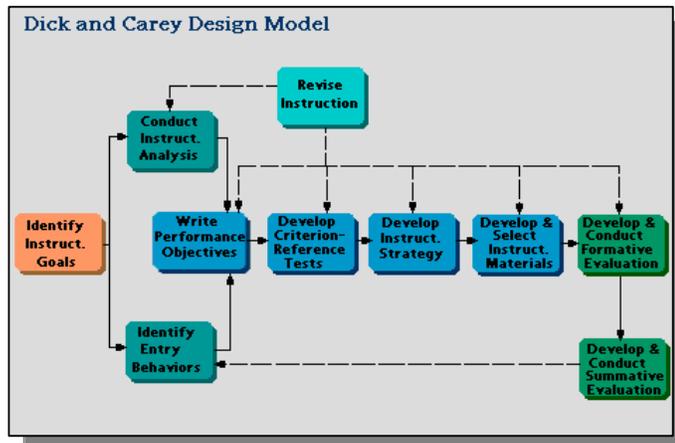
# Technological Overview

| Title | *Comparison of Distance Learning Technologies [Comparación de las Tecnologías de Educación a Distancia]* |
|---|---|
| **Author** | *Jenny Dos Reis* |
| **Institution** | *School of Engineering of the Central University of Venezuela* |
| **Web Page** | http://neutron.ing.ucv.ve/revista-e/No5/JDReis.htm |
| **Location on CD-ROM** | Preliminary Analysis Technological Overview |

Distance Education is a way of learning characterized by the fact that a physical distance separates the professor and the student(s). Technology plays an important role because through it voice, video, data, graphics and print transmission features are made available. There are many types of distance education. They vary according to the media support provided (voice, video and data); the type of communication employed (synchronous and asynchronous); the nature of the interaction (for example, one alone, one to one, one to many, many with many); and, the technologies employed (telephone, satellites, etc.).

This work describes the foundation of distance learning, its motivations and benefits. Such as, the possibility of sharing resources, improvements in instructor and student access, and advances in the quality of education.

The article also identifies some of the systems used in distance education, such as email, WWW, audio and video-conferences, etc. A comparison is presented of those listed.

| Sistema | Texto | Gráfico | Imagen | Vídeo | Audio |
|---|---|---|---|---|---|
| E:Mail | X | X(*) | X(*) | X(*) | X(*) |
| WWW | X | | | | |
| Grupos Discusión | X | | | | |
| Conferen-cias por Computador | X | | | | |
| Audio Conferencias | | | | | X |
| Vídeo Conferencias | X | X | X | X | X |
| Correo de Voz | X(**) | | | | X |
| IRC | X | X(*) | X(*) | X(*) | X(*) |
| MUD/MOO | X | | | | |
| Pizarra Electrónica | X | X | | | |
| Workflow | X | X | X | X | X |

| Sistema | Síncrona | Asíncrona |
|---|---|---|
| E:Mail | | X |
| WWW | X | X |
| Grupos Discusión | | X |
| Conferencias por Computador | | X |
| Audio Conferencias | X | |
| Vídeo Conferencias | X | |
| Correo de Voz | | X |
| IRC | X | |
| MUD/MOO | X | |
| Pizarra Electrónica | X | |
| Workflow | | X |

The media frequently used in distance learning is also described, e.g. mobile video, stationary video and audio.

There are two forms of communication in the systems developed in synchronous and asynchronous distance education. The comparison provided allows the reader to quickly identify and classify distance learning systems according to the type of communication used.

A brief description of the technologies employed and the associated factors to be considered in preparing a distance learning project are also explored.

| Title | *How to Evaluate Educational Software and Web Sites* |
|---|---|
| | *[Como Evaluar Software Educativo y Sitios Web]* |
| **Author** | *Gregg B. Jackson* |
| **Institution** | *George Washington University* |
| **Web Page** | http://www.techknowlogia.org |
| **Location on CD-ROM** | Preliminary Analysis |
| | Technological Overview |

There are more than 20,000 educational software packages and thousands of educational sites around the world. How can one decide which is the best and which is merely a waste of time?

There are two approaches. One is to use software guides and portals indicating the list of resources and sites believed to have merit. The second alternative is to assess oneself the available software and web sites.

There is also another method for approaching this issue. Find out if the students using the software and the educational web sites learn more than the students that do not.

For this purpose, the author provides a list of educational software guides and portals for web sites with educational contents.

The author also provides a model questionnaire with the necessary criterion for conducting surveys. There are also considerations of hardware platform requirements, goals and objectives, content, teaching methods, user friendliness and cost.

| Title | *On-line Educational Applications: A Web Tool for Comparative Analysis [ Aplicaciones Educativas de Entrega en Línea: Una Herramienta Web para el Análisis Comparativo]* |
|---|---|
| **Author** | *Bruce Landon, Randy Bruce and Amanda Harby* |
| **Institution** | *Douglas College, Kwantlen University College and Centre for Curriculum, Transfer and Technology* |
| **Email** | landonb@douglas.bc.ca |
| **Web Page** | http://www.c2t2.ca/landonline |
| **Location on CD-ROM** | Preliminary Analysis<br>Technological Overview |

This web site is designed to assist educators to evaluate and select software for on line delivery. The study describes and compares the majority of applications being used in Canada focusing on:

- technical specifications
- instructional design values
- tools and features
- user friendliness and accessibility
- sharing potential
- technological standards compliance



On the web site there are also four interactive forms for comparing on line educational software.
- A first option for the review of technical and instructional specifications.
- A second with a review for criteria especially designed for those educators unfamiliar with the technical functions and specifications of the educational software for on-line delivery.
- The third option allows for the comparison of a selection of applications considering the particular desired features. Especially prepared for those who need to make reports and presentations on the subject.
- Finally, a fourth alternative allows for a tailored assessment consultation.

There is also a glossary of the terms used on this site to more correctly understand the language employed.

| Title | *2000 Software and Hardware Guide for On Line Courses [Guía 2000 de Software y Hardware de Recursos para Cursos en Línea]* |
|---|---|
| **Institution** | *Syllabus* |
| **Web Page**<br>**Location on CD-ROM** | http://www.syllabus.com/syllabusmart/Apr00_bg.html<br>Preliminary Analysis<br>Technological Overview |

Developed by Syllabus, this article contains a resource guide of software and hardware for sending courses on line, videoconferencing and network administration on university campuses.

Included are products available on the market, as well as information on provider companies. The list contains more than 50 products ordered by categories.

- On line delivery of courses and development tools.
- Network Administration and Management
- Servers
- Routers, hubs, wireless components
- Videoconferencing

| Title | *Platforms for the Design and Development of Virtual Courses* |
|---|---|
| | *Analysis and Selection of the Virtual Learning Environment* |
| | *[Plataformas para el Diseño y Desarrollo de Cursos Virtuales* |
| | *Análisis y Selección del Entorno Virtual de Aprendizaje]* |
| **Institution** | *Cátedra UNESCO. Universidad Nacional de Education a Distancia, España* |
| **Web Page** | http://www.uned.es/catedraunesco-ead/cursos.htm |
| **Location on CD-ROM** | Preliminary Analysis |
| | Technological Overview |

These two documents are an excerpt of reference materials listed on the *Cátedra Unesco* Web Page of UNED, National University of Distance Education of Spain.

The first of the documents contains a list of web sites for more than 100 platforms available on the market.

The second is a list of more than 15 web sites for comparing the different platforms available on the market.

# Tele-Education and Education in the Third Millennium

| Title | *Distance Learning and the new paradigms for the XXI Century [La Educación a Distancia en los nuevos paradigmas para el siglo XXI]* |
|---|---|
| Author | *Manuel Moreno Castañeda* |
| Institution | *University of Guadalajara - México* |
| Web Page | http://www.udg.mx |
| CD-ROM Location | Preliminary Analysis |
| | La Tele-Education and Education in the Third Millennium |

A proposal to reflect on the possibility of building an educational model for the future, reviewing some characteristics and trends of the current educational systems and how we must plan an educational proposal for now, tomorrow and always.

Castañeda maintains that, considering today's world in which the frontier of technological advances coexists with highly backward environments, we can be absolutely sure that this millennium will also be one of great inequality and contrasts. Therefore, he proposes that we recover the core of education, revitalize basic and primary skills as a platform that allows for pertinent responses to demands for change and diversity that will need to be present in this century.

Examine the trends of current educational systems and determine what should be improved, strengthened, discarded and reworked to finalize the formulation of the principles of his

proposal. Distance Learning has an important role in that proposal, as it can contribute to the vitalization of educational development in general and the New Technologies that assure accessibility for large numbers of students. He concludes his analysis with the implications of TIC for learning.

| Title | *Distance Education: strategy for the XXI Century. Planing Distance Education capable of linking the village with the world [Educación a Distancia: estrategias para el siglo XXI. Pensando una Educación a Distancia capaz de articular la aldea con el mundo]* |
|---|---|
| **Author** | *Norma Lidia Carosio* |
| **Institution** | *INTA - Argentina* |
| **Web Page** | http://www.inta.gov.ar |
| **CD-ROM Location** | Preliminary Analysis |
| | La Tele-Education and Education in the Third Millennium |

The author indicates the contradictions of Globalization: between governing elite and nationalized people, between internationalized economic life and territorialized political life.

For Ms. Carosio, the deciding factor for the destiny of nations in this global economy will be the educational level of its peoples. She affirms that the new jobs require intensive knowledge, imagination and intelligence. Therefore, Distance Education is a suitable strategy for fostering equal opportunities.

The States will have to provide Education, although it is not probable that the State will be the one that produces those services. In this expert's opinion, these services will be the responsibility of third parties: universities, institutes, international organizations, companies. Therefore, she suggests thinking of Distance Education as an enterprise with high content and ethical responsibility, and advancing in search of new systems for cooperation to make it viable.

| Title | *A Holistic Approach to IT&T Human Resource Development in T&T* |
|---|---|
| Author | *Kim Mallalieu* |
| Institution | *Department of Electrical and Computer Engineering - University of West Indies -Trinidad Tobago* |
| Web Page<br>CD-ROM Location | http://www.uwi.tt<br>Preliminary Analysis<br>Tele-Education and Education in the Third Millennium |

Thoughts aimed at formulating some recommendations and suggestions on how training in new technologies can be guided from national governments.

In principle, Dr. Mallalieu sustains that there are clearly defined national objectives for the States' social and economic development, which to some extent presuppose the existence of a well-developed Telecommunication sector.

National policies should be oriented toward assuring basic teaching and computer literacy for all of the civil community, and to promote teaching formal levels of education in new technologies for the professional sector. In doing so, she affirms, it becomes necessary to develop a culture in which the benefits of the new technologies are obvious and tangible for the community. The author also indicates specific measures that will lead to sensitizing the community to that effect.

Considering that the training of human resources in new technologies is not a goal in itself, she emphasizes the need to prepare long term educational programs formulated from a holistic approach that must consider that:
- Education must transfer knowledge and also procedural methodologies.
- Education must develop competencies.
- Education must be enriching for the development of attitudes, discipline and perspective.
- Education must promote tutorial processes that guide and motivate the student.

The author examines the experience ITU Centers of Excellence in Telecommunication have had throughout the world. She emphasizes the objectives of these Centers, the areas where they conduct what are mainly training activities, and the user profile of this educational system. She indicates the priority themes defined both for the Center of Excellence of the Americas Region, and for the Caribbean sub-region.

| Title | *The New Information and Communication Technologies as mediators in the teaching-learning process* |
|---|---|
| | *[Las Nuevas Tecnologías de la Información y la Comunicación como mediadoras del proceso de enseñanza-aprendizaje]* |
| **Author** | *Several* |
| **Institution** | *University of Cienfuegos "Carlos Rafael Rodríguez" - Cuba* |
| **Email** | ldibut@ucf.edu.cu |
| **Web Page** | http://www.ucf.edu.cu |
| **CD-ROM Location** | Preliminary Analysis |
| | Tele-Education and Education in the Third Millennium |

The authors examine what the current modernization process should require of Education. This process is comprised of two basic components: rationality and subjectivity. The first is geared towards organizing social life and productive activities through the incorporation of science and technology. The second presumes the integral development of the personality.

Therefore, they indicate that we must conceive of the school, education and learning in a different way. We must awaken the interest and desire for independent learning for a lifetime. Only in this way will we educate men and women capable of adapting to change. Citing the most recent UNESCO report, the authors maintain that the four pillars of education in the third millennium are:
- Learn to learn.
- Learn to know.
- Learn to do.
- Learn to know others.

This requires developing new theories on learning, geared toward computer supported learning. Computers must be immersed in powerful and collaborative learning environments as tools that support the active process of building learning and developing skills. We must take full advantage of their potential and strength to present, represent and transform information and to induce specific ways of interacting and cooperating.

Based on this new concept of research based learning, a new generation of computer supported learning environments has emerged. They have in turn, made way for new data processing techniques that sustain and promote these renovations in learning, e.g. hypertext, multimedia and hypermedia techniques which the authors review specifically.

Furthermore, they study the three fundamental processes of student-instructor behavior enhanced by computer use: information processing, the interaction and communication. They include a description of the main functions of each one of these processes.

# The Status of Tele-Education in the Americas

# Case Studies in Distance Education

# North America

| Title | *Distance Education at Postsecondary Education Institutions: 1997-98. Statistical Analysis Report* |
|---|---|
| **Institution** | *National Center for Education Statistics -Office of Educational Research and Improvement - U.S. Department of Education - USA* |
| **Web Page** | http://nces.ed.gov |
| **CD-ROM Location** | The Status of Tele-Education in the Americas<br>Case Studies in Distance Education<br>North America<br>United States of America |

This Report was written by the National Center for Education Statistics under the auspices of the Department of Education, United States of America. A federal agency whose mission is to survey, examine and systematize all of the information pertaining to Education in the United States and in other countries.

The document provides complete and detailed information on the public and private, two and four-year Postsecondary education institutions that offer distance courses.

The information is classified to include:
- Institutions and Enrollment.
- Academic Proposal (courses offered).
- Degrees and Certificates.
- Technologies used.
- Cost of registration and fees.

The Report concludes with a review of the trends noted in comparing the last statistical report of the 1994-1995 period with this one, considering in particular:

- Percentage of institutions offering Distance Education.
- Number of courses offered in this format.
- Number of students registered in this format.
- Number of degrees and Certificates issued.
- Increase in use of asynchronous Internet based technologies rather than using other media (videoconferences, videos, etc).

| Title | *Distance Education in Higher Education Institutions - Statistical Analysis Report* |
|---|---|
| Institution | *National Center for Education Statistics - Office of Educational Research and Improvement - U.S. Department of Education - USA* |
| Email | Bernard_Greene@ed.gov |
| Web Page | http://www.ed.gov/NCES |
| CD-ROM Location | Status of Tele-Education in the Americas<br>Case Studies in Distance Education in North America<br>United States of America |

The National Institute for Postsecondary Education, Libraries and Continuing Education, under the auspices of the Department of Education, United States of America conducted the survey substantiating this Report.

The questionnaires were designed to provide the first nation-wide sample of representative data of the country's Higher Education institutions offering of distance courses.

The Report reflects the information obtained considering in particular:
- Percentage of institutions offering distance courses, or planing to offer them in the next three years.
- Academic proposal (courses offered).
- Media and technological support utilized.
- Profile of the target population of these academic proposals.
- Current enrollment.
- General features of the courses and distance programs.
- Distance Program Objectives.
- Future Planning for distance academic proposal (courses selected).
- Factors considered by the institutions to initiate or expand its academic proposal in this format.

By the end of this Report, the Authors have defined Distance Education as education or training courses, administered at a distance (in a non-attendance-based fashion), via audio, video or through computer technology.

| Title | *Distance Education in Higher Education Institutions: Incidence, Audiences, and Plans to Expand -Issue Brief* |
|---|---|
| Institution | *National Center for Education Statistics - Office of Educational Research and Improvement - U.S. Department of Education - USA* |
| Email | Bernard_Greene@ed.gov |
| Web Page | http://www.nces.ed.gov/ |
| CD-ROM Location | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | North America |
| | United States of America |

This summary was conducted on the Statistical Analysis Report by the National Center for Education Statistics found in this Chapter.

It contains important information for providing a complete and updated overview of the status of Distance Education on a national level in the United States.

The information has been classified applying the method adopted in the above mentioned Report, and the most representative illustrations of each one of the topics considered is included.

| Title | *Status of Tele-Education in the Americas - Survey-Offprint: Texas A&M University* |
|---|---|
| **Author** | *Norma Lidia Carosio* |
| **Institution** | *CREAD - CITEL/OEA* |
| **Web Page** | http://www.tamu.eduhttp://cread.outreach.psu.edu/ |
| **CD-ROM Location** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | North America |
| | United States of America |

Offprint of the Survey conducted by the Distance Education Network Consortium, in 1999, upon request by the Inter-American Telecommunication Commission of the OAS.

At this opportunity, information on Texas A&M University was surveyed, specifically, the Department of Agriculture.

According to this report, the academic proposal refers to training and continuing education and degree programs. The academic proposal has 158 courses.

The main area of coverage is regional (State of Texas) and international (México and Costa Rica).

The media and support technologies used mainly are videoconferences and computers.

| Title | *Overview of Provincial/Territorial Involvement in On-line Learning* |
|---|---|
| Institution | *Advisory Committee for Online Learning by the Council of Ministers of Education - Canada* |
| Web Page | http://www.cmec.ca |
| CD-ROM Location | Status of Tele-Education in the Americas<br>Case Studies in Distance Education<br>North America<br>Canada |

This Report prepared by the Advisory Committee for Distance Teaching of the Council of Ministers of Education, Canada, contains complete and updated information on developments in this format in the Provinces and Territories of the Nation.

According to its authors, the Canadian public education institutions have an academic proposal of more than 5000 online courses. This is a tremendous wealth of experience, resource development, and communication infrastructure helping to make Canada one of the leading countries in *e learning*.

The Report describes in detail some examples of policies implemented by the different Provinces and Territories of Canada: British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland and Yukon. Along with a partial inventory of initiatives developed by public and private institutions:

- Newfoundland:
    - College of the North Atlantic (CONA).
    - Memorial University of Newfoundland.
- Quebec:
    - Télé-université.
    - College Center for Distance Education (CCFD).
- Ontario:
    - Contact South: a consortium of six community colleges.
    - Contact North/Contact Nord: the largest network of distance education of Canada.
    - Colleges Distributed Learning Task Force.
- Saskatchewan:
    - The Saskatchewan Institute of Applied Science and Technology (SIAST).
    - The University of Regina.
- Alberta:
    - The University of Alberta.
    - Northern Alberta Institute of Technology (NAIT).
    - Southern Alberta Institute of Technology (SAIT).
    - The Calgary Board of Education.

- Campus Alberta Repository for Educational Content.
- NETERA (association of universities, research centers, government agencies and large and small private companies).
- British Columbia:
  - Open Learning Agency (OLA).
  - New Public Universities:
    - Royal Roads University (RRU).
    - The Technical University of British Columbia (TechBC).
  - The CanLearn Project (University College of the Fraser Valley).
- Northwest Territories:
  - Chinook College.
  - Aurora College.
- Yukon:
  - Yukon College.

Furthermore, the Report contains a detailed list of provincial and institutional initiatives and programs:

- Centre for Curriculum, Transfer and Technology (C2T2).
- British Columbia Council on Admissions and Transfers (BCCAT).
- Education Portal.
- The Centre for Education Information Standards and Services (CEISS).
- National Centre of Excellence.
- Motiv8.
- bcopportunities.com
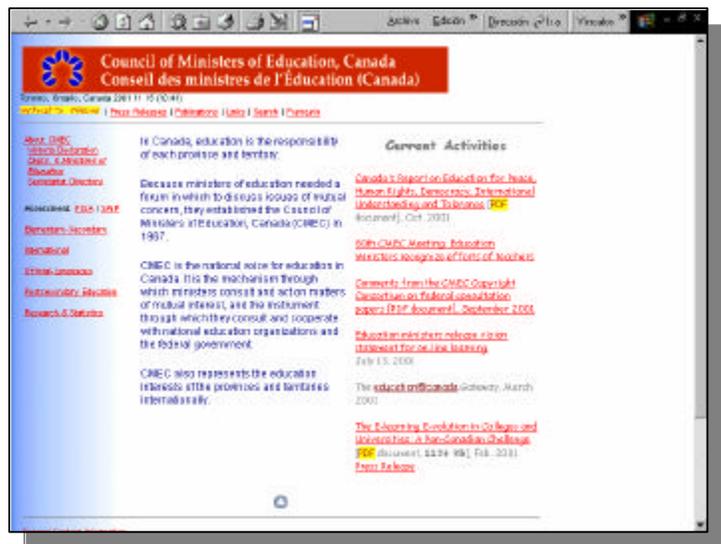
| Title | *CMEC Vision Statement on On-Line Learning in Postsecondary Education* |
|---|---|
| **Author** | *CMEC On-Line Learning Working Group* |
| **Institution** | *Council of Ministers of Education - Canada* |
| **Web Page** | http://www.cmec.ca |
| **CD-ROM Location** | Status of Tele-Education in the Americas Case Studies in Distance Education Canada |

The document prepared by the Advisory Committee for Online Education of the CMEC, based on the education priorities established by the Provinces and Territories, defines the recommended line of action to be implemented as a concerted national effort to assure Canadian leadership in online Postsecondary education.

Online education has increased in importance and is one of the priority topics for debate in the Canadian Provinces and Territories, considering its relevance and suitability for providing continuing education whether used in conjunction with traditional methods or in isolation.

The Provinces and Territories have responded to the needs and requirements set forth by the educational institutions and the community in the area of education by making significant investments in technology, telecommunication infrastructure, educational policy and training for students and instructors at the Postsecondary level.

Among the priorities indicated in the document are:
- Assure a high level of academic quality in online education.
- Promote access to quality online education throughout the Canadian territory.
- Promote collaboration among the Postsecondary level educators, for the development and sustainability of online education.
- Promote research, identification and adoption of best practices in online education.
- Assure the flow of information among the Provinces and Territories on the best practices, and the preparation and development of curriculum for online education.
- Promote cooperation among instructors and didactic processors in the use of better practices for professional development of distance programs.
- Maintain the competitive edge of the Provinces and Territories in the area of online Postsecondary education internationally.

The action plan for the 2001-2002 biennium is included in the Document appendix. The main themes of the plan are:

- Infrastructure.
- Intellectual Property.
- Content Development.
- Better practices.
- International Strategy.

| Title | *CanConnect* |
|---|---|
| **Institution** | *CanConnect - Federal Government* |
| **Web Page** | http://canconnect.ic.gc.ca |
| **CD-ROM Location** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | North America |
| | Canada |

*CanConnect* is part of the *Connecting Canadians* initiative of the Canadian Government. The objective is to promote among individuals and organizations partnership efforts on a local, regional and national level, to assure that young people are trained in the necessary skills to manage and utilize the New Information and Communication Technologies.

The article indicates the main characteristics of this initiative:
- What is *CanConnect*.
- Who are its users.
- Who sponsors it.
- How it works.
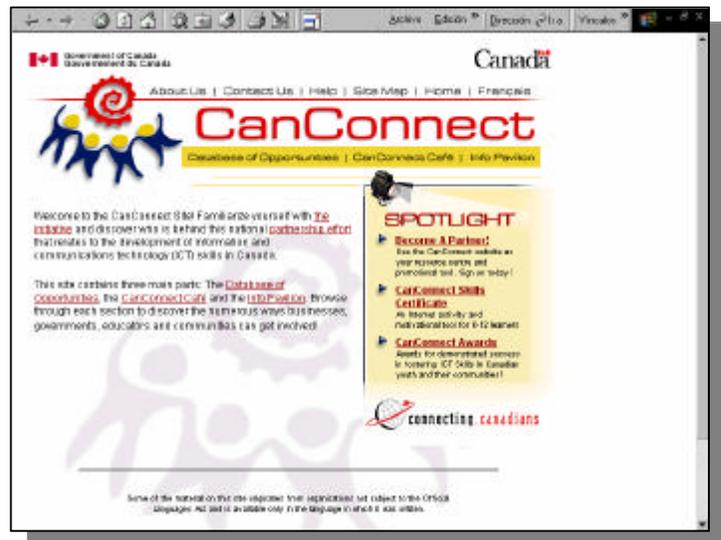
| Title | *Canada Business Service Centres (CBSCs)* |
|---|---|
| **Author** | David Gazsi |
| **Institution** | Business Development. HyperNet |
| **Web Page** | http://www.cbsc.org |
| **CD-ROM Location** | Status of Tele-Education in the Americas Case Studies in Distance Education North America Canada |

The *Canada Business Service Centre (CBSCs)* is a portal that gathers all of the necessary governmental information, for business start-up and management.

*CBSCs* is the result of a cooperative agreement among 36 departments of the national and provincial governments (with private sector involvement in some instances), which allows for the provision of all types of information on government services, programs and regulations linked to the area of business. It also provides assistance for business start-ups and management.

The articles provides details on the main features of the portal:

- What is *CBSCs*.
- Who are its users.
- Who maintains the portal.
- Main products to which access is available:
    - Interactive Business Software.
    - Online Workshop for Business start-ups.
    - Information Guides.
    - Business Information System.

| Title | *Canadian Technology Network (CTN)* |
|---|---|
| **Institution** | *National Research Council of Canada* |
| **Web Page** | http://www.ctn.nrc.ca |
| **CD-ROM Location** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | North America |
| | Canada |

The *Canadian Technology Network (CTN)* is an initiative of the National Research Council of Canada, whose mission is to provide access to information and services pertinent to small and medium-sized technology based enterprises.

This network links the national government, provincial governments, research centers, universities, community colleges, business associations, technology centers and economic development agencies to provide quick access to experiences, consulting and information, to small and medium-sized innovative enterprises.

The article provides details on the main features of the network:

- What is *CTN*.
- Who are its beneficiaries.
- Who are its sponsors.
- How it works.
- Consulting System.
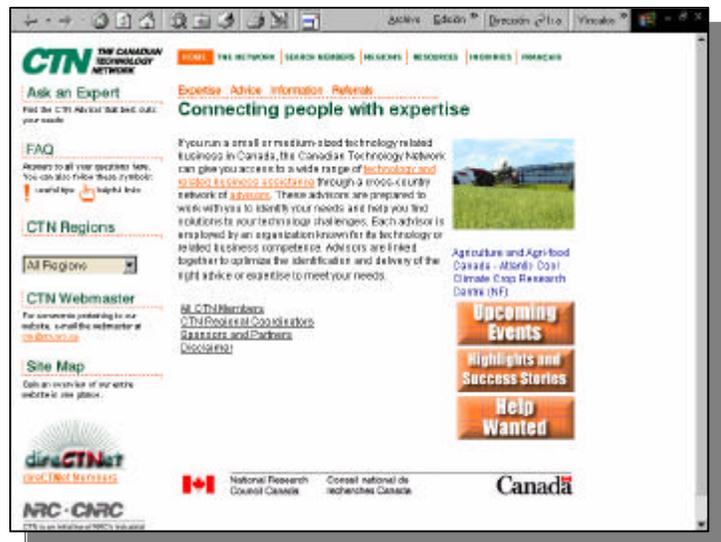
| Title | *LybraryNet* |
|---|---|
| **Institution** | *LybrayNet - Federal Government* |
| **Web Page** | http://www.connect.gc.ca |
| **CD-ROM Location** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | North America |
| | Canada |

*LybraryNet* is part of the government initiative *Connecting Canadians.* It is a cooperative venture of the country's federal government, provincial governments and library associations.

Its objective is to promote Internet use in public libraries.

The main initiatives of this program are:

- Better practices for the use of information highways, for delivery service in public libraries.
- Internet guide to promote online training in Internet user skills for public library officials.
- World scale online monthly newspaper on libraries, with special emphasis on the public libraries of Canada.

| Title | *Smart Communities* |
|---|---|
| **Institution** | *Federal Government* |
| **Web Page** | http://smartcommunities.ic.gc.ca |
| **CD-ROM Location** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | North America |
| | Canada |

The Smart Communities Program is a priority of the federal government initiative Connecting *Canadians*. These Communities will become centers for dissemination of the incorporation of new information and communication technologies in communities, organizations and families.

In May 2000, the Program Selection Committee announced the installation of twelve Smart Community Pilot Projects, one in each Province, one in the North and another in the indigenous community.

- British Columbia.
- Alberta.
- Saskatchewan.
- Manitoba.
- Ontario.
- Quebec.
- New Brunswick.
- Nova Scotia.
- Prince Edward Island.
- Newfoundland and Labrador.
- North.
- Indigenous.

| Title | *SourceCAN* |
|---|---|
| **Institution** | Canada´s National E-Marketplace |
| **Web Page** | http://www.sourcecan.com |
| **CD-ROM Location** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | North America |
| | Canada |

*SourceCAN* has come rapidly to the national e-market of Canada. It is the result of the Agreement for Collaboration and Cooperation between Industry of Canada, Canadian Commercial Corporation and HyperNet Inc. *SourceCAN* also receives considerable support from industry, from different departments of the federal government and from the provincial governments and, recently, from the local and regional governments.



*SourceCAN* utilizes the platform provided by HyperNet Inc., through which it provides dissemination services of business opportunities in the private sector and with governments.

The article provides details on the main topics disseminated by this system.

| Title | *Strategis* |
|---|---|
| **Institution** | *Industry Canada* |
| **Web Page** | http://www.strategis.ic.gc.ca |
| **CD-ROM Location** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | North America |
| | Canada |

*Strategis* is an initiative of Industry Canada; to provide small and medium-size companies with easy and economical access to all the information linked with business management, which allows them to strengthen their competitiveness.

*Strategis* is an information portal containing databases and tools for small and medium-size businesses and consumers.

The article indicates the main contents of the portal.

| Title | *OAS/Ser.L/XVII.4.1 CCP.I/doc. 1250/01* |
| --- | --- |
| | *Tele-Education in México* |
| **Author** | *Juan Manuel Borbolla* |
| **Institution** | *Mexican Association of Distance Education [* |
| | *Asociación Mexicana de Educación a Distancia]* |
| **Web Page** | http:///www.amed.org.mx |
| **CD-ROM Location** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | North America |
| | México |

The Author, President of the Mexican Association of Distance Education, presents an up-dated overview of the status of incorporating the new information and communication technology into the distance format.

Approaches the subject from three different points of view:

- The efforts that the institutions and persons involved are making to join education, from a pedagogical perspective, with the new information and communication technology.
- The efforts that the government authorities are making to encourage the use of information technology in different activities.
- The current advances in applying new technologies to educational activities.

Among the main government activities, the Author emphasizes the Information Development Program whose main objectives are:

- Stimulate research in scientific and computer technology.
- Promote human resources training and the development of an information culture.
- Foster an information culture throughout society and develop a specialized culture among professionals and teachers.
- Foster the development of the data network infrastructure.
- Consolidate academic networks for access to information and training services.

Among the most important experiences developed by educational institutions, the Author highlights the following:

| Contents and Objectives Distance Education Programs | Private Institutions | Media and Technology Used |
| --- | --- | --- |
| Continuing Education | Autonomous Technology Institute of México | Satellite Television |
| Postgraduate Continuing Education | Technological Institute of Higher Education of Monterrey | Television via satellite and Internet |
| Communication between its *campi* | Anáhuac University | Interactive Videoconferencing Internet |
| Communication between its *campi* | La Salle University | Interactive Videoconferencing Internet |
| Postgraduate Continuing Education | Regiomontana University | Videoconferencing and Internet |

| Title | *OAS/Ser.L/XVII.4.1 CCP.I/inf. 1251/01*<br>*Distance Education in México* |
|---|---|
| **Author** | Francisco Xochipa Sánchez |
| **Institution** | Engineering Department - Public Education Secretariat - México |
| **Web Page** | http://www.sep.gob.mx |
| **CD-ROM Location** | Status of Tele-Education in the Americas<br>Case Studies in Distance Education<br>North America<br>México |

Dr. Francisco Xochipa Sánchez, Director de Engineering of the Public Education Secretariat, presents to us in this article the general features of the institutions that offer the distance format.

These include the Basic Level, Mid-Higher and Higher Education.

In the Basic Level, the Author highlights the activities of the National Institute for the Education of Adults (INEA) and the Tele-Secondary System, developed by the Federal Government.

In the Middle-Higher, there are some 21 institutions that offer Open and Distance Education, among which he makes special mention of:
- Adult Education Centers.
- Tele-secondary System.
- Center for Middle Studies and Advanced Educational Procedures (CEMPAE).
- National Institute for Adult Education (INEA).
- Open University, Open Teaching System (SEA) and Open Technological System (STA).
- Open Teaching System (SEA) of the College of High School Certificates.

At the Higher Education Level there are 24 institutions, 15 of statewide scope, and 8 of national or regional scope. Among the public institutions, the following are highlighted: National Autonomous University of México, National Polytechnic University, National Teaching University, University of Guadalajara, University of Colima and the Secretariat of Education of the State of Jalisco. Among the private institutions: Technological and Higher Education Institute of Monterrey (ITESM), the Latin American Institute of Educational Communication (ILCE) and the University of the Valley of Atemajac (UNIVA).

On referring to the future of Distance Education in México, the Author makes special mention of the Distance Education Program of the Secretariat of Public Education, the fundamental infrastructure of which is made up of the National Distance Education Network. This is comprised of the Satellite Network of Educational Television (Red Edusat) and School Network for Educational Information Systems (Red Escolar).

The article contains detailed information on the National Distance Education Network and on Tele-secondary programs and SEPAinglés [KNOWEnglish], of the Secretariat of Public Education.

| Title | *University de Monterrey* |
|---|---|
| **Institution** | *Distance Education Center (CEAD) University of Monterrey - México* |
| **Web Page** | http://www.mty.itesm.mx |
| **CD-ROM Location** | Status of Tele-Education in the Americas Case Studies in Distance Education North America México |

This article explains the formation of CEAD of the University of Monterrey, and the methodology employed by this Center for design of online courses:

**Step 1**.
If you decide to register for an online course from the U of M catalogue, you will follow the exact same procedure as for registering for an attendance-based course. In online courses both for UDEM and Athabasca, there is a note indicating that they are courses taught under this format.

**Step 2.**
When you register for an online course, you will be monitored during the entire course. Not only will there be exact instructions for each activity that you must do, but there will always be someone available to answer your questions or give you some type of advice. This person is your academic coordinator. Your academic coordinator will send you a welcome email the day after you register for the course in which he or she will give you your log in and password to be able to access the course, will give you the necessary instructions for doing so as well as the procedure for obtaining course materials
The online course is based on a web platform; therefore, you will only need a connection to internet Explorer or Netscape to take your course.

**Step 3**

Once you have accessed WEB CT, and before your course begins, you will register for an orientation session for online course users. In 3 to 4 days you will familiarize yourself with the use of the platform and how to navigate in it. The orientation is necessary as it will allow you to begin the course with more confidence and it will help you to achieve a good performance standard.

**Step 4**
Once connected, you will observe that your course is within a "virtual classroom" where you will have access to buttons that appear on the screen. There, you will be able to easily navigate any online course, since although the courses are different, the virtual classroom will be the same in all of them so that the students can identify them and navigate quickly and easily. It is not necessary for you to be an expert in managing the internet to be able to use it. In fact, if you know how to send e-mail, you have the necessary skills for managing your online course. Inside your virtual classroom, you will have access to information provided by the professor, to public discussions, to real time chats between teacher and students, and to material and documents indicated by the teacher.

**Step 5**
The course is structured in Modules. For each one of them, the teacher will begin by giving a conference, and organizing a notebook where the lectures, homework and learning and evaluation activities are included.
When the module begins, the teacher will indicate how you can interact with him/her and among the students, creating online learning communities. In these communities, discussions take place on a specific topic indicated by the instructor and each entry made by the instructor or the students is recorded, so that at any time each member of the course can review the entries made during the course.

**Step 6**
Online courses are more similar to attendance-based classes than they seem. Like any course, a professor gives your online course; it has a beginning and an ending date, you handle bibliographic materials, you work individually and in teams, there are exams and homework.
You can also speak in real time with anyone who is on line at the same time you are; although it is not face to face, you can have an enjoyable experience through electronic media.

The article ends with details about the three distance Masters programs offered by UDEM.

| Title | *Coordination of Educational Information* |
|---|---|
| **Author** | *Francisco Xochipa Sánchez* |
| **Institution** | *Engineering Department - Secretariat of Public Education - México* |
| **Web Page** | http://www.sep.gob.mx |
| **CD-ROM Location** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | North America |
| | México |



In response to the survey administered by CITEL/OAS, the Director of Engineering of the Secretariat of Public Education of México reports on the objective of the *School Network* and *Edusat Network* Project.

| Title | *Autonomous University of Tamaulipas* |
|---|---|
| **Institution** | *Autonomous University of Tamaulipas* |
| **Web Page** | http://www.uat.mx |
| **CD-ROM Location** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | North America |
| | México |

The *Distance Education Academic Units* Project *(UNAED)* is reviewed in-depth in this article.

Furthermore, it explains how the University activities fit into the framework of the National Program for Educational Development, through the national projects School Network and Edusat, Tele-secondary, SEPAinglés, The Primary School Teachers Refresher Summer Program, Masters in Educational Technology and a Degree Program in Developing Teaching Skills.

# Central America and the Caribbean

| Title | *Tele-Education in the Caribbean* |
|---|---|
| **Author** | *Kim Mallalieu* |
| **Institution** | *CITEL / OAS* |
| **Web Page** | http://www.citel.oas.org |
| **Location on CD-ROM** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | Central American and the Caribbean |
| | Caribbean |

This document is a study on tele-education in the Caribbean region, written by Dr. Kim Mallalieu between June and July of 2001.

For this purpose, surveys were conducted of twenty-six country representatives, personal interviews, telephone interviews, e-mail, bibliographical and Internet searches.

As a first step the report begins with a concise discussion on Tele-education. It briefly examines the literacy levels, education policy, communication, economic and social development in the region.

Then, it provides a broad and detailed review of Tele-education in each of the countries. A brief geographic description is given for each of them. Followed by a list of the Tele-education activities currently in effect. Sub-regional initiatives are also examined along with those of the University of West Indies (UWI) and the Organization of Eastern Caribbean States (OECS).

In a detailed chart, the Author identifies the different initiatives according to the educational level reached; primary, secondary, tertiary or postsecondary.

Next, in another series of charts, the report identifies the investments made and the source of that investment.

| Country | Primary Level | Secondary Level | Tertiary / Post Secondary Level |
|---|---|---|---|
| Anguilla | (1) Government of Anguilla plans Strategic Framework for ICT in Education and Strategic Framework for an Information Economy for Anguilla | | • UWIDEC centre |
| Antigua & Barbuda | • Adult Literacy Program Radio Broadcast– Golden Words and Living Numbers (CARCAE) | | • Caribbean University Network (CUNet) electronic node at the University of Health Sciences, Antigua<br>• UWIDEC centre |
| Aruba | **1. NO TELE-EDUCATION ACTIVITIES KNOWN TO EXIST** | | |
| Bahamas | • Broadcasting Corporation of the Bahamas and the Government exploring educational broadcasting possibilities | | 1. Distance Education Resource Center - The College of the Bahamas<br>2. Distance Education Network –New Providence and Family Islands (COL)<br>3. Bahamas Hotel Training College as site for COL distance education program for TVET teachers. (Uses monthly teleconferencing)<br>4. Caribbean University Network (CUNet) electronic node at the College of the Bahamas. Local Area Network expansion and interconnection.<br>5. UWIDEC centre |
| Barbados | The St. Mary's Primary School Educational Technology Research Project<br>I. Edutech 2000 | • Educational Television in the 1970s | Inter-American Institute for Co-operation on Agriculture (IICA) Distance Learning Center<br>• Commonwealth Conference of Education Ministries (COL)<br>• Radio GED 106.1 FM, Barbados Community College (UNESCO)<br>• RedHUCyT/CUNet LAN expansion and interconnection for the Barbados Community College<br>• Erdiston Teachers' Training College as site for COL distance education program for TVET teachers. (Uses monthly teleconferencing)<br>• UWIDEC centres (2) |

| Title | *Establishment of a Virtual Center for the Center of Excellence of the Americas in the Caribbean Sub-region [Establecimiento de un Centro Virtual para el Centro de Excelencia de las Américas en la Sub-region del Caribbean.]* |
|---|---|
| **Author** | *Kim Mallalieu* |
| **Institution** | *CITEL / OAS* |
| **Web Page** | http://www.citel.oas.org |
| **Location on CD-ROM** | Status of Tele-Education in the Americas<br>Case Studies in Distance Education<br>Central American and the Caribbean<br>Caribbean |

The Author proposes the establishment of a Virtual Center as: a content staging area, a central communication point for the Center of Excellence of the Caribbean, and as a sub-regional arm of this Center coordinated in the Caribbean.

Moreover, it should be considered a generic framework for sending courses from the Center of Excellence through the Caribbean Virtual Center.

A description is given of the Sub-regional Virtual Center objectives along with the mandates and proposals of the Centers of Excellence. The author explains what the activity of the Virtual Center will be, indicating the resources and the time required in each case, as well as the counterparts involved.

In the report, tasks are listed that pertain to the maintenance and administration of the system.

Regarding the way that the activities will be carried out, two modes are specified in the document:
- Attendance-based
- Online Delivery

The methodology for preparing materials for use in course development should be created with both attendance-based and online courses in mind.

# South America

| Title | *Tele-Education in Argentina* |
|---|---|
| Author | *Henoch D.Aguiar* |
| Institution | *State Secretariat of Communication of the Nation - Argentina* |
| Web Page | http://www.secom.gov.ar |
| Location on CD-ROM | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | South America |
| | Argentina |

The Author, current Communications Secretary of Argentina, indicates the need to formulate national Tele-Education policies based on two principal focal points. The first, is the strategic use of technological tools. The second, is the need to develop as quickly as possible an interactive link between all of the university campuses of the region making available to all educational systems throughout America major courses of study, updated knowledge and specific applications obtained in each one of our countries.

Thus, in Argentina priorities have been established for developing information technologies:

- Universalization.
- Electronic Government.
- Foster TIC´s use.
- Human Resource Development.
- Promote the production of content in Spanish.
- Develop e-commerce.

With these priorities in mind, Argentina has established the National Program for the Information Society, which has among other instruments, Community Technology Centers (CTC), Educational Technology Centers (CTE), the Schools Without Borders Project, the Computer Literacy Corps and the National Telemedicine Program.

In addition, the Author highlights the National Government initiative, Educational Portal Educ.ar, a project based on an educational content portal, a training plan and a connectivity plan.

| Title | *Contributions for the Book of Tele-Education of the Americas, National Program for the Information Society, Republic of Argentina* |
|---|---|
| **Author** | *Jorge Mantovani* |
| **Institution** | *National Program for the Information Society - Secretariat of Communication- Argentina* |
| **Web Page** | http://www.secom.gov.ar |
| **Location on CD-ROM** | Status of Tele-Education in the Americas<br>Case Studies in Distance Education<br>South America<br>Argentina |

Mr. Mantovani, Director of the National Program for the Information Society, highlights the need for the national governments to encourage the educational institutions to provide online educational formats. We must be aware that by not doing so, we run the risk of being left behind by global actors less sensitive to national interests and priorities.

Argentina has a diversified and complex system of higher education comprised of: 36 national universities, 42 private universities, 12 university institutes (5 public and 7 private) and around 1700 tertiary non university institutes, principally geared toward the training of basic level educators.

The Federal Education Act, ratified in 1993, acknowledged the Distance Education format.

In this institutional and normative context, the author indicates that the educational institutions should move to a new model of administration and development of TIC based distance systems.

Progressing toward this transition, we find the UBA XXI Program (University of Buenos Aires), the Distance Education Service for the children of Argentineans living abroad and some institutions of higher education that provide integral services and self-sufficient online learning. Some examples are: the Virtual Campus of the University of Quilmes, FLACSO, and UBANET. Also, partial or supplementary services of online education, such as some schools of the University of Buenos Aires, degree programs at the Pascal Blas University, and postgraduate degree programs at private universities.

The Author emphasizes the principle initiatives of the National program for the Information Society: * Community Technology Centers; * Schools Without Borders Project; * the Computer Literacy Corps; and * the National Telemedicine Program.

The article concludes with a commentary on the *Educ.ar* portal. The *Educ.ar* project is a national project with the objective of closing the digital divide and improving the educational system in the country.

| Title | *OAS/Ser.L/XVII.4.1 CCP.I/doc. 694 /98* |
| --- | --- |
| | *Report on Tele-Education and Tele-Information Systems in Argentina. Distance Education in Argentina* |
| | *[Informe sobre Teleducación y Teleinformática en la Argentina. La Educación a Distancia en la Argentina]* |
| **Author** | *Norma Lidia Carosio* |
| **Institution** | *Vice Presidency, Sourthern Cone - Distance Education Network Consortium (CREAD)* |
| **Web Page** | http://www.outreach.psu.edu/cread |
| **Location on CD-ROM** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | South America |
| | Argentina |

Ms. Carosio provides us with an updated overview of Distance Education in Argentina. The country has international associations: the Vice Presidency for Latin America and the Caribbean, World Distance Education Council (ICDE); and the Vice Presidency, Southern Cone, Distance Education Network Consortium (CREAD). National associations include: the Argentine Association of Distance Education and the University Network of Distance Education (RUEDA).

CREAD has surveyed Distance Education offerings available, identifying 210 Distance Education projects and courses, and 132 organizations involved with the subject, of which 76 correspond to universities and educational institutions, and the remainder to non-educational companies and organizations.

Furthermore, the Author refers to the Information Systems scenario in Argentina.

More development has taken place in the private sector, especially in the creation of software and technical assistance for the development of data transmission projects in the schools.
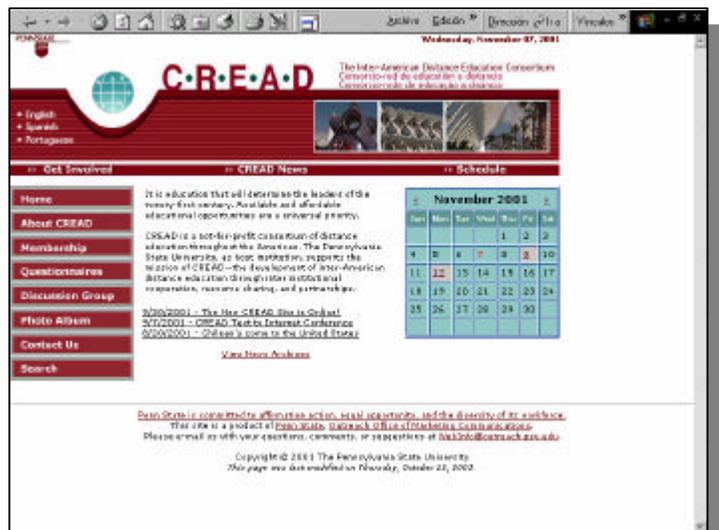
| Title | *OAS/Ser.L/XVII.4.1 CCP.I/doc. 905/99* |
|---|---|
| **Author** | *Distance Education Network Consortium CREAD)* |
| | *[Consorcio Red de Educación a Distancia (CREAD)]* |
| **Institution** | *Distance Education Network Consortium* |
| | *Consorcio Red de Educación a Distancia (CREAD)]* |
| **Web Page** | http://www.outreach.psu.edu/cread |
| **Location on CD-ROM** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | South America |
| | Argentina |

Offprint of the Survey conducted in 1999 by the Distance Education Network Consortium as requested by CITEL/OAS.

Two Argentinean university institutions are included: the National University of San Luis and the Official UNISA Tuition Center in Argentina.

The National University Tele-Education System provides regional and national coverage.

This University offers an Executive Secretary University Specialist distance professional training course. This academic activity is co-administered by the University and thirty-three municipalities of the Province, four Penitentiaries, a Business Center and two Neighborhood Unions. The co-administration methodology is explained in the article.

The University gives a Postgraduate Course in Advanced Training in Molecular Biochemistry for Clinical Biochemists and the article includes a detailed description of the contents and didactic media used.

The Official UNISA Tuition Center in Argentina has a national and international sphere of influence. It offers sixty graduate and postgraduate degree programs to students from Argentina and the rest of Latin America.

| Title | *CITEL Survey - By Project or Experience* |
|---|---|
| | *[Encuesta CITEL - Por Project o experiencia]* |
| Institution | *Autonomous University  Juan Misael Saracho* |
| Email | Rector@mail.uajms.edu.bo |
| Web Page | http://www.uajms.edu.bo |
| Location on CD-ROM | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | South America |
| | Bolivia |

Bolivia submitted its response to the Survey administered by CITEL/OAS, on the projects and experiences developed in the area of Tele-Education.

The survey refers to the Autonomous University Juan Misael Saracho, located in the Department of Tarija.

In reference to the communication infrastructure for Internet use, the system adopted by the University uses a normal telephone line, DSI and cable modem. The hardware chosen are UNIX   servers and Windows NT, and the software support for instructional word processing and management of the courses involves the use of Learning Space, Top-Class, Web-CT and BlackBoard.

| Title | *Virtual University: Opportunity for Growth or a Threat to the Higher Education Institutions* *[Universidade Virtual: oportunidade de crescimento ou ameaça para as instituições de ensino superior]* |
|---|---|
| **Author** | *João Vianney. Ricardo Miranda Barcia. Rodolfo Joaquim Pinto da Luz.* |
| **Institution** | *Federal University of Santa Catarina. National Foundation for the Development of Private Higher Education. National Association of Directors of Federal Institutions for Higher Education.* |
| **Web Page** | http://www.ufsc.br |
| **Location on CD-ROM** | Status of Tele-Education in the Americas Case Studies in Distance Education South America Brazil |

This important work was done in collaboration with the President of the Federal University of Santa Catarina and the Chancellor of the National Association of Directors of Federal Institutions of Higher Education, Dr. Rodolfo Joaquim Pinto da Luz, with the Director of Creation and Development of the Distance Learning Laboratory of the University and member of the Technical Council of the National Foundation for Private Higher Education, João Vianney, and the Coordinator of the Postgraduate Program in Production Engineering of the University. The Article presents a complete overview of the development of Distance Education in the public and private Universities of Brazil from the beginning of the XX Century to present.

The article also contains a complete summary of the development of this format on other teaching levels and in training activities throughout the country

The Authors maintain that currently Brazil is promoting structural transformations in its Higher Education System, specifically regarding:
- Official encouragement for university autonomy.
- Encouragement to create autonomous mechanisms for institutional assessment.
- Creation of public quality assessment systems for university teaching.
- Trend toward the establishing post university graduation exams for entering the job market.
- Creation of sequential courses for education in specific professions.
- Acknowledgement of studies accomplished.

This will allow for a change in definition of the institutional profile of the universities adapting them to the demands of the productive sectors and the academic bodies of each institution.

Within this framework, a new generation of Distance Education emerged in Brazil in the mid 90's, which promoted the intensive use of communication and information technology.

The Authors indicate the resources used by this third generation of Distance Education, and the article provides a very complete outline of the activities of the pioneer universities that led this modernization process.

Moreover, it is important to highlight the proposal prepared by the Federal University of Santa Catarina, which is referred to in the article in detail, and its national and international ties with other university institutions, research centers and companies in the Telecommunication sector.

The work also includes the regulatory framework for Distance Education in Brazil, and provides the chronological order of this format development, both in the formal and informal scope of education.

This article thoroughly examines the activities carried out and currently being implemented in this area by the public and private universities of the country.

| Title | *UBC and Distance Education: Establishment, objectives and results obtained [A UBC e o Ensino a Distância: Implantação, objetivos e resultados obtidos]* |
|---|---|
| **Author** | *Maurício Chermann. Luci Mendes de Melo Bonini.* |
| **Institution** | *Braz Cubas University* |
| **Web Page** | Http://www.brazcubas.br |
| **Location on CD-ROM** | Status of Tele-Education in the Americas<br>Case Studies in Distance Education<br>South America<br>Brazil |

Written by the Chancellor of the Braz Cubas University, Mr. Maurício Chermann and by Professor Luci Mendes de Melo Bonini, Coordinator for the University's Distance Education project, this article highlights the activities developed at the Institution in this area.

In order to plan for the adoption of the distance format at the University, special consideration was given to the exogenous and endogenous demands surveyed.

The exogenous demands are those that correspond to the public outside the University, the community where it is incorporated. In general, it refers to extension activities, training and refresher courses.

The endogenous demands are those that pertain to the public within the University: the students, the corps of instructors, and the administrative personnel. The needs of the students are, among others: research, teaching, refresher courses and preparation of future professionals. The requirements of the corps of instructors surveyed are among others: refresher courses, research, processing and dissemination of knowledge. For the administrative personnel they are training and updating.

The work distinguishes four generations of the distance format indicating new paradigms that must be designed for Education, beginning with the incorporation of new technologies to the learning process.

Moreover, identifying the need to establish collaboration and linkage systems between the educational institutions that make development possible in this format, the authors recommend that this be done.

They conclude by stating the basic requirements that must be considered for successfully implementing distance projects and systems:
- Acquire appropriate equipment
- Tutorial programs.
- Availability of content and support materials.
- Final evaluation.
- Innovative academic plan..

| Title | *Distance Education: Professor Training Program in operation at UFMT* |
| --- | --- |
| | *[Educação a Distãncia: Programa de Formação de professores em exercício na UFMT]* |
| **Author** | *Kátia Morosov Alonso.* |
| **Institution** | *Mato Grosso Federal University* |
| **Web Page** | http://www.ufmt.br |
| **Location on CD-ROM** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | South America |
| | Brazil |

Kátia Morosov Alonso, Coordinator of the Open and Distance Education Nucleus (NEAD) of Mato Grosso Federal University, provides complete and integrated information about the activities developed at this University in the Distance format and in particular of NEAD since its inception in 1993.

Outlining the background of NEAD, the Author highlights the development of the UFMT Distance Education project. This project is included in the debates and definitions, which gave rise to the Education Institute's Research and Teaching Policy created in 1992.

The UFMT Institute of Education was academically structured in Work Programs, considering the contributions of the VI National Encounter of the National Association for Professors Training (ANFOPE).

Within the framework of the guidelines written at this Encounter, the UFMG Education Institute renews its institutional perspective and organizes its training activities into three basic programs:
- Initial Series Educators' Training Program
- $5^{th}$-$8^{th}$ series and second grade Educators' Training Program
- Postgraduate Program.

These Training Programs will be developed gradually, initiating their activities with the first program mentioned. The Inter-Institutional Instructor Qualification Program (1996) was taken into account for its design. This includes the necessary program links and interaction among the institutions, and with the Public Education System and the Mato Grosso Education Workers Union.

The first of the activities prepared is the project of Basic Education Full Licentiate Degree of the 1st to $4^{th}$ series, through the distance format. This is incorporated into the Initial Series of the Educator Training Program. UFMT professionals comprised of specialists from the State Secretariat of Education and professors from the State University formed a Work Team for its development. The Tele-University of Quebec, UNESCO, and advisors from other Brazilian Universities collaborated with this team.

Within this framework, NEAD was created with the participation of the three public institutions involved (UFMT, SEDUC y UNEMAT). The main objective was to establish a Licentiate degree through the distance format.

The article gives a detailed explanation of the course's organizational and methodological structure, which is highly appropriate for its establishment as an instructional and administrative design model.

NEAD's objective is to consolidate the UFMT Distance and Open Education system. Currently, in addition to assessing this initial activity, the Licentiate Degree, NEAD is beginning a new phase of efforts to incorporate NTIC's into the distance format.

Included in the footnote of the work, is the survey administered by CITEL/OAS pertaining to UFMT.

| Title | *An Experience in Graduate Level Courses of Distance Education* |
|---|---|
| **Author** | *Ana de Lourdes Barbosa de Castro* |
| **Institution** | *Castelo Branco University* |
| **Web Page** | Http://www.castelobranco.br |
| **Location on CD-ROM** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | South America |
| | Brazil |

In this article, the Author, Coordinator of Distance Education, University of Castelo Branco, provides a brief description of Distance Education development in the world, to establish the relationship between the local socio-cultural context and the experiences propounded for this format in the University since 1995.

Distance Education at the University of Castelo Branco was established based on the following principles:
- Equal opportunities.
- Continuing education contributes to the training and updating of professionals.
- Educational innovations using the NTIC´s.
- The format's contribution to the general socio-cultural development of the local and national community.
- Creation of new systems, using alternatives to the traditional formats to respond to the growing demand.
- Establishment of a system for linking the institutions which optimizes human and financial resources, and the physical facilities.

In her work, the author presents the inclusion of Distance Education in the general context of the University teaching system and the basic pedagogical structure adopted in its courses:

Distance Education is conceived with a pedagogical structure comprised of three stages:
- Attendance-based moments.
- Self-learning.
- Non attendance-based tutorials.

The article contains a detailed description of the pedagogical structure of the courses, the formats, and functions of the tutorials, the student selection process and the preparation of entrance profiles, the course's organizational structure and dynamics adopted in the attendance-based encounters.

Moreover, the Author focuses on the make-up of the interdisciplinary teams that work in this area of the university and on the functions of those responsible for each stage of preparing instructional materials

| | |
|---|---|
| **Title** | *Distance Education at CETEB.  A history of challenges* |
| **Author** | *Heliane Maria Bergo* |
| **Institution** | *Technological Education Center of Brasilia* |
| **Web Page** | http://www.sec.ba.gov.br/educ_profissional/projetoceteb.htm |
| **Location on CD-ROM** | Status of Tele-Education in the Americas<br>Case Studies in Distance Education<br>South America<br>Brazil |

The Technological Education Center of Brasilia (CETEB) was created in 1968 to address the professional training needs of the new capital of the country. The Author, Educational Projects Manager of that Center, propounds to present in this article a retrospective view of some of the Distance Education programs developed by CETEB over the extent of the 26 years of its existence.

Specifically, the Author explains in detail the following programs:

Professors' Training Programs:
- Project 13.5. in collaboration with the Department of Substitute Teaching, Ministry of Education (DSU/MEC).
- Project 9.4. continuation of the above.

Direct Attention:
- Youth and Adults Education Program.
- Cebeban Project.

Attention to companies:
- Access Project.
- Learn Project.

Certification of professors:
- In collaboration with the Ministry of Education: Logos II.
- Project Own: Now I know.
- Additional Studies Program.

Projects in Mozambique:
- In collaboration with the Institute of Professors' In-Service Training (IAP), Ministry of Education, Mozambique.

Professional Training:
- Professors: Open School.
- Former-Athletes: Technical Sports Project.
- School Networks Specialists: Cebrace Project.
- Health Officials: Sucam Project.
- Rural Instructors: Senar Project.
- Union Leaders: MTB/SPS Project. Human Resources Development for the unions.
- Managers for the public sector: Municipal Development Planning (Pladem).
- Public Sector Education Managers: Management Training Program for Education System Administrators (Procapa).

The article concludes with a brief overview of the obstacles that we must overcome to certify courses in other States and on the Federal level.

| Title | *Courses in virtual learning environments: Anhembi Morumbi University experience with on-line courses.* |
|---|---|
| **Author** | *Marilene Santana dos Santos Garcia Carmem Maia, Kathia Castilho* |
| **Institution** | *Anhembi Morumbi. University.* |
| **Web Page** | http://www.anhembi.br |
| **Location on CD-ROM** | Status of Tele-Education in the Americas<br>Case Studies in Distance Education<br>South America<br>Brazil |

Written by the Academic Coordinator, Interactive Education Department, Anhembi Morumbi University, this document describes the process of seeking new educational strategies, implemented through on-line courses. Discovering solutions that involve interactive Internet communication resources, research and instructional interface.

The article contains a brief outline of the activities developed since 1995 by the Institution.

As usual, the Institution began working in the area beginning with the design of an on-line course. In this case it was the field of Fashion: *Universe of Fashion*. After this first experience the following activities were undertaken in the form of programs and Projects:
- Project Acting On-Line.
- Educator Refresher Program in the Use of New Technologies.
- On-Line University Living Program.
- Short Extension Courses.
- Major Course of Study. *Fashion and Communication.*
- Revitur Project: Virtual Network for Continuing Training for Professionals in Tourism.

The University has been able to develop a structured virtual space based on two programs: - Instructional Browser; and Personalized Spaces for Courses. Both permit the preparation of on-line courses, a format more suitable to the contents to be imparted. They also make on-line teaching management possible through tools and resources provided by the instructional browser.

The article explains in detail the preparation process, with emphasis on content organization, the interactive nature of the activity, and work by the Author on the online course content.

It also indicates activities of the Department of Interactive Education. Specifically the Training Program for the University Teaching Corps in the use of NTIC's, and the Educator Refresher Program, with a detailed list of the workshop content.

| Title | *Student-Tutor Relationship in the Distance Education Learning Environment* |
|---|---|
| **Author** | Marreiros, P.R. L. Moreira, I. F. L. Zanon, A. M. |
| **Institution** | *Public Virtual University of Brazil - UniRede* |
| **Web Page** | http://www.unirede.br |
| **Location on CD-ROM** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | South America |
| | Brazil |

The Distance Extension Course, *TV in School and Today's Challenges*, is being promoted by *UniRed*, in collaboration with the Federal University of Mato Grosso del Sur and the State Secretariat of Education of Mato Grosso del Sur. The educators who tutor this Course indicate the need for debate on the instructor-tutor role in the distance format.

The Authors' experience as tutors of the course mentioned, enriches this first approach to the debate.

The Virtual University of Brazil, *UniRed*, was created in 1999.from the consortium of sixty-seven institutions of Higher Education -federal, state and Technology Education Centers.

The course for which the Authors are tutors is promoted by the Distance Education Secretariat, Ministry of Education and Culture and by *UniRed*, under the general coordination of the University of Brasilia, D.F., involving 18 nuclei with the participation of 25 universities of the consortium.

The course objective is to train public institution professionals for basic and medium level education for better daily school use of resources provided by information and communication technology with an emphasis on audiovisual educational Communi-cation.

The work describes in detail the general course methodology and, in particular, the pertinent tutorials done using different media: telephone, fax, conventional mail, and email.
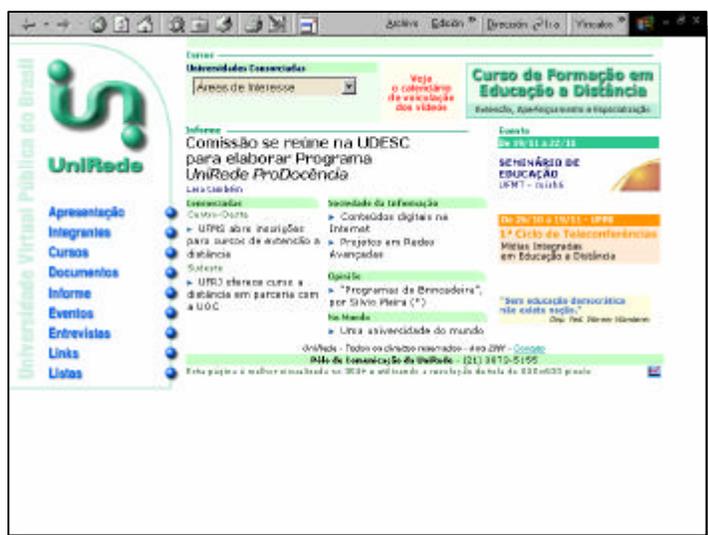
| Title | *Institutions Offering Distance Education in Brazil* |
|---|---|
| **Location on CD-ROM** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | South America |
| | Brazil |

A list is provided of the institutions that offer distance specialized study programs and courses in Brazil, indicating the administrators, telephone numbers, addresses, email addresses, and web sites.

| Title | *CITEL Survey- Book of Tele-Education* |
|---|---|
| **Author** | *Several* |
| **Institution** | *Several* |
| **Location on CD-ROM** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | South America |
| | Colombia |

All of the survey forms administered by CITEL/OAS are attached to this mailbox.

The institutions mentioned have responded to the survey with a detailed description of the Communications Infrastructure for Internet use, the Hardware and Software involved, the number of students and teachers per PC, the general characteristics of the courses being administered and the general objectives of each active Project.

The consolidated results of these surveys and two Annexes are attached. The first one is on active Projects at the different Universities in the country and the second on New Technologies research.

| Title | *CREAD Survey* |
|---|---|
| Author | *Southern Cone Vice Presidency - Distance Education Network Consortium CREAD* |
| Institution | *Distance Education Network Consortium CREAD* |
| Web Page | http://outreach.psu.edu/CREAD |
| Location on CD-ROM | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | South America |
| | Colombia |

This article is an offprint of the Survey conducted by the Southern Cone Vice Presidency, Distance Education Network (CREAD), by request of CITEL/OAS in 1999.

In this article, information regarding the Distance Education Institute, INSED, of the Industrial University of Santander was surveyed.

| Title | *Applications implemented. Programs and Projects in the Tele-Education Fields* |
|---|---|
| **Author** | *National Ministry of Education - Colombia* |
| **Institution** | *National Ministry of Education - Colombia* |
| **Web Page** | http://www.mineducacion.gov.co |
| **Location on CD-ROM** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | South America |
| | Colombia |

Prepared by the National Ministry of Education of Colombia, this work provides an integral overview of the progress made in Tele-Education programs and projects in the country.

The first of the Programs examined is *World Links* or *World Links for Development.* This is a program headed by the Institute of Economic Development of the World Bank. The program's pilot phase has been in operation in Colombia since October 6, 1999.

The objective is to create communities of interactive and cooperative learning by applying telecommunication in schools.

Details are provided in the article about the impact of the program in this initial phase, the institutions involved, their general and specific objectives, their current status in Colombia and throughout the world.

The chapter linked with existing materials in the worldwide program is highlighted, along with the need to develop training materials for school telecenters in Colombia.

The second of the Programs mentioned is *Telesecondary,* being implemented in conjunction with the Secretariat of Public Education of Mexico. The objective of this program is to instrument a strategy of quality coverage for Basic Rural Secondary Education. In the work a detailed description is provided of the Program objectives, the model components, the actors involved, the operative strategies and an initial evaluation of the pilot phase.

The third is the *New Technologies Program*, in the framework of which 757 Information System classrooms have been installed in middle technical education establishments, training more than 1,500 instructors.

The work concludes with a polished commentary on the EDUCATEL System developed in the Research Division of ITEC-TELECOM, and a brief synthesis of other Projects in operation.

| Title | *Connectivity Agenda* |
|---|---|
| **Author** | *National Planning Department - Colombia* |
| **Institution** | *Ministry of Communication - Colombia* |
| **Web Page** | http://www.mincomunicaciones.gov.co |
| **Location on CD-ROM** | Status of Tele-Education in the Americas<br>Case Studies in Distance Education<br>South America<br>Colombia |

The *Connectivity Agenda* of Colombia is the result of the initiatives aimed at fostering the use of the NTIC´s in the country, which have emerged in the mid-nineties.

In 1997 the National Information System Council was created. In April of this year it published the *General Guidelines for a National Information Systems Policy.* At the same time, the *Permanent High Technology Forum*, some months later, presented the document: *Basis for a National Information Systems Policy - Subject Analysis.* Furthermore, five government Telecommunication objectives were defined in the *National Development Plan* 1998-2002.

This *Connectivity Agenda* was prepared with this background in mind. The Agenda's objectives are to extend NTIC's use to the masses, to increase the competitiveness of the productive sector, to modernize the public and government institutions, and to socialize the access to information.

This work brings together complete information on the current situation in Colombia, specifically on:
- The Information Society Infrastructure, whose indicators are:
    - Information Infrastructure.
    - Computational Infrastructure.
    - Social Infrastructure.
- Agenda Objectives
- Agenda Strategies
- Link between the Agenda, the Strategies and the Programs

The article concludes with the Recommendations made to the National Council of Economic and Social Policy by the Communication Ministry and the National Department of Planning.

| Title | *Response from the Republic of Chile - OAS/Ser.L/XVII.4.1 PCC.I/doc. 694/98* |
|---|---|
| **Author** | *Juanita Gana Quiroz* |
| **Institution** | *Communication Secretariat - Chile* |
| **Web Page** | http://www.redenlaces.cl |
| **Location on CD-ROM** | Status of Tele-Education in the Americas<br>Case Studies in Distance Education<br>South America<br>Chile |

Response by the Repub lic of Chile to the request for made by the Tele-Education Rapporteur through the Executive Secretary of CITEL/OAS, for information on Tele-Education experiences, projects and programs in effect in the countries of the region.

Among the most important projects highlighted are the following:
Educational Quality and Equity Strengthening Program (MECE), Ministry of Education and the creation of a National Educational Network (Links) aimed at the incorporation of the NTIC´s in educational institutions.

| Title | *Virtual University Project* |
|---|---|
| **Author** | *Various* |
| **Institution** | *Virtual University - Chile* |
| **Web Page** | http://www.uvirtual.cl |
| **Location on CD-ROM** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | South America |
| | Chile |

The article describes the characteristics and components of the Virtual University Project. This is a joint effort of nine Chilean Universities and of the National University Network Consortium (REUNA).

The Universities involved are:

- Austral University of Chile.
- University of Concepcion.
- University of Bío Bío.
- University of Chile.
- Metropolitan Technology University.
- Metropolitan University of Education Sciences.
- University of Valparaíso.
- University of La Serena.
- University of Atacama.



In this Project the Universities have interconnected and interactive videoconferencing rooms. The coordination headquarters also has a videoconferencing room. REUNA makes available to the Virtual University the ATM technology of the REUNA2 broadband network. It has a RDSI (Digital Network of Integrated Services) gateway and will be strongly consolidated with an Internet2 connection, permitting it to be linked to high speed academic networks in the United States, Europe and Asia.

The Virtual University is made available to all of the institutions that require educational and training activities infrastructure.

The article indicates integration models of current educational practices and the implementation of NTIC´s in the teaching-learning processes.

It concludes by explaining the structure of the REUNA2 network and the technological modernization initiatives and incorporation of new services set forth for the Virtual University.

| Title | CITEL Survey - Book of Tele-Education |
|---|---|
| Institution | Salesian Polytechnical University |
| Web Page | http://www.ups.edu.ec |
| Location on CD-ROM | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | South America |
| | Ecuador |

The Salesian Polytechnic University of the Department of Cuenca submitted its response to the survey administered by CITEL/OAS.

Furthermore, added to this mailbox is the Annex presented by the national government with information from the Public and Private Universities and Polytechnic Schools and informative charts on the involvement of the private sector in the National System of Higher Education.

The data surveyed is incorporated into the consolidated result for the Andean Region.
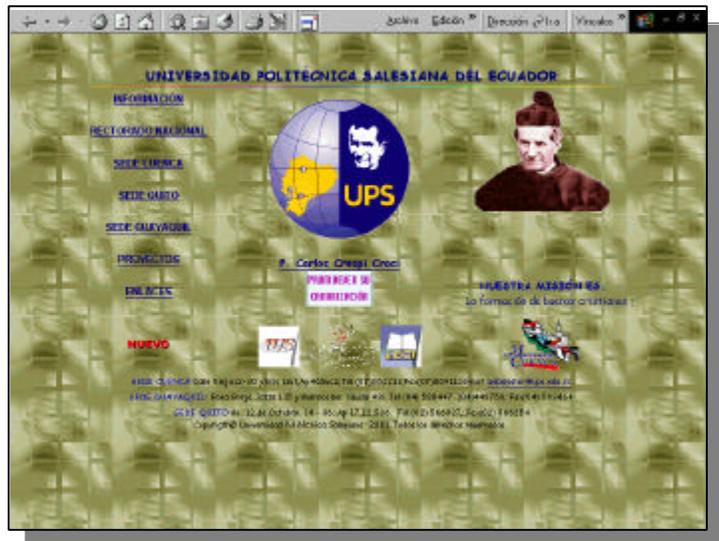
| Title | *Tele-Education* |
|---|---|
| Institution | *Department of Cultural Educational Communication - Ministry of Education and Culture - Paraguay* |
| Web Page | http://www.mec.gov.py |
| Location on CD-ROM | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | South America |
| | Paraguay |

This work, presented by the Department of Cultural Educational Communication, Ministry of Education and Culture, Paraguay, provides a complete overview of the state of Tele-Education in the country.

The article describes the activities of Programming, Television and Radio Units, and a detailed list of the programs produced by Tele-Education.
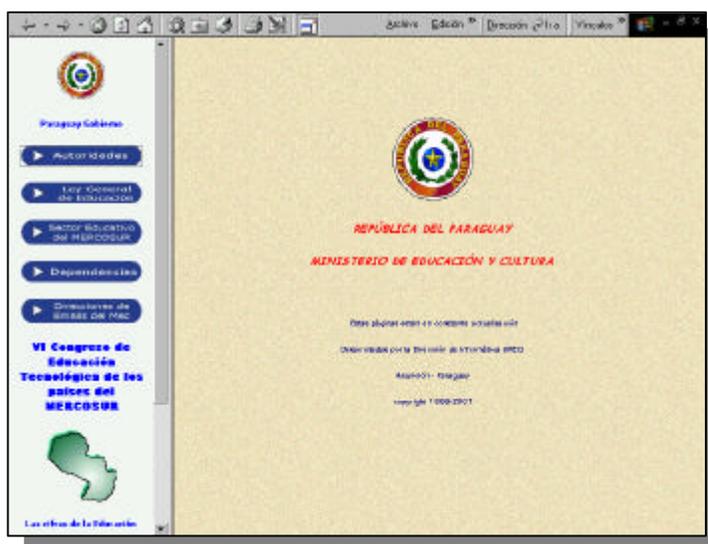
| Title | OAS/Ser.L/XVII.4.1CCP.I/doc.1161/00 - *Perspectives of Distance Education in Peru* |
|---|---|
| **Institution** | *Ministry of Education - Peru* |
| **Web Page** | http://www.minedu.gob.pe |
| **Location on CD-ROM** | Status of Tele-Education in the Americas <br> Case Studies in Distance Education <br> South America <br> Peru |

Summary of the evolution of Distance Education in Peru, with details about the experiences of the National Tele-Education Institute -INTE- the National Research and Development Institute -INIDE- and the Audiovisual Education Services Center - CESPAC-.

Project frames of reference and objectives are described in this format, specifically:
- EDURED
- MISSION
- VISION
- "INFOESCUELA" [INFOSCHOOL]

The report concludes with responses to the survey administrated by CITEL/OAS, from the following institutions:

- National Institute of Research and Training in Telecommuni-cation - INICTEL.
- TECSUP

The result of these surveys comprises the consolidated result for the Andean Region.

| Title | *OAS/Ser.L/XVII.4.1 CCP.I/doc.1090/00* |
| --- | --- |
| | *Tele-Education in Uruguay* |
| **Institution** | National Government - Uruguay |
| **Web Page** | Http://www.mec.gub.uy |
| **Location on CD-ROM** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | South America |
| | Uruguay |

A general overview of the status of this format in Uruguay is presented.

The experiences of the University of the Republic since 1988 are indicated along with several private Universities.

Regarding basic and mid-level education, the efforts made by the National Administration of Public Education are presented.

The Virtual Community of La Costa City, in the Department of Canelones is highlighted among the early experiences. There is a description of the phases involved, the technology used, and the services provided: and the Information Technologies for Education Program, National Telecommunication Administration (ANTEL), which is a supplement to Project Mercury, also under the auspices of ANTEL.
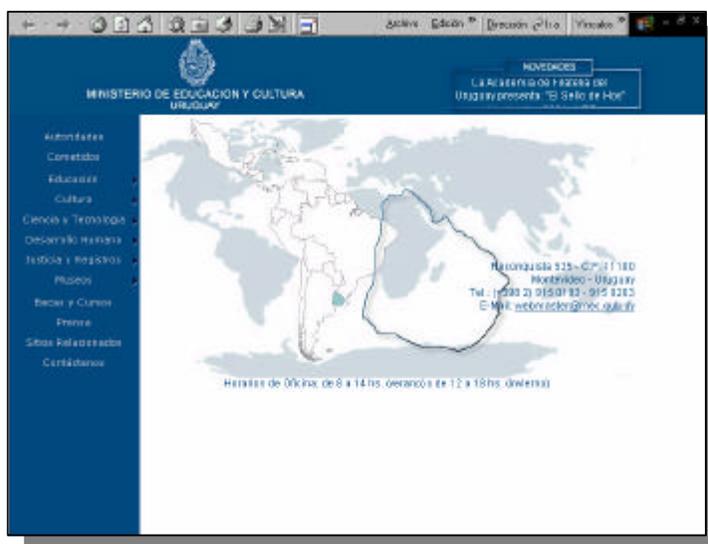
| Title | *OAS/Ser.L/XVII.4.1CCP.I/doc.1360/01 The Venezuelan Experience in Telecommunication Use in Education* |
|---|---|
| **Author** | *Nyurka Rodríguez* |
| **Institution** | *CANTV - Venezuela* |
| **Email** | nrodri@cantv.com.ve |
| **Web Page** | http://www.cantv.com.ve |
| **Location on CD-ROM** | Status of Tele-Education in the Americas <br> Case Studies in Distance Education <br> South America <br> Venezuela |

This article, prepared by the person in charge of the area at CANTV, describes the Venezuelan experience in incorporating NTIC´s in the different education and training levels in the country.

Thus, the main characteristics of the Projects in operation are pointed out, such as the InfoCenters, the Bolivarian Centers and the Virtual Libraries; and potential Projects, particularly related to Computerized Classrooms or Schools with Information Systems Laboratories and the creation of Hardware Workshops in the middle schools.

**Survey**

| Title | *OAS/Ser.L/XVII.4.1 CCP.I/doc. 905/99* |
| :--- | :--- |
| | *Survey of Experiences in Tele-Education in the Americas* |
| **Institution** | *Distance Education Network Consortium (CREAD)* |
| | *Vice Presidency of the Southern Cone Region* |
| **Location on CD-ROM** | Status of Tele-Education in the Americas |
| | Case Studies in Distance Education |
| | Survey |

For the purpose of determining the status of Tele-Education development on the American Continent and the availability of Software and Hardware for such purposes, a questionnaire was administered to identify the current experiences throughout the Americas, with the exception of Argentina. The Survey for that country was conducted in 1998.

The Survey was conducted "at a distance," by identifying qualified informants in each country who could distribute the survey to interested parties in their country and region. Indirect polling was done through data transmission interest lists on Distance Education and the Technologies and nodes generated by them. It was also distributed among the attendees of the CREAD Inter-American Conferences. The questionnaire was applied directly to 180 institutions of Distance Education in the Americas.

In spite of the broad coverage achieved, mainly using new technologies for distributing the questionnaire and the repeated reminders about the survey and requests for responses, very few were received.

The following institutions responded:
From Brazil, Fundacao Carlos Alberto Vanzolini and Embratel; from Colombia, the Industrial University of Santander – Distance Education Institute; from the United States, Texas A & M University; from Spain the UNESCO Training Center – Florida Eskola, the University of Murcia – Institute of Education Sciences; and from Argentina, the National University of San Luis, and the University of South Africa UNISA – Official / UNISA Tuition Center Argentina.

The Survey requested considered the following items:
- Country
- Data on the Institution
- Home-page
- Tele-Education System Responsible Party/Referent
- Responsible Party/Reference Person of the Tele-Education System
- Institution Type
- ¿What is the Institution's main area of activity?
- Tele-Education System
- ¿What is the main objective for its use?
- ¿Who are the recipients?
- ¿How many people were served?
- ¿What is the main area of coverage?
- ¿What types of programs or courses are offered?
- ¿Since when is the Tele-Education System in operation?
- Educational and Distance Education Software

# Education and New Information and Communication Technologies in Latin America

| Title | *Education and New Information and Communication Technologies in Latin America* |
|---|---|
| Author | *Patricia Avila Muñoz* |
| Institution | *ILCE* |
| Location on CD-ROM | Status of Tele-Education in the Americas<br>Case Studies in Distance Education<br>Education and New Information and Communication Technologies in Latin America |

In this document the author reviews the different technologies applied to distance education, indicating how it was used in distinct cases and making a critical analysis of each one of them.

As we already know, with the appearance of printing, text became the principle media for sharing information and knowledge. In the communication field, the telegraph, telephone, radio, television and fax have created social and economic changes of great transcendence. It is important not to forget the influence this has had on formal and informal education. Currently, with the appearance of electronics and telecommunication it is possible to transmit a large quantity of information to practically anywhere in the world in a matter of seconds. This holds tremendous potential for education. No medium has come to replace another as each one has a specific function, potential and limitations. Data transmission has made the integration of various media possible and has maximized their potential in what has come to be known as information and communication technology.

The incorporation of the New Information and Communication Technologies into the area of education not only allows an increase in coverage to challenge the education lag, but through the use of diverse strategies and methodologies, it is possible to seek mechanisms designed to improve the quality of education.

The author describes the main technological media used in Latin America, such as Satellite Systems, Television, Information Systems and Multimedia Systems, showing in each case the advantages and disadvantages in educational application.

She also reflects on new technologies and learning, indicating that this is a topic that must be included in the discussions about learning. It would be a mistake to believe that the mere use of the medium, for example, the computer and the technologies built around the computer, is enough to make a change in learning contents without considering the different factors that influence the individual and their educational situation.

The new technologies have led to the creation of Educational Virtual Environments. These are new academic spaces and environments where the center of interest is the learning of the participants who have gathered virtually through the media and beyond the classroom.

# Successful Experiences in Distance Education

**BDT - ITU International Telecommunication Union**

| Title | *Distance Training for Human Resources Development in Telecommunication* |
|---|---|
| Author | *Manuel Zaragoza* |
| Institution | *ITU/UIT* |
| Email | Manuel.zaragoza@ties.itu.int |
| Web Page | http://www.itu.int/ITU-D-HRD/Cexellence/index.html |
| Location on CD-ROM | Status of Tele-Education in the Americas |
| | Successful Experiences in Distance Education |
| | ITU/UIT International Telecommunication Union |

The Human Resources Development Division (HRD) of the BDT has taught distance courses through the Internet for several years now. The current platform is the Virtual Training Center (VTC). Several HRD projects use this platform for training activities. Principally, this involves the CoE Project (Centers of Excellence) and the Global Telecommunication University Project / Global Telecommunication Training Institute (GTU/GTTI).



The current VTC platform is a conference system on the Web of the Internet; the platform is very economical and adapts to the always-limited BDT budgets. The VTC methodology is so very simple.

The Centers of Excellence (CoE) Project contributes to the transformation of the telecommunication training centers and of other similar institutions into true centers of excellence.
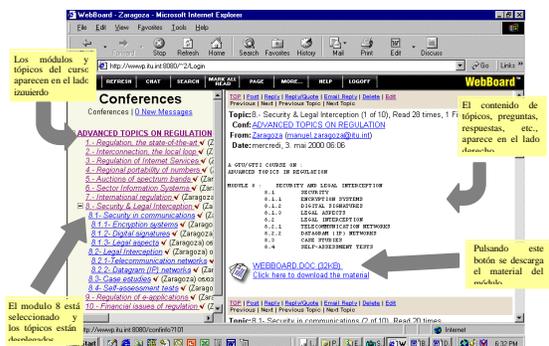


Several experiences have been achieved including the Minsk workshop seminars (Byelorussia) and Sophia (Bulgaria) on the "Preparation of Business Plans and Improving Telecommunication Marketing." They have also given distance courses. One of them dealt with the subject of Telecommunication Regulation for the Americas Region; another was a course on Managing with Leadership for Telecommunication

Starting now and for the next few years, the project should concentrate on:
- Broadening and diversifying the course portfolio.
- Attracting new sponsors interested in telecommunication development and in the platform involved with the Global University.
- Develop an institutional structure where the sponsoring members join.

| Title | *Practical Conclusions for the Pilot Phase of the Telecommunication University and the Global Telecommunication Institute* |
|---|---|
| Author | *Manuel Zaragoza* |
| Institution | *UIT / ITU* |
| Email | manuel.zaragoza@ties.itu.int |
| Web Page | http://www.itu.int/ITU-D-HRD/Cexellence/index.html |
| Location on CD-ROM | Status of Tele-Education in the Americas Successful Experiences in Distance Education ITU/UIT International Telecommunication Union |

The Telecommunication Development Bureau (BDT) is responsible for technical cooperation and assistance to developing countries. The idea of a Global Telecommunication University (GTU) and a Global Telecommunication Training Institute (GTTI) was proposed at the Telecommunication Development Conference in Buenos Aires (1994), organized by the ITU.

To begin the process, a feasibility study was conducted which recommended an initial pilot phase of the VTC (Virtual Training Center), ITU, which has been the test platform of the GTU/GTTI.

The VTC platform is a web conference system. This type of platform has several advantages for the project:
- ✓ it is simple and requires little prior training
- ✓ stimulates professional participation and networking
- ✓ it is an economic tool

Although GTU/GTTI methodology is not the result of theoretical studies, it was built as the Pilot Phase progressed and is the fruit of the experience.



**Figura 1.**
**Evolución de la GTU/GTTI**

In the document summarizes the most important characteristics of the participants and its context in the pilot phase where the principal characteristic is diversity.

Two factors are identified:
- ✓ Context: Countries of origin. Entities of origin.
- ✓ Participants: Academic Training, Professional Experience, Professional Level, Language, Age, Sex, Experience with Distance Courses.
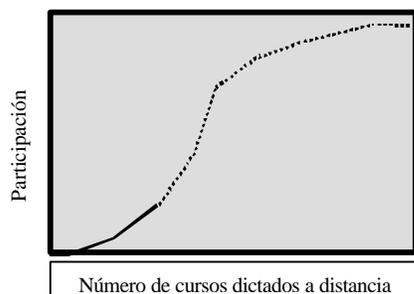


**Figura 2.**
**Aprendizaje de la cultura de e-learning**

The Author reflects on the context conditions, which show that although there are many factors that affect participation in the courses, once the importance of distance courses is understood by the receiving entities, the problems are easily resolved.

| Title | *HR Development Division Projects: Centers of Excellence and GTU/GTTI* |
|---|---|
| Author | *Manuel Zaragoza* |
| Institution | *ITU/ UIT* |
| Web Page | http://www.itu.int/ITU-D-HRD/Cexellence/index.html |
| Location on CD-ROM | Status of Tele-Education in the Americas |
| | Successful Experiences in Distance Education |
| | ITU/UIT International Telecommunication Union |

The Human Resources Division is responsible for coordinating the implementation of the Centers of Excellence Projects and the Global Telecommunication University/Global Telecommunication Training Institute (GTU/GTTI).

This document includes an outline of the current status of Centers of Excellence that were established in different parts of the world. The current status of each site is indicated along with the current associates in the following regions:

- ✓ Americas
- ✓ Asia and the Pacific
- ✓ Eastern and Southern Africa
- ✓ Western and Central Africa
- ✓ Arab Countries

**STRUCTURE FOR IMPLEMENTATION OF THE
CENTRES OF EXCELLENCE (COE) AND GTU/GTTI PROJECTS**
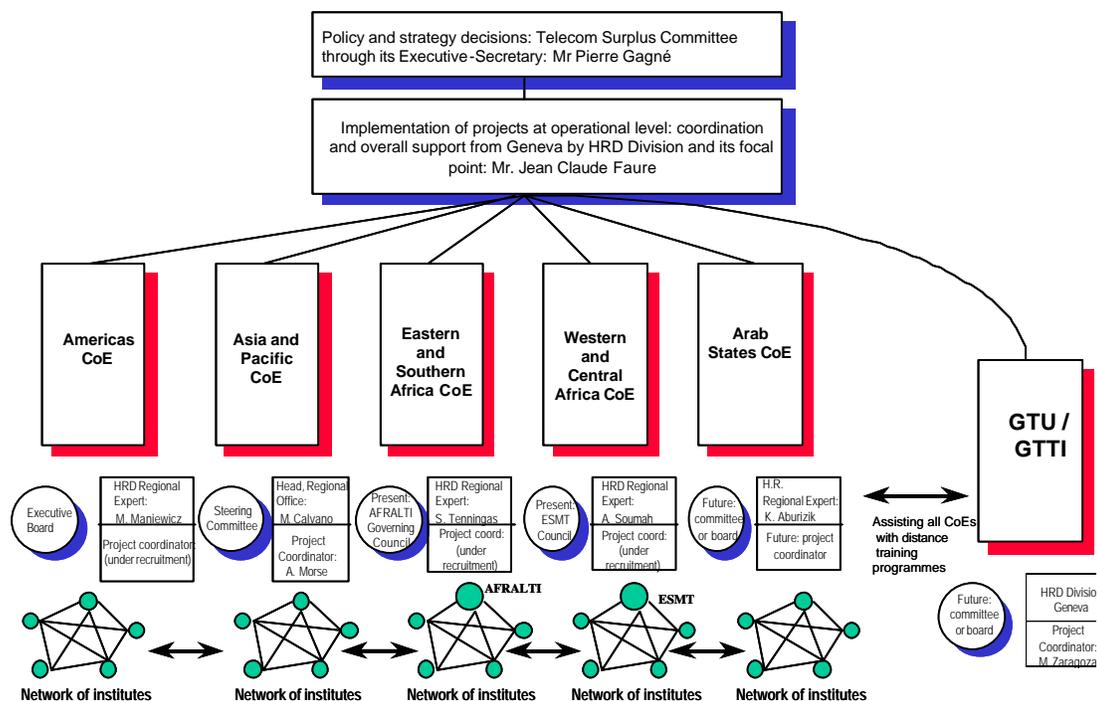
| Title | *Center of Excellence for the Americas* |
|---|---|
| **Author** | *Melba de Reyes* |
| **Institution** | *ITU/ UIT* |
| **Web Page** | http://www.itu.int/ITU-D-HRD/Cexellence/index.html |
| **Location on CD-ROM** | Status of Tele-Education in the Americas<br>Successful Experiences in Distance Education<br>ITU/UIT International Telecommunication Union |

Since May of 2001, the ITU put into operation the Management Unit of the Center of Excellence for the Americas, in the facilities of the Blas Pascal University, Cordoba, Argentina.

This is an integral project developed under the auspices of the ITU. For the Strategic Purpose of "Establishing a regional mechanism for strengthening the capacity of the Americas for generating knowledge and experience for the highest level Human Talent of the region and to contribute in this way to training and development itself."

This center has been planning different activities and events, such as:

- ✓ Network Security, essential technical factors
- ✓ Business and Secure Communication in the Network
- ✓ Administration of SDH (Synchronous Digital Hierarchy) in Telecommunication Companies
- ✓ Costs in Telecommunication Services
- ✓ Quality Plan and Quality Assurance in Telecommunication Service Companies
- ✓ Business Planning
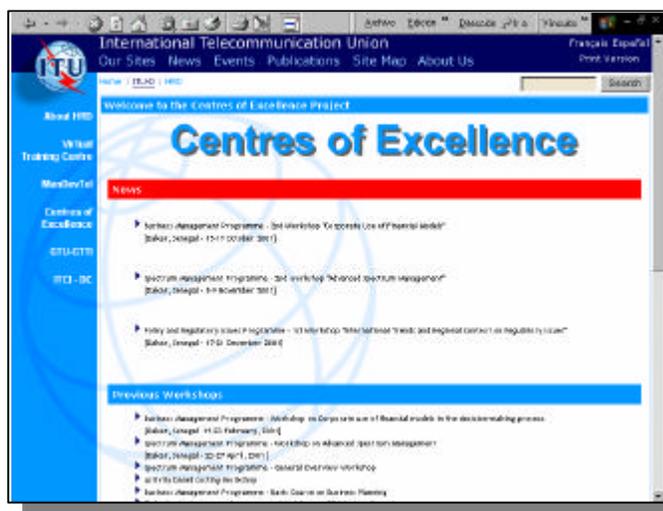


After the first quarter of existence, several entities in the Region have shown an interest in participating in the creation of programs for the Americas Region.

| Title | *Terms of reference for the implementation process of the Centers of Excellence Network* |
|---|---|
| Institution | *ITU/ UIT* |
| Location on CD-ROM | Status of Tele-Education in the Americas |
| | Successful Experiences in Distance Education |
| | ITU/UIT International Telecommunication Union |

This document describes the principle objectives, organizational guidelines, and methodological implementation of the Centers of Excellence.

The Mission, Mandate and Purpose of the Centers of Excellence are explained in this document. There is also a detailed description of the Network Work Process, which allows for the gathering and dissemination of best practices examples and training materials of excellence.

The Authorities are a Committee of International Management, comprised of distinguished individuals in telecommunication, industry, government, and education. There is also a Department of Counsel and a Management Unit under the responsibility of a Program Coordinator.

The Management Committee will administer a trust fund created for financing. An essential objective of the network work process is to keep this first association in operation and successfully attract more associates who can contribute the true strengthening experience of the region.

In the Methodology for installing the Centers of Excellence special mention is made of the impact in the implementation process. The following are highlights:

- ✓ Improvement of regional capabilities
- ✓ Network work processes
- ✓ Long Term Sustainability
- ✓ Synergistic Role of the ITU
- ✓ Aspects of excellence

The long and short term Implementation Process is explained. Special mention is made of the incorporation of electronic resources in the teaching process through:
- ✓ Distance Education Infrastructure
- ✓ Promotion of the e-learning culture
- ✓ Development of a practical methodology

**CITEL/OAS**

| Title | CITEL / OAS / Ser.L/XVII.4.1 PCC.I / doc.645/98 |
| --- | --- |
| | CITEL / OAS / Ser.L/XVII.4.1 PCC.I / doc.696/98 |
| | CITEL / OAS / Ser.L/XVII.4.1 PCC.I / doc.709/98 |
| | CITEL / OAS / Ser.L/XVII.4.1 PCC.I / doc.735/98 |
| Institution | CITEL / OAS |
| Web Page | http://www.citel.oas.org |
| Location on CD-ROM | Status of Tele-Education in the Americas |
| | Successful Experiences in Distance Education |
| | CITEL/OAS - First Tele-Education Project for the Americas |

The process for the initial treatment of tele-education in CITEL / OAS is described fully in the above documents.

Permanent Consultative Committee I. Public Telecommunication Services of the Inter-American Telecommunication Commission, Organization of American States (CITEL/OAS), resolved at its VIII Meeting held in Cartagena, Colombia, June 29 - July 3, 1998, that the Universal and Basic Services Group (WGBUS) of PCC I. (OAS/Ser.L/XVII.4.1.doc.645/98) would handle Telemedicine and Tele-Education.

At that meeting the Universal and Basic Services Group Chairman designated the Rapporteurs for Tele-Education and Telemedicine. (OAS/Ser.L/XVII.4.1 PCC.I/doc.696/98)

Among the functions assigned to the Rapporteurs were: *To collect and present to Universal and Basic Services Group plenary, country requests to be considered as the possible headquarters for the development of **a pilot project. This would** be implemented with the assistance of the select financial and technical counterparts, for the specific purpose of testing select applications under various generic scenarios of existing telecommunication links.*

At the IX Meeting of Permanent Consultative Committee I, held in Cartagena, Colombia, November 16-20, 1998, Argentina requested to be the headquarters of the Tele-Education pilot project.

The designated Rapporteur for Tele-Education, submitted in his Report the request made by Argentina to become the headquarters for the tele-education pilot project. (OAS/Ser.L/XVII.4.1. PCC.I/doc.709/98)

At this Meeting PCC I. resolved to designate the Republic of Argentina as the headquarters for the *First Tele-Education Pilot Project* (OAS/Ser.L/XVII.4.1.PCC. I/doc.735/98).

| Title | *CITEL / OAS / Ser.L/XVII.4.1 PCC.I / doc.824/99* |
|---|---|
| | *CITEL / OAS / Ser.L/XVII.4.1 PCC.I / doc.844/99* |
| **Institution** | *CITEL / OAS* |
| **Web Page** | http://www.citel.oas.org |
| **Location on CD-ROM** | Status of Tele-Education in the Americas |
| | Successful Experiences in Distance Education |
| | CITEL/OAS - First Tele-Education Project for the Americas |

The presentations and advances of the Tele-Education Pilot Project for the Americas provided at the X Meeting of PCC.I, in Cartagena, Colombia, June 28 - July 2, 1999, were included in the documents of this session.

The entity in charge of developing the Project submitted the *Advances of the Tele-Education Pilot Project for the Americas.* (OAS/Ser.L/XVII.4.1.PCC. I/doc.824)

In this Document the *Work Plan for the Tele-Education Pilot Project Development* is presented. *T*his report identifies the activities to be carried out.  They are:
- ✓ forming of a team of specialists
- ✓ national and international links
- ✓ preparation of a work plan with four stages:

   1- Policy and Planning Strategy
   2- Academic Preparation
      - Curriculum Design
      - Didactic Materials Design
   3- Implementation
      - Infrastructure Adaptation
      - Course Development
      - Organization of Tutorials
      - Academic Administration
   4- Assessment of Processes and Results of the Distance Education System

- ✓ A methodology for establishing and operating a Distance Education System, identifying a normative model.

This document is submitted in the *Report of the Chairman of the Universal and Basic Telecommunication Services Group to the Third Plenary PCC.I Meeting* (Doc. OAS/Ser.L/XVII.4.1.PCC. I/doc.844/99).

| Title | *CITEL / OAS / Ser.L/XVII.4.1 PCC.I / doc.876/99* |
|---|---|
| | *CITEL / OAS / Ser.L/XVII.4.1 PCC.I / doc.877/99* |
| **Institution** | *CITEL / OAS* |
| **Web Page** | http://www.citel.oas.org |
| **Location on CD-ROM** | Status of Tele-Education in the Americas |
| | Successful Experiences in Distance Education |
| | CITEL/OAS - First Tele-Education Project for the Americas |

These two documents describe the presentations and advances of the Tele-Education Pilot Project for the Americas made at the XI Meeting of PCC.I, in Buenos Aires, Argentina, on October 25 - 29, 1999.

In document OAS/Ser.L/XVII.4.1 PCC.I/doc. 877/99 the First Stage of the *Work Plan* is developed.

In document OAS/Ser.L/XVII.4.1 PCC.I/doc. 876/99 the Normative Model was submitted for the creation of a Distance Education System.

The document develops a methodology to establish and operate a Distance Education System. That is, a structured and sequential set of activities to be carried out to make the format possible and feasible.

The *normative model* envisages different stages that the Institution must follow in the creation and operation of a Distance Education System.



On the CD-ROM there is an interactive version of this methodology. To access it, there is a link through a button in "Preliminary Analysis."

The diagram allows us to fully observe the steps for the theoretical model. Each box allows access to the text describing a stage.

In the upper right there is an observation window to move the diagram.



133

| Title | *CITEL / OAS / Ser.L/XVII.4.1 PCC.I / doc.1138/00* |
|---|---|
| **Institution** | *CITEL / OAS* |
| **Web Page** | http://www.citel.oas.org |
| **Location on CD-ROM** | Status of Tele-Education in the Americas |
| | Successful Experiences in Distance Education |
| | CITEL/OAS - First Tele-Education Project for the Americas |

This Resolution was approved at the XIII Meeting of PCC.I, in Lima, Peru, October 30 - November 3, 2000.

This is the Resolution that authorizes the preparation and publishing of the *Book of Tele-Education in the Americas* for the purpose of establishing *inter alia*, policies and strategies for its development in the region.

In that Resolution, the ITU/BDT is invited to participate jointly with CITEL in writing the Book.

The idea of developing a *Book of Tele-Education* arose by virtue of the importance of the role of technology in human resource deve lopment. Specifically, in associating technology with educational and training processes as the principle means for raising the levels of quality and efficacy of education in relation to implementation costs.

There is also an ethical imperative to reach the most vulnerable sectors; therefore we seek to strengthen distance education programs.

CITEL must provide information to all of its members on all the applications mentioned made possible in the field of education due to the telecommunication technological advances achieved. This, together with the ITU which also formulates strategies that lead to intensifying the use of telecommunication systems and services for distance education.

This Book will be highly useful to the Tele-Education Rapporteur's Office for directing all its efforts. Combined with this is the fact that the ITU has developed important work on tele-education and compiled important information.

Recently the BDT/ITU has developed an important encounter on Tele-education in the Americas in the city of Manaos, Brazil, the content of which will also be found on this CD-ROM.

# The Incorporation of the New Information and Communication Technologies into the Systems of Tele-Education in the Americas

| Title | *Connectivity Agenda for the Americas* |
|---|---|
| **Author** | *National Administrations of the Region* |
| **Web Page** | *http://www.americascanada.org* |
| **Location on CD-ROM** | *The new technologies in the Tele-Education Systems* |
| | *The incorporation of the new technologies* |

In April of 2001 the Heads of State and Government of the Americas met in Quebec, Canada, where they resolved to promote the *Connectivity Agenda for the Americas.*

We acknowledge that a technology revolution is unfolding in the region. Therefore, the promotion of the *Connectivity Agenda for the Americas* will facilitate the beneficial integration of the hemisphere into an increasingly knowledge-based society.

We recognize the great disparities in cost and access to technology within and between our countries. Therefore, we will seek to achieve sustainable economic growth and social development of the region. Also, recognizing respect for linguistic and cultural diversity.

We will devote special attention to human resources development, particularly health, education and the environment. We will seek to broaden access to technical expertise through the continued use and expansion of national and regional information and communication technologies training programs, especially encouraging horizontal cooperation.

We will seek to enable all those in our societies to use information and communications technologies to build networks, share ideas, and establish more effective partnerships with government and private sector that will enable them to participate more fully in the political, social and economic development of their respective societies.

That is, in the Connectivity Agenda of the Americas we highlight the Hemisphere's commitment to promote greater access to knowledge and better communication flows for all of the inhabitants of the region.

In all, the Agenda is an instrument that encourages governments to collaborate with academic institutions and with the private sector to promote the creation of capacities and the development of human resources through information and communication technologies.

| Title | *The Institute for Connectivity in the Americas* |
|---|---|
| Web Page | http://www.idrc.ca/ica |
| Location on CD-ROM | *The new technologies in the Tele-Education Systems* |
|  | *The incorporation of the new technologies* |

*The Institute for Connectivity in the Americas* is a Canadian contribution for the fulfillment of the objectives endorsed by the hemisphere's leaders during the Summit of the Americas 2001.

In the document the main topics under which the tasks will be accomplished are described.

The Institute will support the themes of the Summit, that is, the strengthening of democracy, the creation of prosperity and the realization of human potential through the use of information and communication technologies.

It will be directed by a hemispheric Consultative Council involving the participation of representatives of governments, of non-governmental organizations, along with the private sector and academic communities.

The Institute's priority themes are the support of initiatives such as:

- strengthening democracy and good governance
- promote human rights (including justice and rule of law)
- work
- protection of children
- development of civil society
- creation of an equitable economic development
- administration of matters regarding the environment and assistance in case of natural disasters
- promotion of social development, including health and education
- promotion of gender equality
- promotion of cultural diversity, including the preservation of the traditional knowledge and the cultural customs of the autochthonous people; and the objectives expressed in the declaration of the Summit on "Connectivity in the Americas."

The Institute will support programs that connect the hemisphere, those that will be able to receive financing, especially those that:

- Support a network of national institutions
- Establish a network of hemispheric experts
- Link cultural institutions
- Connect communities
- Connect the hemisphere's youth
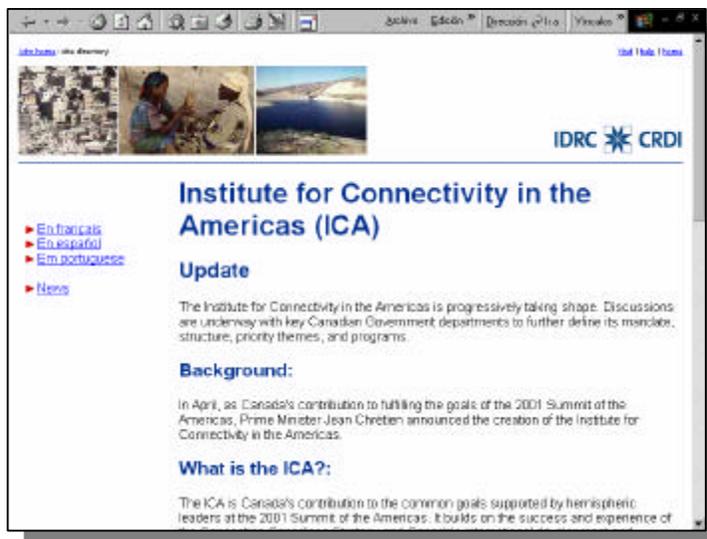
| Title | *Develop the Information Society in Latin America and the Caribbean* |
|---|---|
| **Author** | *Cláudio Menezes* |
| **Institution** | *UNESCO* |
| **Email** | Informatica@unesco.org.uy |
| **Web Page** | http://www.unesco.org.uy |
| **Location on CD-ROM** | *The new technologies in the Tele-Education Systems* *The incorporation of the new technologies* |

This article provides a general view of the information society. Considering thoughts such as those of the Minister of Science and Technology of Portugal, José Mariano Gago, and of Philippe Quéau, Director of the Information Society Division of UNESCO. The latter highlights that "Knowledge possesses very specific properties that differ substantially from industrial products. Just like fire, which can propagate rapidly with a favorable wind, practically with no cost at all." Also, the article examines the thoughts of the OECD Ministers.

The Status of the Information Society in Latin America and the Caribbean has an important place in the analysis conducted. Especially in reference to the Internet and the Index of the Information Society (ISI) designed by the International Data Corporation.

The impact of Telecommunication is examined. Fundamentally, the growth of cellular telephony has been exponential, competing only with the growth of Internet use.

Information needs vary significantly among different groups. Scientific information refers principally to the scientific community, while the traditional users of libraries have different information needs.

The author shows here some initiatives on information services or "networks" that were developed in different countries of the region.

The role of the governments is examined, especially in light of the launching of processes or programs of the Information Society. Such as the cases of Chile with its *Initiative on the Information Society*, México with its *National Information Systems Commission,* and Brazil through the "The Information Society Green Book. "

Internet-2 is described in this article and its link with the research areas. Remember that the principal focus of Internet-2 is the development of advanced applications with intensive use of real time multimedia technology.

UNESCO also has an *Information Systems Program for Everyone* the objectives, visions and values of which are described in this document, along with other UNESCO programs.

| Title | *The Educational Portal of the Americas* |
|---|---|
| Author | *Carlos Paldao* |
| Institution | *Organization of American States - OAS* |
| Web Page | http://www.educOAS.org |
| Location on CD-ROM | *New technologies in Tele-Education Systems* *Incorporation of new technologies* |

This pertains to an initiative of the Inter-American Agency for Cooperation and Development of the Organization of American States, under the auspices of the Cooperation Fund of the United States.  The purpose is to take on some of the commitments issued at the Third Summit of the Americas and with the intention of contributing to the completion of the Connectivity Agenda.

The Educational Portal of the Americas must be conceived as an *on-line* instrument to the service of the democratization of information, the essential mandate of which is to spread high quality educational opportunities that are channeled through the distance education format.

Through this instrument, we aspire to expand access to global knowledge.  Thus permitting the peoples of the Hemisphere to take an active part in the technological revolution that will significantly transform their lives and societies.  At the same time, through this proposal we will make known the different scholarship programs and formats offered by the OAS.  As well as the availability of other support, motivational and strengthening services prepared especially to serve the demands and needs of the region

Educational Portal of the Americas can be defined as a Portal of Knowledge.  The main function of the Portal of Knowledge is to obtain specific information using an information technology system and presenting it based on the preferences and profiles of the user in particular.  Making possible personalization and navigation features that will allow the user to adapt his or her searches in order to reap the greatest benefit.  And to facilitate communication and collaboration between those that have information and those that need it.

The Educational Portal of the Americas was created for all those individuals interested in enhancing their personal and professional development.  It has identified user groups that will benefit directly from its services

- Students
- Employees
- Corporate Users
- Professors
- Educators
- Adults

The Portal will promote continuous learning and new opportunities to take part in the new knowledge-based society.
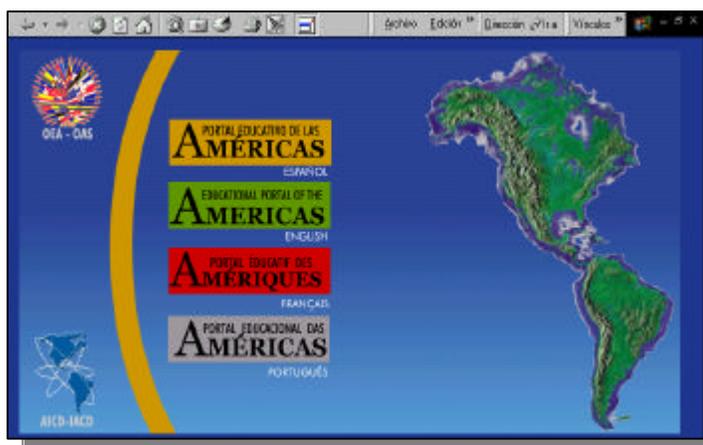
| Title | *The e-learning e-volution in Colleges and Universities* |
|---|---|
| **Institution** | *Advisory Committee for Online Learning* |
| **Web Page** | http://www.cmec.ca |
| **Location on CD-ROM** | *New technologies in Tele-Education Systems* *Incorporation of new technologies* |

This document is a report prepared by the Advisory Committee for Online Learning. This Committee was created in June of 2000 with the Consortium on Public Expectations for Post-Secondary Education, Council of Education Ministers, Canada (CMEC) and Industry of Canada.

This report examines the opportunities that information and communication technologies, especially the Internet, present to postsecondary institutions.

It also identifies and expands on the features that will be critical for making it possible for postsecondary institutions and schools to evolve together with online education.

The Committee's principal mandate is to provide independent advice to the Consortium CMEC and to Industry of Canada seeking to optimize the online educational opportunities, as well as the investments required to build Canada's global presence in online education.

In doing so, the following questions were assigned to the Advisory Committee:
- Based on existing studies, What are the main advantages, disadvantages and obstacles for students, educators and institutions for accelerating the inclusion of online postsecondary education?
- What are the internal management options that can best accelerate the adoption of individualized online education by colleges and universities?
- ¿What are the structural options and the value added benefits of each option, including specifically an online consortium at the provincial/territorial/regional or national levels? What would be the appropriate development strategies and plans?
- What are the main administrative and infrastructure challenges that the institutions face, including those that work in consortiums? How can consensus and collaboration be promoted in key areas, such as residency and accreditation requirements? If additional resources are needed, What are the main priorities that must be met? Are there existing programs and instruments that can be used?
- What are the priority actions that need to be taken to accelerate the use of online education? What can the institutions do with the existing financial resources? What can be accomplished through relocation of existing resources?

All of these questions are examined in this report, offering a specific recommendation for each subject reviewed.

| Title | *Connectivity Agenda of Colombia* |
| --- | --- |
| | *Web Site Information, Ministry of Education, Colombia* |
| **Web Page** | http://www.mineducacion.gov.co |
| **Location on CD-ROM** | *New technologies in Tele-Education Systems* |
| | *Incorporation of new technologies* |

The first document contains an outline of the *Connectivity Agenda: The leap to the Internet* of the National Government. The National Council for Social Economic Policy (CONPES) made this official on February 9, 2000. It is a response to a diagnosis identifying the great weaknesses that the country has for entering into what has been called the "knowledge-based society." The Agenda contains no less than 35 programs responding to 6 strategies on 3 fronts, to overcome these deficiencies.

The role that the private sector will have is mentioned. Both the financial sector with the interconnection of the banking system, and the productive sector in Internet e-trade and value chains.

Also, mention is made for example of the program *Computers to educate.* This is a joint effort of the Government, private enterprise and the community to provide the public schools with computer equipment that permits the students to access information and communication technologies. This involves the donation of computer equipment by the public and private enterprises to the public schools of the country.

The National Ministry of Education of Colombia has a Web site where the users will be able to consult on the services provided by the Ministry and all the information about the 2000 – 2002 Strategic Educational Plan.
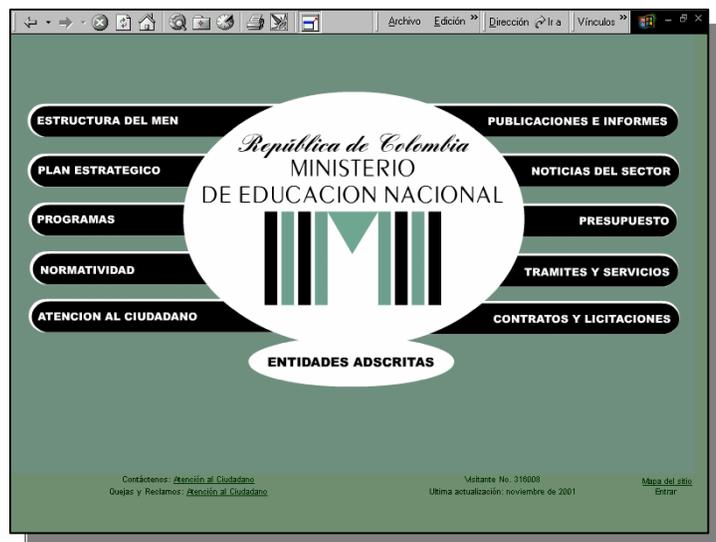
| Title | *National Information Systems in Education Program* |
|---|---|
| **Institution** | *Ministry of Education of Brazil* |
| **Web Page** | http://www.mec.gov.br/seed |
| **Location on CD-ROM** | *New technologies in Tele-Education Systems* |
| | *Incorporation of new technologies* |

El PROINFO is an educational program that seeks to introduce the New Information and Communication Technologies to public schools as a tool to support the teaching-learning process. Its objectives are to promote the development and use of data transmission to academic enrichment.

CETE is the Center for Experimentation in Educational Technology. It is a center for gathering and distributing information referred to PROINFO.

The objective of PROINFO is to prepare human resources with special attention to professors. It adopts the principle of professors training professors and the use of data transmission in the classroom.
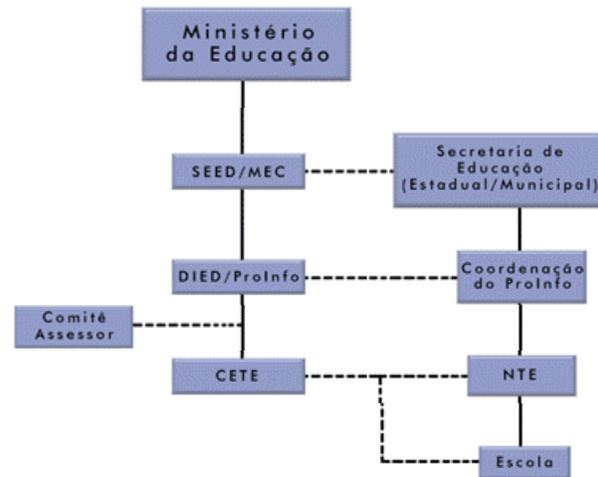




Others projects are:

- The TV School Project that began with middle school reform. It is used in the training and updating of professors.
- The Program of Research Support in Distance Education (PAPED), consists of financial support for masters dissertations and doctorate thesis on subjects related to Distance Education and Information and

Communication Technologies applied to education.

| Title | *Educational Television Site* |
|---|---|
| Institution | *Public Education Secretariat of México* |
| Web Page | http://ute.sep.gob.mx |
| Location on CD-ROM | *New technologies in Tele-Education Systems* *The incorporation of new technologies* |

The Educational Television Site, of the Public Education Secretariat of México, produced and administered by the General Directorate of Educational Television, pertains to the Internet Site of the Edusat system.

In the Edusat system the following tasks are designed and developed:

- Production
- Programming transmission of compressed digital signal and put on line
- Education, training and refresher courses
- Technology maintenance, operation and expansion
- Documentation, data processing, preservation, digitalization, processing and reuse of images
- Research, study and assessment of educational uses of technology.

The EDUSAT recipients are educators and students of the National Educational System at all levels, form the initial stages to post graduate in the attendance-based, distance and mixed formats.

The Internet site is an adequate supplement that seeks to provide support to the different objectives to which Edusat is devoted.

# Evolution of Tele-Education in a Globalized World

| Title | *Some Thoughts* |
|---|---|
| **Author** | *Saad Chedid* |
| **Institution** | *CITEL / OAS* |
| **Location on CD-ROM** | *New technologies in Tele-Education Systems Incorporation of new technologies* |

In this document the Tele-Education Rapporteur of the Basic and Universal Services Group, CITEL/OAS shares some thoughts on the task accomplished in compiling this *Book of Tele-Education in the* Americas and on the data involved.

In particular, he redeems the formidable possibilities that the NTIC open in the field of education and training, that turns them into true indispensable instruments for us to be able to fulfill the aspirations and hopes of all. For all the inhabitants of our continent to have universal access to the different levels of education.

The article reflects on the possible reasons for the lag in formulation of educational policies that tend to promote distance education, but also some of the technical reasons that thwart it.

Among the important elements underscored is the need for safeguarding the ancestral cultures of each people.

Restore the need of all the private and governmental actors to make significant investments in the development of the distance education methodologies and technologies (multimedia and *on-line)* and recover in this way the time and the path lost.
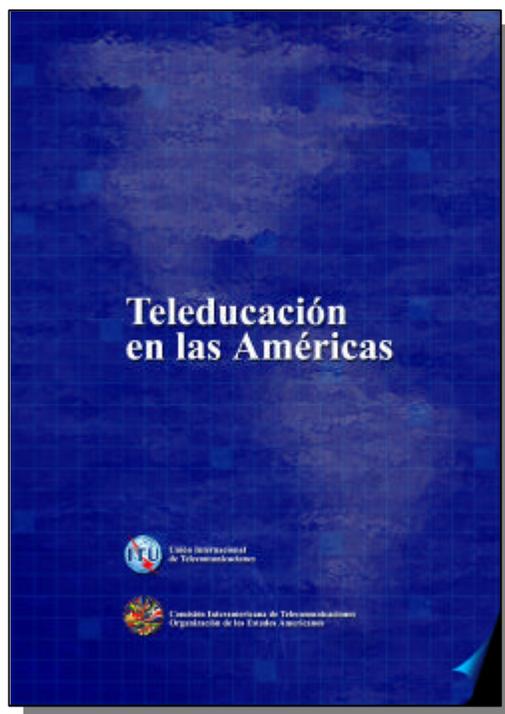
# Sites of Interest

| Title | *Institutions of Excellence and Recommended Sites* |
| --- | --- |
| | *UNESCO University Department of Distance Education* |
| **Web Page** | http://www.uned.es/catedraunesco-ead |
| **Location on CD-ROM** | *New technologies in Tele-Education Systems* |
| | *Incorporation of  new technologies* |
| | Institutions of Excellence and Recommended Sites |

On the CD-ROM there is an interactive page with different web sites that can be accessed.

Documents have also been included with:



- Sites of interest
- Reference Sites
- Bibliography on themes of virtuality, networks and technology
- Bibliography of instructional design
- Electronic Magazines and Bulletins in Spanish
- Electronic Magazines and Bulletins in English
- Education Ministries of the Americas Web Sites

An article is also included written by Dr. Lorenzo García Aretio, Chair of the UNESCO Distance Education University Department (UNED-Es) *Unesco Distance Education University Department of Uned, Spain: A project for Ibero-America*, one of the main initiatives for spreading and promoting this educational format.

The Author explains the promotion, research, education, information and documentation activities in the field of distance education carried out by UNESCO:

- Promote high level education in Spain and Latin America
- Develop through the Internet, the Ibero-American Center for Distance Education Resources *(CIREAD)* of reference information and documentation for the Spanish and Portuguese speaking countries



- Coordinate a Network of *Distance Education Scholars in the Ibero-American Sphere (REEDI)*
- Create an *Electronic Distance Education News Bulletin (BENED)*
- Create an *Ibero-American Magazine of Education and Training in Virtual Spaces (RIEFEV)*
- *Consulting on Distance Education for Ibero-America.*