THE IMPACT OF THE NEW TECHNOLOGIES OF INFORMATION AND THE COMMUNICATION IN THE SOCIETY OF KNOWLEDGE: HIGHER EDUCATION

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The progressive changes produced by the so called technological revolution and its essential axis were the innovation in all the fields of science and the new technologies of information and communications, NTICs, not only have appointed multidimensional changes, but also have created a new social paradigm, a new culture.

During the seventies, "society of information" is defined as the set of social relationships of any type which established by means and support of the technologies of information and communications, especially the telecomunications ones. In this model of society, information is the key factor, becoming a consumption good, an accessible item, which gives power, essential to be competitive in a global world. Gianni Vattimo had stated whether the society of information was a clear society. In this society, means of massive communication take a prevailing role, but they do not make this society clearer or more conscious of itself – and therefore more illuminated-; on the contrary, this society appears to be more complex.

"Society of Knowledge" arises as a term in the last years, which is used as synonymous of Society of Information, but they are not exactly the same.

The Society of Knowledge is an extensive concept which refers to the increasing importance that science and technology have for the creation of wealth and economic development. New technologies of information and communication allow the establishment of relationships and the development of activities. They contribute to the growth, transfer and multiplication of the capacity of store of knowledge. Although knowledge has acquired extraordinary relevance, it is not a new concept. The traditional speech about knowledge were exclusively given by philosophers like Sócrates, Platón, Aristóteles, Descartes, Kant, between others, who have tried to respond to questions related to the possibility, origin, essence, types of knowledge and the essential items of knowledge. Epistemiologuists´ concern, on their side, have taken the logical

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roots and the social and historic impact of knowledge; among them Habermas, Mannheim, Kuhn, Foucault. Today, the reflection about knowledge is taken by theoreticians from several disciplines and applied to different fields of human activity. An example of that are the strategic changes applied to organizations in the educational, health, government administration fields as well as the private sector, undertaken from three sides: the management of information, the management of human resources and the measurement of intangible goods.

This article aim is to understand how knowledge has become a central element of the new productive paradigm and, accordingly, the need of a real educational transformation, essential factor to the development of the capacity of innovation and creativity, also with integration and solidarity in a society; on the other side, to understand how new technologies of information and telecommunications are necessary and possible means for the management and administration of knowledge.

In order to achieve the above mentioned, this piece of work shows a synthesis of the evolution of knowledge and its management from the agricultural-cattle society until the present scenario of the so called Society of Knowledge so as to analysis the characteristics of the intellectual wealth, that strategic raw material for the management of knowledge and for the creation of dynamic competitive advantages A new model of University is proposed, with a new management from an integration panorama, a dynamic management of knowledge that forces to transform -in a continuous way- data in information, information in knowledge and knowledge in more knowledge. Due to the fact that knowledge is a concept that implies the individual search of its significance by each unit of analysis (individual, group, organization, inter-organization group), and that it has three functions: thinking (intelligence), affection (will and emotional compound) and doing (action), one has to admit the inseparable characteristic of person and the society in which the person develops.

Finally, new technologies of information and communication are analyzed as means of collection, organization, process, analysis and distribution of knowledge inside an institution, taking into account that in the paradigm "society of information," the strategic and competitive resource is knowledge.

As Nonaka Ikujiro assures "in an economy where the only certainty is uncertainty, the only reliable source of competitive advantages is knowledge."1

From the agricultural-cattle society to the society of knowledge

Along the centuries, the management of knowledge was achieves by men in a natural way based in their own experiences, experiences from others and common sense, but the accumulation and growing of this same knowledge provoked a qualitative change, where the necessity of going on creating

knowledge forced man to think the scientific direction of the management of experience. After that moment, and as a result of the development approached, the paradigm of the industry f knowledge is announced.

	AGRICULTURAL-CATTLE SCENARIO	INDUSTRIAL SCENARIO	TECHNOLOGICAL SCENARIO - KNOW HOW	TECHNOLOGICAL SCENARIO- KNOW WHY
HISTORICAL LAPSE	XXX A.C XVIII D.C	XVIII-1960	1960- 1990	1990 on
KEY RESOURCE	Land	Wealth	Information	Knowledge
PREVAILING ECONOMY	Agricultural-cattle	Industrial	Based on Services	Based on Services
SOCIAL GROUPS	Peasant Land owner	Worker Contractor	Consumer Technocrat	Consumer Technocrat New groups
PREVAILING TECHNOLOGY	Agricultural	Energy Processes	Informatics Microelectronics Robotics Telecomunications New materials	Biotechnology Informatics Telecommunications
TYPE OF EDUCATION	Oriented to the exercise of skills	Oriented to the skills to process, take decisions and act	Oriented to the development of the abilities of thought, reasoning, creativity	Oriented to the development of the abilities of integration though, reasoning, creativity, innovation, Multiple intelligences

These four steps of the chart show the evolution of inventions (tools and devices) as an answer to the different problematical situations of the context.

Man faced three matters in each of these steps:

1. Which is the need and how to solve it?
2. Which recourse can be used?
3. How should this be used?

Tools created by man to improve his material and spiritual life have provoked the growing and spreading of knowledge, with the need of managing it. During the steps of the agricultural-cattle economy, the management of knowledge was made by men in a natural and empiric way, but when tools and

devices multiplied, the accumulation and growing of knowledge originated a qualitative change where the need of going on creating knowledge forced man to take steps for and manner it.

From XVII, the industry of knowledge distinguished for the development of hydraulic energy, textiles and iron. During XIX railways and steel were developed. The XX century started a cycle characterized by electricity, chemical products and the internal combustion engine and later on, petrochemical products, electronics and aviation.

As from 1960, the diversified and replaceable recourses of energy and the methods of production radically modified the characteristics of civilization.

During the 90s, a cycle full of development distinguished by digital nets, software and the appearance of new and more sophisticated means (tools) initiative. The 90s were, in this way, characterized by the engineering of processes and from 2000 by the speed of those technologies.

We are now an transition phase to the era of knowledge, where knowledge is a strategic factor that allows answers to multi-causal stimulus in a scenario permanently changing (dynamic).

We have now a new culture, new principles, new requirements of ability and skills, new institutions, unpublished careers and occupations, as well as a new educational system.

A current problem: the search for significant knowledge

In the new social scenario, the new model of knowledge promotes the intercultural integration and cooperative nets and eliminates the frontiers in the productive processes of teaching and also of entertainment. Educational transformation becomes an essencial factor when knowledge becomes the main item in this new paradigm. The society of knowledge characterizes for:

- Alphabetization in informatics
- Intensive use of information and communication systems
- The value of knowledge
- Continuous learning
- Electronic-digital organization of all human activity

Thus, the efforts of some actors of the international system –nations, international organizations, international non-government organizations, among others- try to achieve these characteristics to successfully participate in the new scenario that the society of information offers. This designation has been adopted by the United Nations to define the present revolution of humanity.

In this context of deep changes prompted and potentied by the new technologies of information and communication it is important to conceptualize and set a difference between information data and knowledge. They are not synonymous but concepts that –although they appear interconnected and are interdependent, they are different.2

- Data: it is a formal representation of entities or facts of a symbolic characteristic and consequently adapted to its communication, interpretation and process by human and automatic means. It represents observations or facts out of context and, therefore, without any immediate meaning. It is the raw material of information and does not have any meaning, it just indicates it has passed without giving elements to opinion or to elaborate an interpretation or a base for sustainable action.
- Information: it is the manner that a person gives to a piece of data, which implies that the piece of data becomes information when it is evaluated to achieve an especific aim. A piece of data becomes information when it has value added, that is to say, when it is put in a context, it is related to a purpose, it is given category, it is processed, corrected or compressed.
- Knowledge: it is what we achieve to create and give value to as from the significant information, by means of the adding of experience, communication and inference. Knowledge occurs in and between subjects. And for this reason –to be so close to human beings- it is difficult to transfer or share it.
- "Knowledge represents an intangible and strategic asset that generates competitive advantages. Organizations directed to services, as universities, are based on knowledge. Its competitiveness is determined by common intelligence and its intellectual asset is its main resource of difference.

Management of knowledge and intellectual wealth

The notion of Management of Knowledge is closely attached to the intellectual wealth.

MANAGEMENT OF KNOWLEDGE	INTELLECTUAL WEALTH
It legalizes and systemizes the processes of identification, management and control of knowledge. This is a process of organizational management	The intellectual wealth defines the set of non-material contributions which in the era of information are understood as the main asset of the companies of the 3rd n. It represents the intangibles assets of an organization (human, structural and relational).

It implies two variables: Hard: harder and more formalizable aspects of management. They include the formal communication and informatics systems. Soft: soft aspects or less formalizable of the management, talent identification, formalization of best practices and standardization of competitiveness.	It is a soft variable of the management of knowledge: knowledge treasured in the employees´ brains comes from experimental learning..

The management of knowledge arises as a tool that answer to some trends:

1. Intensive use of knowledge in the production of goods and services: it is different from the industrial era when capital and manual labour were mainly used.
2. Technology as well as informationlevel the competitiveness, so the growing could only come from the innovation of products and services.
3. Non up-to-dated-knowledge: knowledge is created to a lesser rhythm than the one used to transfer it, because informatics nets eliminate delays and allow to use and share information.
4. Preference for smart products: products concentrate more knowledge each time and for this reason should be more intelligent: new products are things that can diagnose their own maintenance or adapt to particular users and, therefore, they tend to be plugged, customized, interactive, easy to learn and anticipatory.
5. Tendency to mass-customization: companies tend to vertical their markets through a great knowledge of the needs of a certain segment and how they use a standard product.

The Management of Knowledge connects the University to the culture of a dynamic, excellent and multidiscipline organization of knowledge. Thus, it is essential the revaluation of the intellectual wealth.

The intellectual wealth makes reference to a combination of non-material assets which allow the functioning of an organization; it is knowledge, information, copyright and experience.

Intellectual wealth is composed of:

- Human capital: emotional knowledge and operational knowledge
- Structural capital: organizational capital and technological capital
- Relational capital: with internal and external agents, market capital.

Human capital refers to the explicit or implicit knowledge, useful for an organization, which possess the people working in it, as well as their ability to re-generate it, that is, their ability to learn. It belongs to the people, is inside them and the individual is the centre of his development and accumulation.

We can distinguished between “emotional knowledge” and "operative knowledge.”

The first one refers to the attitudes individuals have inside the reorganization and includes the aspects close to feelings and motivations and how people integrate to the organization: behavior motivation, loyalty, friendship. The operative knowledge refers to the ability that human resources have, inherent to human beings and which are offered to the organization: skills, technical education, experience, capacity to work inside a group.

Human capital is the base of the generation of the other two types of intellectual capital:

a) Structural capital is the knowledge that the organization achieves to formalize, make explicit and systemize and that –in the beginning- could be latent in individuals and teams inside the company. All structured knowledge of which internal efficacy and efficiency depend are included: systems of information and communication, available technology, labours processes, patents, management systems. The structural capital is owned by the organization and it depends on the organization when individuals leave it. A solid structural capital makes an improvement easy in the flow of knowledge and implies an improvement in the efficacy of the organization. It is composed of organization capital and technological capital.

1. Organization capital: it integrates all the aspects related to the classical theory of the organization: structural design, coordination and control mechanisms, group behaviour, organizational rutines, co-operative culture,planning and control systems.
2. Technological capital they are the technical and industrial knowledge available in the organization: patents, copyright, know-how, technical experience.

b) Relational capital it refers to the value the organization gives the set of relationships that keeps with the exterior and that may have influence in its competitive management (suppliers, clients, competitors, government, national and international organisms).

Market capital. The generic aspects of the organization a from which it is present in its background: image, reputation, ethics, brand, identifying logotype, among others.

The intangible assets of an organization, represented by the intellectual capital, although they are not included in the accounting statements, they create

value in the society of knowledge and have the potential to generate it in the future. It is a growing strategic value, a source of innovation and renewal.

One of the challenges, perhaps the most important one, is the comprehension and the fidelity of those human resources able to generate knowledge. They are known as “the talented.” They are those who produce outstanding results, those who are different from te ones that have the same role within an organization.

In order to create some useful human capital, every organization should foment the team work, practice communities and other ways of social learning. Although individual talent may be excellent, interdiscipline teams learn, formalize and capitalize the talent because they spread it and make it less dependent of just one individual.

Generally, it is a capital that many little concern about measuring and it has real value. Identifying and measuring the intellectual capital has the aim of converting an asset which generates value inside the organization in something visible. The problem of the existing models “models for measuring the intelectual capital” is that the intangibles cannot be valued by means of uniform measures. Among these models we can mention: Edvinsson and Malone´s, Tobin´s, Sznirer and Sarancho´s.

The structural capital is the support for the management and administration of knowledge in an organization. Human and structural capital co-operate with each other when the organization has clearly defined its reason to be, that is to say, its mission, vision and aims.

The University and the Management of Knowledge

The scenario of the society of knowledge is the globalization where the local is being replaced by the global, arising large models of cultural hybrids, with a progressive disappearance of the economic and cultural frontiers.

This paradigm demands a new model of university, based in an integrated and dynamic management which continuously transforms the data in information, the information in knowledge and knowledge in more knowledge. For this, it is necessary a new social-cognitive model wich implies the tools to learn and going on learning (abilities, skills and capacities) to distinguish among data, information and knowledge (methodical and systemic mind), know-how (learning of method or ways to do).

Summing up, the transformation of the education implies:

- A new socio-cognitive paradigm
- Permanent learning

- Appropiate integration of contents and methods
- Systemic development of cognitive and meta-cognitives strategies
- Development of logical reasoning
- Space-time re-orientation
- New style of communication and socialization

The management of knowledge (GC) is forma process directed to identify, capture, store, keep, integrate, up-to-date and transmit with fluency this new necessities of the upper level education, inside the management of the university institution as well as its teaching, research and extension functions. The new technologies of information and communication (NTICs) have helped to increase the possibilities of that GC.

Nets, systems of information, intelligent research tools (intelligent agents), the mining of data (data mining), the data massive storage (data warehousing), tools for the development in Internet, among others, are used to develop systems which allow the management of knowledge, also allowing the development of web sites, intranets, work platforms as the electronic mail, audio/video conferences, tools for accessing forums and the chat.

In the case of universities, and before the new necessities arosen by the actual background, the application of the GC should follow the internal re-organization of processes as well as the healing in teaching, research and extension.

Two cases in the university area

One aplications of the GC in the re-organization of the internal processes is in the Bina Nusantara University of Indonesia. This university, a leader for technical teaching in Indonesia, has introduced a technological substructure of nets, ahrware and software with the aim of reducing the slowness of administrative tasks and to up-to-date the required information to empower the decision-making in all estates of the organization. The base of the system is a set of information repositories –of "knowledge" to which all workers have access. This is complemented by inter-organization communication tools in order to exchange experiences and practical cases among the workers with the subsequent improvement and speed of the management processes. One more specific case about the management of knowledge for the organization is Poliedre, developed by the Universitat Politécnica de Catalunya (UPC). In this case, they have a corporate intranet for the exchange of information, knowledge an experiences.

Factors that facilitate the management of knowledge in the University

Taking Revilla´s work (1999) as reference we can determine that in the field of a university there are five factors that can achieve the role of the knowledge flows:

- Leadership
- Culture
- Technology
- Measuring system
- Human resources politics of the knowledge flow

Leadership	It is determined by the set of roles and skills of the managers who allow an efficient management of knowledge. Their main function is to help people to learn, they do not need to know all answer but understand keys matters such as: limits and knowledge potential, technical, organizational and economic resources that the development, direction and speed of change, risk, etc. require.
Organizational culture	The organizational culture should motive and encourage the human resources to develop their capacity to permanent learning with responsibility inside a place with confidence and assurance that encourages the innovation and the risk.
Technology	The technologies of information and communication /TIC) facilitate the process of learning allowing the organization and storage of knowledge. Their functions are: a) Codify the knowledge, b) Distribute the knowledge and guarantee quick access to it c) Facility the transference d) Allow the analysis and interaction required to its development.
Measuring system	Implement a system of valuation to assure the continuous improvement in the process of learning. The valuation of intellectual capital is composed of: a) Human capital b) Structural capital (organization capital and technological capital) c) Relational capital
Strategies and politics to human resources	Knowledge is storaged essencially in people, thus the management of knowledge depends on individuals development. It is important to create proper places of cohabitation which support the development of innovative processes of management of knowledge, applied to the essence of business.

The Management of Knowledge and the New Technologies of Information and Communication

Technological evolution in the last decades

The historic evolution of the Technologies of Information and Communication, TICs, was given parallel to the organizatios tendencies implemented by companies. This coincidence is due to a condition of reciprocity between organization and technological changes that makes it possible.

We can determine four stages which resumes the change produced in relation to the application of the technologies of information:

From 1950	From 1980	From 1990	From 1995
1st Generation	2nd Generation	3rd Generation	4th Generation
Isolated Applications	Databases	Nets and Redes and Terminals	Telecommunications
			Digitalization
			Internet
			Redesign of processes, innovation, integration Creativity of human resources that innovate about the use of electronic tools
		Commercial	processes
	Management	processes	
	Administrative	processes	

The importance and influence of the technologies in an organization are directly linked to its characteristics. Without any doubt, new technologies have brought a spectacular and drastic change in all companies. It is important to point out that, during the last years, Internet has become a revolutionary element, also with the mobile telephony. In very short time Internet has become essential to any organization. At present, there are companies that operate globally by internet, although they are considered small o medium under traditional parameters related to the number of workers or the amount of investments in capital assets.

Most of the society uses the computer every day, from their homes and from their jobs.

The development of the management and administration of knowledge generated the creation and use of great quantity of technological tools, in order to support the knowledge flows among the component agents. For that reason, hardware and specially software are being designed to make communications more efficient and give a common background for research, classification, processing, storage, extraction and use of information.

The globalization of the nets of computers, Internet and the development of communications in the last years of the past century have favoured a fan of technologies for the treatment of information and conditions for the integration of distinct means in the Management of Knowledge have been created.

The New Technologies of Information and Communication (NTICs) are better known as from the 90s. These electronic tools oriented to the production, exchange and communication can be classified in the following way:

- PC, servers and any other hardware device
- Telecommunications
- Tools of administrative productivity
- Tools of material productivity
- Intelligent products

Thus, worldwide politic initiatives in order to regulate such a dynamic and changing sector – telecommunications – have arisen.

According to perspectives, telecommunications are:

- Erasing time and space fences
- Betters communications
- Encouraging co-operation among the different estates
- Giving greater impulse to the economy of nations
- Multiplying the channel of expression of society in all levels: cultural, economical, knowledge, work and entertainment
- Multiplying the private exchange of information

There are two positions in this evolution of the NTICs as related to the impact they have inside globalization:

a) Social isolation versus social relationships enlargement

b) Technological integration of the bigger sectors of the population versus the technological exclusion of the same sectors

New technologies have evidently disturbed the old industrial society reating new economic, political and social relationships centered in the electronic flows of information, which have derived in the configuration of a new social model known as Postindustrial Society or Society of Knowledge. It is important to point out that the differentia value, in terms of productivity and

competitive is the creativity of man that innovates the uses of the mentioned electronic tools.

Why are NTICs essential in the society of knowledge?

At the same time as the society evolves from an industrial structure to the so called society of knowledge, one can see the invasion of conclusive and unthinkable changes. The technological phenomena has transformed the economic, social and also power relationships between nations.

Technology no only determines the rhythm and the pace of the human work but also its social organization and each parsons way of life. Also, technology has caused severe injuries to humanity and the planet.

Among those changes, we can mention:

- Abolition of frontiers: physical frontiers are being excessed nets of communication
- Lack of individual privacy: the more modern and technical a nation, the greater the knowledge an individual has.
- Impact of the models of job: new technologies of informations and communication have moved a great number of administrative employees, but also demands a new type of employee: a more qualified one.
- Reduction of distances: telecommunications potential not only communication but also the disappearance of distances. Today, almost everything can be managed at distance.
- Incidence in the economic activity: technologies capable of carrying information, quicker and to a greater distance, acquire substantial added value in economic terms, influencing on PBN; information begins to be conceived as a product, besides as a service.
- Incidence on health: great progress has been given to the detention and treatment of ilnesses.
- Incidence in the military field: military industry intensively uses the new technologies.
- Incidence in the everyday domestic life: each home has become a place of concentration of new technologies of information and communication.

State role

The NTIC's applied to the management of government allow the investment of the traditional model of public administration, transforming it in a plan "to the outside" where the citizen is the axis of the public informatics systems.

The benefits of the application of the NTICs to the management of "intelligent governments" are:

- Modernization and efficacy of the State
- Transparency of the public sector
- Closeness of the government to the citizens
- Participation of the people in the decision making processes
- Progressive de-centralization
- Acceleration of management times
- Optimization of the internal and external control tasks

The capacity of using the new technologies in the development of the political, economic and social life will depend on the success of getting a work force at a local and national scale and to stimulate the continuous labour training in digital technologies. This claims for state policies with specific actions in order to reach a sustainable development of the scientific/technological sector of the NTICs through its association with the productive and social sectors so as to contribute with an equitative and firm growing.

Availability of means in the University

We can mention several technologies of information which give a basic structure for the management of knowledge in the field of higher education:

Web Sites

The Site is an essential tool for the transversality of the colleges of a university, in favour of their integration. The unique feature of a web site is the possibility of converging a great amount of information in a single space and a temporal access which turns to be impossible by any other means.

Internet is a suitable means for the global exchange of information, according to the following reasons:

- Low costs for the creation of a web site
- It can be used 24 hours a day, 365 days a year
- Intuitive and friendly inter-phases for the user.

- Homogeneity in the access to distributed databases
- Global accessible
- Closer relationships between users
- On-line live events
- Creation of communities

Intranet

The intranets are basic means to share data within a specific community. They are flexible and adapt to the needs of each community; they allow a quick access and processing of information. They also allow the definition of different security logic domains, offering a greater or smaller access and transparency.

Team work platforms

They are, among others. Electronic mail, conferences, forums, chats (by which the users exchange opinions, data and information related to the groups interests).

There are two reorganization in the University which functions are essential and necessary for the integration, development and the implementation of the management of knowledge: the library and the administration.

Final considerations

Due to the changes produced in the world in the last ten years, the evolution of the new technologies of information and communication have provided the institutions, among them the University, a greater competence and efficiency to manage its intellectual wealth, as well as to generate new services and patents through projects of investigation and transference to the community. Therefore, the management of knowledge, and particularly of the intellectual wealth, has acquired an indispensable importance for the success of an educational institution that tries to create and keep dynamic competitive advantages and give answers to the new complex situations of its context.

To manage the knowledge means the management of all the intangible assets that add value to the organization to get capacities or essential distinctive competence.

In the XXI century society, learning is the most important source of wealth and well-being, of capacity to compete and co-operate in peace. Therefore, each educational institution should begin to accept the necessity of

transforming in a dynamic and flexible organization to be able to develop itself in all educational levels in order to achieve the integral formation of the individual.

The development of the administration of knowledge arose the creation and use of great amount of technological tools in order to give support to the flows of knowledge among its inner agents . Thus, the hardware and software are designed to supply a common background for the search, classification, processing, storage, extraction and use of information.

The existing tools (personalization, team work, corporative and simulation pages) indicate the process of complexity that technology has acquired for the Management of Knowledge and that, at first, started from the most elemental software for the search, processing and storage of data and information.

These tools vary as regards its aims and quality; for this reason it is necessary to study them before getting them into the organization.

Although technological tools have a main role in the development of the management of knowledge, it is important to point out that the real impact depends on how deep the culture of organization is as regards management of knowledge.

In the field of New Technologies of Information and Communication –NTICs-, in the future nets will be more diversified than ever and will be distinguished by a great competence among the different ways of access to the services (cable, satellite, wired, etc.). User are not interested in the way they access the services but they mind quality, price, comfort and options. Operators will compete on a base of different technological nets and platforms, although they will also have to set up new models of co-operation and association.

The great debate of new technologies of information and communication is in the configuration of a new model of society, fairer and equal, where man does not feel opressed by the great technological advances and where people take equal benefit from technological developments. It is clear that there is a dislocation among post-industrial societies in the world order, capable of creating sophisticated but non-selling systems, and the rest of nations, lacking money to purchase them as well as enough technological development to get that benefit. The problem arises, in the same way, by the production and sale of these technologies oriented to the immediate acquisition of benefits by their creators.

The access to new technologies of information and communication reinforces the social segmentation and the stratification. From that, the growing abyss between rich and poor in information. The inner risk in the present society is that new technologies can be used to arrange hierarchically, bureaucratically and to reinforce the technocracy and the centralization of the societies, so as to favour the appearance of wider personal relationships and more democratic as politics regards, when multiplying the centres of expression and, indirectly, of decision.

These new technologies are not an end in itself, they are a tool that can help to give concrete solutions to the problems of human development. The connectivity is important if we know how to use it, what for and when.

The generation of knowledge, appropiate administration and the management are essential to the sustainable development of a country and its insertion in the international relationships. If the capacity of processing information and generate knowledge is concentrated in social sectors, the educational inequity transforms in social exclusion.

Higher education ha an important role to play in the Society of Knowledge, promoting a real interaction among the government, the private sector and the centres of Research and development, contributing to the formation of professionals able to understand the processes of the new Society from a genuine interdisciplinary point of view. So, new technologies appear to open a lot of possibilities to the future because they go through all political, economic and social sectors, being its "strategic" development the means to contribute to equal and firm growing of the country.

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