



Ciencias de la educación

Artículo Científico

Intellectual capital as a strategy to integrate university functions in knowledge societies

El capital intelectual como estrategia para integrar las funciones universitarias en las sociedades del conocimiento

Capital intelectual como estratégia para integrar funções universitárias nas sociedades do conhecimento

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Resumen

En el marco de las sociedades del conocimiento, las universidades como instituciones cuyas actividades fundamentan la formación profesional y la generación de conocimiento científico, cumplen un papel estratégico en la promoción del desarrollo económico y social. En este artículo, se diserta sobre la importancia de la gestión del capital intelectual, como elemento que fomenta la integración de las funciones universitarias en el contexto de las sociedades del conocimiento. Metodológicamente, se adopta un diseño bibliográfico basado en la revisión de literatura en las líneas de investigación en sociedad del conocimiento, capital intelectual y, funciones universitarias. El trabajo se estructura en cuatro secciones: en la primera, se abordan las bases de las sociedades del conocimiento; en la segunda, se analizan los postulados de la teoría del capital intelectual; en la tercera, se discute la incidencia de la gestión del capital intelectual en la articulación de las funciones de extensión, investigación y docencia universitaria y; finalmente en la cuarta, a manera de conclusiones se destaca la importancia de la gestión del capital intelectual, como factor estratégico que promueve un replanteamiento del modelo de gestión tradicional empleado para el desarrollo de las funciones universitarias.

Palabras clave: sociedades del conocimiento, gestión, capital intelectual, instituciones universitarias, funciones universitarias.

Abstract

Within the framework of knowledge societies, universities as institutions whose activities underpin professional training and the generation of scientific knowledge play a strategic role in the promotion of economic and social development. In this article, the importance of the management of intellectual capital is discussed, as an element that promotes the integration of university functions in the context of knowledge societies. Methodologically, a bibliographic design is adopted based on literature review in the lines of research in the knowledge society, intellectual capital and university functions. The work is structured in four sections: in the first, the foundations of knowledge societies are addressed; in the second, the postulates of the theory of intellectual capital are analyzed; in the third, the incidence of the management of intellectual capital in the articulation of the functions of extension, research and university teaching is discussed; Finally, in the fourth, the conclusions of the conclusions emphasize the importance of the management of intellectual capital, as a strategic factor that promotes a rethinking of the traditional management model used for the development of university functions.

Key words: knowledge societies, management, intellectual capital, university institutions, university functions

Introducción.

The knowledge societies have induced a transformation of the traditional view of the factors of production and their contribution to development. Knowledge has positioned itself as the main productive resource that generates value and competitive advantages for organizations. In this orientation, the management of intellectual capital has begun to play a transcendent role in organizational development, contributing in a decisive way with the positioning of organizations in globalized markets.

The university institutions are not isolated from the described context, because the management of intellectual capital contributes to the articulation of teaching, research and extension activities that underpin the formation of human resources and the generation of scientific knowledge that provides the basis for development economic and social. In this paper, we discuss the importance of intellectual capital as a strategy that promotes the articulation of university functions in the context of knowledge societies.

To achieve this objective, a methodological design was adopted based on the literature review specialized in the lines of research in: knowledge societies, intellectual capital and management of university teaching, research and extension functions.

The results of the study demonstrate the importance of intellectual capital as a strategic factor that induces the rethinking of the models that have based the traditional development of university functions, since to promote a relevant professional training and generate the scientific knowledge that society demands is required an integration of the university functions, which is achieved through a functional cycle initiated in the extension, where the needs of society are

gathered as regards the training of professionals and areas of scientific knowledge that are key for the development economic and social, these demands must be transferred to research to develop the research processes, whose results are incorporated into the extension processes to satisfy the requirements of society in terms of scientific knowledge, as well as in teaching to enrich the university curriculum and promote the training of integral professionals with competences to be incorporated efficiently in knowledge societies.

DESCRIPTION OF THE UNIVERSITY MANAGEMENT MODEL (SUBSYSTEMS AND MACRO PROCESSES)

In the University Management Model, the configuration of university management subsystems was proposed, taking as a reference the substantive functions of the university, as shown in figure 1, to generate the following effects: to.

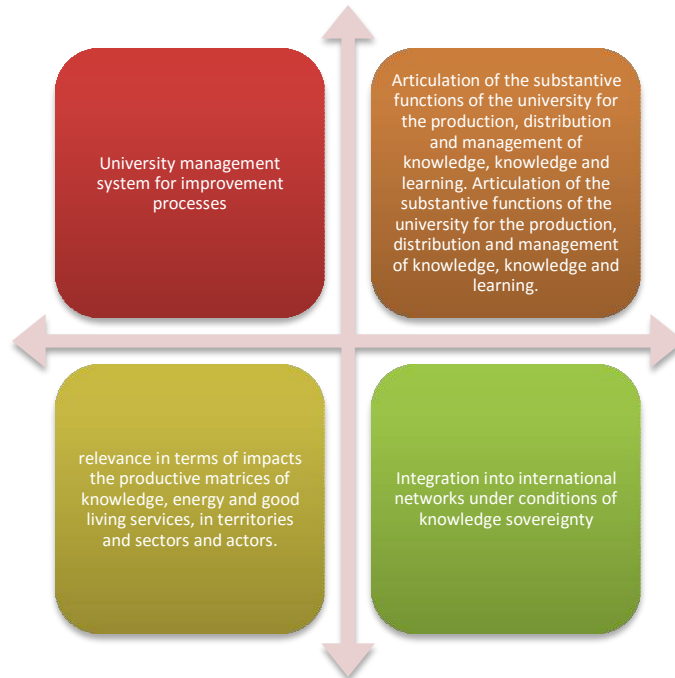
The articulation of substantive functions based on interactions and interconnections organized from scientific, technological, cultural and humanistic domains, declared by HEIs, based on their historical trajectory of capacities and potentialities and the pertinent response to the strategic objectives of sectorial, zonal and national;

to. The management of knowledge, learning and knowledge networks, at a national and international level, developed in accordance with the dynamics and strategies of generation and communication of the HEIs of excellence, which will turn them into nodes of influence and deployment of quality opportunities of the System of Higher Education; o. The change in the matrices of knowledge organization, academic and of the learning incorporated in the agenda of

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transformation of higher education; Y, b. The organization and planning for improvement processes that guarantee the quality of university functions.

Graph 1. Effects of the configuration of the university management subsystems.



Source: SENESCYT. Larrea, 2013.

This systemic organizational approach proposes the formation of a structure of 4 subsystems:

- a. University Degree and Postgraduate Education.
- b. Research, development and innovation.
- c. Link with society.
- d. Administrative-financial.

Its organization is based on processes of continuous improvement for quality management, focused on knowledge, learning, innovation, cooperation and the identity of educational actors.

- a. These subsystems are composed of macro interconnected processes that allow establishing the situation of origin and the vision of transformation to which one wants to reach;
- b. The determination of what are the fundamental dynamics of the university organization;
- c. The establishment of a base and origin situation that you want to transform to develop services according to the university project.

The foundations of knowledge societies

Currently, knowledge has positioned itself as the main factor of production that promotes economic and social development. Emphasis is placed on knowledge management, as a process centered on the creation, transfer and diffusion of knowledge, which induces the generation of competitive advantages and value for organizations. In this sense, current development models base knowledge as a strategic factor that promotes the process through the generation of innovations, which favor the adoption of new technologies aimed at the incorporation of alternative production processes, diversification of production lines, increase in production, productivity and added value.

The importance of knowledge as a productive factor has driven the formation of "knowledge societies", which have been developed within the framework of post-industrial society where theoretical knowledge is the main source of innovation. In these societies, technological progress is characterized by the generation of a new type of technology of an intellectual nature (Bell, 2001).

On the other hand, Drucker (1992) defines knowledge societies as societies where knowledge is the main productive resource. For the author, even though the world economy continues to operate on the basis of the market, its foundations have been rethought to form a new category of capitalism based on information.

In this way, in the knowledge societies, the traditional productive factors required in the land (natural resources), labor and capital have begun to lose importance as development factors. These have been replaced by knowledge as a strategic resource that generates competitive advantages and, as Drucker (2002) puts it, "the future society will be a society of knowledge" (p.227).

Castells (1999) presents a contribution in this regard, stating that the most appropriate position for dealing with these societies is the "informational society", since "the informational term indicates the attribute of a specific form of social organization in the that the generation, processing and transmission of information become the fundamental sources of productivity "(p.47).

Regarding the bases of the information society, Castells (1999) points to the development of a technological revolution, which supports the application of knowledge and information as a source of innovation and technological development, which is needed in the creation of " apparatus for generating knowledge and processing information / communication, in a circle of cumulative feedback between innovation and its uses "(p.58).

In a later work, Castells (2002) states that the terms knowledge society in some cases and, information society in others, are expressions that refer to the formation of a new technological paradigm, materialized in the internet and genetic engineering . Both have led to an information

revolution in the fields of electronics and genetics respectively, since "all information processes, including raw material codes, can be programmed, deprogrammed and reprogrammed in another way" (p.7).

From this argument, Castells (2002) emphasizes the transformations that occurred at the level of the economic structure. The emergence of a new economy is required, basically characterized by the adoption of business management models based on company networks, which favor the incorporation of technology in the network as a basis for innovation processes.

In this regard, Peluffo and Catalán (2002) establish a differentiation between the terms information societies and knowledge societies. Information societies are based on the use of information and communication technologies as a basis for development, since their organization finds its foundations in the use of information at low cost, data storage, as well as in the technologies used for its transmission; while knowledge societies are based on knowledge management as a strategic factor that promotes the development of innovation in the terms of a process that leads to the creation of value.

The bases of knowledge societies have been extended by UNESCO (2005) by emphasizing that these societies, in addition to the economic, integrate the social, cultural, educational, political and institutional dimensions in the conformation of a new type of society, where the information and knowledge generated through innovation and technological development constitute the sustenance that promotes the production of new knowledge. From this position, for UNESCO (2005) the foundations of knowledge societies are found in the "capacity to identify, produce, process, transform, disseminate and use information with a view to creating and applying the knowledge necessary for human development "(Page 29)

In this direction, UNESCO (2005) points out that the term knowledge society is broader than the notion of the information society, since it includes the concepts of technology and connectivity, implicit in the conception of the information society. Consequently, "the global information society only makes sense if it fosters the development of knowledge societies" (page 29).

In these terms, Benner and Carnoy (cited by Lesemann, 2008) summarize the characteristics of knowledge societies based on the following aspects: a) the breaking down of territorial borders for the development of diverse economic activities; b) the qualification of human resources and the introduction of technological innovations as a basis for development; c) the emergence of new forms of work organization; d) the formation of social networks of companies and; e) the emergence of new forms of business competition.

In the exposed characteristics, the importance of the scientific knowledge in the economic and social development of the different nations is evident, because this system of knowledge for its institutionalized, systematized and socialized character has replaced other forms of knowledge, which has based the positioning of the scientific-technological dimension as the main condition for the expansion of knowledge societies.

On this aspect Chaparro (2001), states that the foundations of knowledge societies are in:

A. The importance acquired by knowledge in the promotion of development, highlighting the role of education as a process that ensures the formation of societies capable of building their bases to respond to the demands of the new environment.

B. The capacity of society for the conversion of knowledge into a public good, which through the processes of accumulation and socialization is transformed into the social capital available by companies, institutions, organizations or societies to support their development.

C. The development of dynamic social learning processes oriented towards the strengthening of the capacities, abilities and competences of the people, organizations and communities that appropriate knowledge.

D. The development of strategic and prospective thinking that promotes the use of knowledge as a strategic resource for the construction of society.

In this way, knowledge societies are based on the management of intangibles, which include the knowledge, skills and competencies of human capital that integrated structural and relational capital forms the intellectual capital. In the next section, the theoretical foundations of intellectual capital are addressed, emphasizing their structural components, as well as their contributions to the development of innovation processes that contribute in a decisive way to the progress of societies.

The management of intellectual capital as a basis for organizational competitiveness:

Within the framework of knowledge societies, the management of intellectual capital is a strategic aspect that promotes the development of organizations. At the business level, intellectual capital is needed as the element that favors the adoption of innovations aimed at the positioning and consolidation of companies.

In this sense, knowledge is configured as the main source of wealth generation, since intellectual assets have a strategic potential for the generation of value. Such assets, are characterized from the position of Sotomayor (2005) in the following terms: a) are intangible factors that can be used simultaneously in the development of various activities; b) they induce the increase of the profitability of the organizations, because in the measurement that accumulates and uses the knowledge generate greater benefits for the organization and; c) they constitute the fundamental resource that promotes the generation of value.

On this aspect it is worth mentioning that intangible assets, intangible resources and knowledge assets have been used interchangeably in specialized literature to refer to intellectual capital. However, Lev (2001) points out that the concept of intangible resources is frequently used in the accounting field; in the economic, knowledge assets are used; while at the organizational level, emphasis is placed on intellectual capital.

In this direction, Brooking (1997) defines intellectual capital as the "intangible assets that allow the company to function" (p.25). For his part Stewart (1997) states that these assets are made up of knowledge, information, intellectual property and experience, which are the basis for the generation of value. Consequently, intellectual capital is "collective brain force. It is difficult to identify and even more to distribute effectively. But whoever finds it and exploits it triumphs" (Stewart, 1997, p.10). In this position, the importance of the management of intellectual capital is evident, since it constitutes the potential resource that generates competitive advantages for organizations.

Following Edvinsson and Malone (1999), regardless of the definition adopted, intellectual capital is the factor that characterizes the functioning and performance of business organizations

worldwide. These authors express the nature and bases of intellectual capital from the following metaphor:

If we imagine a company as a living organism, say a tree, then what is described in the organizational charts, annual reports, quarterly statements, company brochures and other documents is the trunk, branches and leaves. The intelligent investor studies this tree in search of ripe fruit to harvest.

But to suppose that this is the whole tree because it represents everything that is obvious is obviously an error. Half, or maybe more, is underground, in the root system. And while the aroma of the fruit and the color of the leaves bear witness to the health of the tree at that time, understanding what is happening at the roots is a much more effective way of what the state of health will be in the coming years. (p.26)

Under this conception, intellectual capital is conceived as an immaterial and intangible asset, whose foundations are found in the foundations of each organization. It is expressed in management models, organizational culture, internal environment, administrative and operational processes, technologies generated from innovation and technological development, human resource competencies, as well as in the relationships established with customers and suppliers.

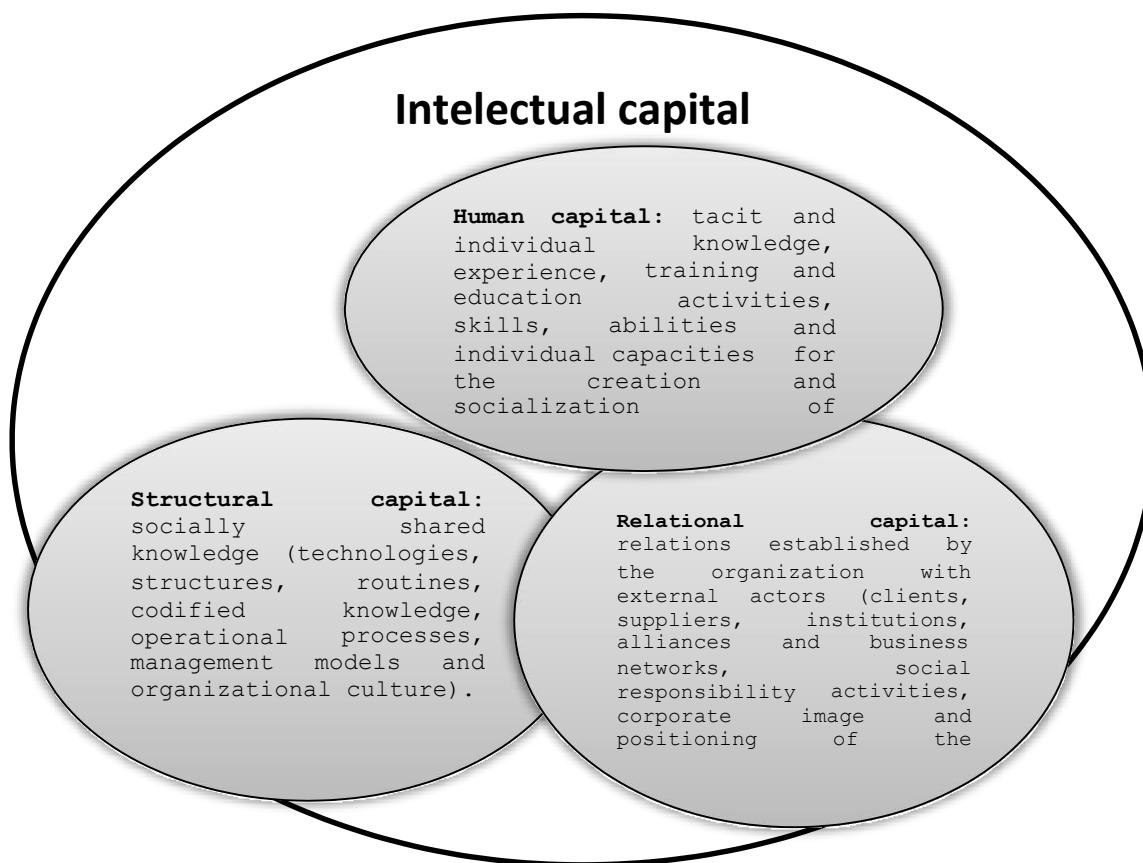
Another conception of intellectual capital, Estrada (1998) exposes it as "total collective wisdom of an organization with power to generate wealth" (p.34). From this position, the intellectual capital finds its foundations in knowledge, arising consequently the need to manage and value this factor as an organizational asset. In the terms of Estrada (1998), the intellectual assets that make up the intellectual capital of an organization are basically expressed in brands, patents,

prototypes, designs, competencies and skills of human resources, as well as in the strategic alliances established by the organization with customers, suppliers of raw materials and services.

Based on the arguments presented, this article is understood as the intellectual capital as the set of intangible resources, defined in the knowledge and intellectual assets, both individual and collective, which are available in an organization and, constitute the main resource that promotes organizational development, as well as the reach of sustainable competitive advantages.

Likewise, from the academic field there is a wide acceptance about the components of intellectual capital (Figure Number 1), whose dimensions are appreciated in the terms of Brooking (1997), Ordoñez (1999) Bueno and Merino (2007) and, Gómez (2016) in:

Figure Number 1. Intellectual capital. Dimensions



Intangible assets

Source: self made.

A. Human capital: includes the set of intangible assets centered on the human being. It covers the tacit and explicit knowledge of individual character; as well as the experience, skills, abilities and capacities of the members of the organization to create the knowledge that is fundamental for the development of the various activities, with special emphasis on the innovation processes, which constitute the key element for the generation of value and strengthening the competitiveness of the organization in national and international markets.

Some authors such as Bueno and Merino (2007) and Gómez (2016) state that human capital is structured on the basis of individual knowledge, training and education activities, the capacity of the members of the organization for learning and, their competences for the creation and socialization of knowledge as a basis for organizational development. Consequently, human capital is the fundamental element of intellectual capital, since it acts as a kind of catalyst for structural and relational capital.

B. Structural capital: covers the collective knowledge socially shared by the members of the organization, which is owned by the company. As expressed by Marino and Bueno (2007) and, Gómez (2016), structural capital is formed from the assets that support organizational activities, which include organizational capital (routines, codified knowledge, structures, operating processes, models of management and organizational culture) and technological capital (technologies, research and technological development, technological endowment, information and communication technologies, as well as intellectual property).

C. Relational capital: includes the knowledge that is incorporated into the organization as a result of the relationships established with external actors. From the position of Good and Merino (2007), the relational capital includes the relations with the market agents (clients, suppliers of raw materials, strategic alliances and networks of companies) and with society in general. To these components, Gómez (2016) adds the factors that can determine the market value of companies such as social responsibility activities, the corporate image and the positioning of the corporate brand in the market.

The structural elements of the exposed intellectual capital are interrelated and interact independently in each organization, since each one fulfills certain functions, defined in general terms in the following terms: a) human capital is the factor that induces the generation of knowledge and explicit in the organization; b) structural capital is the element that promotes the transfer and socialization of knowledge created in the organization, and c) relational capital bases the dissemination and obtaining of knowledge from the relationships established with external actors that remain in contact with the organization.

In the specific case of university institutions, intellectual capital covers the set of intangibles specified in the human, structural and relational capital that underlie knowledge management. As expressed by Velasco and Espinoza (2017), it includes ideas, inventions, knowledge systems, processes, creativity, publications resulting from research processes, intellectual property and the experience of members of university institutions, which they induce the generation and socialization of scientific knowledge resulting from the articulation of extension, research and teaching functions.

The knowledge generated from the management of intellectual capital in the university field, is required both in the university curriculum that guides the professional training, and in the knowledge obtained from the research processes, which are transferred and shared to satisfy the demands of society. Next, the foundations of the intellectual capital of higher education institutions are addressed, as a basis for the articulation of university functions, which promote the fulfillment of the mission of universities within the framework of knowledge societies.

The management of intellectual capital as a basis for the articulation of university functions

Universities as social institutions whose functions are oriented towards professional training and the production of scientific knowledge relevant to social development, have a set of intangible assets that require efficient management to fulfill the mission proposed at the Higher Education Conference (UNESCO, 1998), concretized in the promotion of sustainable economic and social development, as well as in the improvement of society.

In this regard Rengifo (2015) states that as a result of the evolution of knowledge societies, university institutions are in a process of transformation, characterized basically by the emphasis on activities related to the environment, the diversification of the sources of financing, the processes of academic reform and strengthening of research, the adoption of new management models and university management, as well as the incorporation of new information and communication systems.

Such a position finds its basis in the postulates formulated in the World Conference on Higher Education (UNESCO, 1998), which emphasize the role of university institutions in knowledge societies, highlighting the aspects related to professional training and the generation of scientific knowledge, which implies evaluating the relevance of the teaching, investigative and extension functions to adapt them to the requirements of these societies. As stated in the aforementioned document, this leads to an institutional transformation to adopt ethical principles, maintain political impartiality, promote critical capacity and, at the same time, support the fulfillment of university functions for the solution of some problems that affect society. and the world of work.

In this direction, the relevance of the activities developed in higher education institutions is evident from the link established between the university curriculum that supports professional

training programs (teaching activity), with the results derived from the research processes (activity of research) and, with the processes of university linkage with the socioeconomic environment (extension activity).

This argument finds its basis in the approach of Tünnermann (2006), by stating that within the framework of knowledge societies, the rethinking of university functions implies the reinvention of some specific tasks in quantitative and qualitative terms, such as: training of high-level personnel for the development of teaching; research and extension; the research processes in function of the national, regional, local and international problems; the planning of extension activities and; the strengthening of the link with the different sectors of society.

In these terms, it can be affirmed that institutions of higher education have a transcendent role in shaping a scientific culture, which includes knowledge of a scientific-technological nature (systems of institutionalized knowledge) generated from research processes that will later be socialized to promote social development. In this way, the main assets that make up the intellectual capital of the universities are needed both in the human capital that exercises the teaching, research and extension activities, and in the scientific knowledge system derived from the research, whose results are socialized and they share in academic communities through publications in scientific journals, conferences, seminars, workshops, as well as in university extension

Activities.

From this position, it can be affirmed that university intellectual capital comprises the set of intangible assets specified in the management models and operating processes that support the teaching, research and extension activities, the tacit knowledge of the actors that carry out the

university functions, the results of the research and extension processes, patents, the relationships established by the members of the university institution with external actors, the university curriculum, among others.

In relation to the structure of university intellectual capital, Aguilera and Díaz (2011), state that it is based on human capital, specified in the university staff (administrative, technical, teaching and research) in its different categories and dedications; structural capital, which includes knowledge owned by the university institution such as culture and organizational structure, management models, research and innovation processes, patents and intellectual property as well as; the relational capital that includes the relationships established by the members of the universities with external actors at a national and international level, which base the formation of research networks and, alliances with the productive sector and institutions.

A study conducted by Mercado (2014), reveals that the structure of university intellectual capital is presented from the following hierarchical order: a) the structural capital made up of institutionalized knowledge, as well as the codified experience, stored in the databases, patents, manuals, procedures, structures, planning system, personnel control, evaluation and promotion procedures, management models of technical and scientific knowledge, leadership, job satisfaction, motivation for work, organizational climate and human relations; b) the relational capital evidenced in the relationships that the universities establish with their stakeholders, including the quality of the relationship with other institutions of higher and upper secondary education, as well as with the central administration university; c) the human capital required in the experience, creativity, aptitudes, abilities and abilities of university personnel to solve problems, obtain results and maintain a proactive attitude to learning; d) the technological capital configured from the

technological computing platforms (software and hardware), infrastructure for the development of the teaching-learning processes and, for research activities and university extension.

On the basis of the components of intellectual capital, some authors such as Flores and others (2016), highlight its importance as a generator of wealth for higher education institutions, which implies efficiently managing the intellectual assets that constitute the basis for both the construction and socialization of scientific knowledge, as well as for professional training.

However, despite the transformations that took place in the university institutions, Flores and others (2016) emphasize the need to incorporate new management models of the intangibles that support the development of university functions, given that the main contribution of these Institutions in knowledge societies are found in the training of competent professionals, as well as in the production and socialization of relevant scientific knowledge for economic and social development.

In this direction Gómez (2010) argues that the formulated methods for the management, assessment and measurement of university intellectual capital have emphasized the indicators associated with the research component, ignoring the aspects related to university extension and teaching. The author proposes for the management of capital a model based on extension, which is based on the dimensions of human capital, structural capital and relational capital. In this model, we start from the collection of information in the socio-economic context that surrounds the institution to determine the existing needs and problems that can be addressed from the processes of university linkage.

This information is transferred to the members of the university community who perform administrative, teaching, research and extension activities (teachers, researchers, employees, workers, students and graduates) and, finally, by means of the extension as well as the management of the Intellectual capital is the transformation of human and relational capital, in structural capital that is useful to meet social needs.

In the model described, the dimensions of intellectual capital are valued in the following terms:

A. Human capital: sense of relevance and commitment of the university actors with the institution and the environment, self-motivation, creativity, educational level of the members of the institution that participate in the extension activities, as well as their capacity to formulate and evaluate social projects, also including his experience and productivity in the field of extension.

B. Structural capital: procedures, automation of processes, self-management, communication channels and organizational structure.

C. Relational capital: degree of university cooperation, linkage of the institution with society including with graduates and level of satisfaction of the actors participating in extension activities.

As stated in the preceding paragraphs, this model focuses the management of intellectual capital on extension, ignoring the aspects that underlie university research and teaching activities. In this sense, Padrón (2005) states that university institutions traditionally have developed teaching, research and extension activities independently under a University model based on the "Individualistic Conception". In this model, the most important function is teaching; whereas research is perceived as a subset of teaching, limited to the dictation of the chairs of "Research

Methodology" and; the extension is completely disconnected from the curriculum that guides the professional training, as well as from the research processes that promote the generation of scientific knowledge.

In this regard, a study conducted by López, García and Anido (2016) shows that under the "Individualist Model" there is no articulation of university functions, which limits the fulfillment of teaching, research and extension activities, as well as the management of university intellectual capital within the framework of knowledge societies. This occurs as a consequence - among other causes - of: the absence of an adequate income plan; the existence of a curricular structure with programmatic contents based on a single scientific knowledge production approach; formulation of research problems without a prior diagnosis of the needs of society and the productive sector; as well as the absence in the curricular mesh of subjects that promote the development of competencies for the generation of scientific knowledge.

In this context, to integrate the university functions Padrón (2005) proposes a conception of a "Collectivist University", in which the curriculum and teaching are integrated within a broad and comprehensive framework of action conformed by extension and university research. This model starts in the extension, which is configured as the university instance that is directly linked to the environment to collect and systematize the demands of society in terms of knowledge, technologies and associated performance.

The results of the diagnosis carried out by the extension activities are transferred to the research instance for the development of the research processes by the groups and research centers, in which lines and research programs related to the demands of the research are handled. society, because they have human capital with experience, as well as financial resources for the development

of relevant research processes that provide answers to the needs of society and promote social development. Likewise, the findings found from the research are transferred to teaching to strengthen and update the university curriculum that supports the associated professional training, as well as the extension to socialize scientific knowledge and meet the needs of social development.

As López, García and Anido (2016) show, the "Colectivist University" model, unlike the "Individualist University" model, breaks with linearity, which is a characteristic aspect of university functions, since the needs of professional training and scientific knowledge detected in the extension, constitute the inputs for university research whose products are incorporated into the university curriculum that will be made up of contents that really respond to the needs of social development.

The model described promotes the management of intellectual capital as a basis for the articulation of university functions because: a) in the field of teaching, teachers, in addition to professional training, will carry out extension and research activities for the enrichment of the university curriculum, contributing with the training of competent professionals at undergraduate and postgraduate level (specialization, masters and doctorate) to develop research processes and generate the scientific knowledge that society demands and; b) At the level of extension and research, networks, research lines and agendas will be set up in the groups and centers of university research at different times to address the problems that are relevant to society, which is the basis for the development of agreements and strategic alliances with public institutions and private companies.

Conclusions.

From knowledge societies, the management of intellectual capital has been positioned as a strategic factor for improving the competitiveness of various organizations, including university institutions, which contribute to economic and social development from vocational training and the generation of relevant scientific knowledge to respond to the needs of society.

However, in general terms, university institutions have developed the functions of teaching, research and extension based on a model based on an "Individualistic Conception" characterized by a linear vision, in which first the creation of knowledge is proceeded through of the research and then it is transferred to the stakeholders through the extension activities.

Such a model has limitations so that universities can contribute with efficiency criteria to social development, since teaching, research and extension activities are carried out in a disconnected and disjointed manner. The main university function is professional training (teaching); while research and extension are presented as complementary activities that do not contribute to the enrichment of the university curriculum.

Consequently, in order for universities to be able to incorporate efficiently into knowledge societies, it is necessary to efficiently manage intellectual capital, understood as the strategic factor that allows for the proper integration of university functions. In this way, the management of university intellectual capital implies a change in the traditional university management model of "Individualist" character to adopt the "Collectivist Model", which allows feedback and articulation of extension, research and teaching functions to enrich the curriculum. university, improve

professional training, as well as generate and socialize the scientific knowledge developed in these institutions.

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