Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google

DOAJ, www.jinto.lub.lu.se Yokonama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++]

Cita / Citation:

Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE

www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE

Ángel Adrianis Gómez Degraves¹, Kariné del Valle Gómez Marquina²

ABSTRACT

This research had as an objective analyze in a rigorous way, theoretical aspects related to the Organizational Intelligence construct, based on the Fifth Discipline by Peter Senge and the driver elements as the knowledge management, Environment Monitoring and Innovation. To do this, it was developed an exploratory research documentary, under a bibliographical design, obtaining as result the definition of Organizational Intelligence construct, its operationalization and development of organizational practices that brings an instrument scale. The document review provided basic elements, theoretical in the construction of a measurement scale of Organizational Intelligence. **Key words:** Knowledge management, organizational intelligence, measurement, Fifth Discipline

RESUMEN

Esta investigación tuvo por objeto analizar en forma rigurosa aspectos teóricos relacionados con el constructo Inteligencia Organizacional, fundamentada en la quinta disciplina de Peter Senge y los elementos impulsores como la Gestión del Conocimiento, la Vigilancia del Entorno y la Innovación. Para ello, se desarrolló una investigación exploratoria documental, bajo un diseño bibliográfico, obteniéndose como resultado la definición del constructo Inteligencia Organizacional, su operacionalización y la elaboración de prácticas organizacionales que permitan construir un instrumento escala. La revisión documental proporcionó elementos básicos, teóricos en la construcción de una escala de medida de la Inteligencia Organizacional.

Palabras clave: Gestión del conocimiento, inteligencia organizacional, medición, quinta disciplina

¹ Profesor-investigador del Departamento de Estadística de la Facultad de Agronomía. Universidad del Zulia. Venezuela. Email: <u>anggomez@fa.luz.edu.ve</u>.

² Ing. M.Sc. en gerencia de proyectos industrial. Profesional ambiental, Productora de sal (PRODUSAL). Maracaibo, Venezuela. Email: karine_gomez@crgl-thirdparty.com.

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE

www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

In the area of management has been developing a range of approaches that reinforce everyday knowledge of the relevant factors in the management field, which may well be coordinated and systematized to understand the management phenomena and its different edges. There have been many efforts to improve processes and management of the company, one of them, the famous Peter Senge materialized when the construct Organizational Learning addressed in terms of five (5) disciplines: personal mastery, mental models, shared vision, team learning and systems thinking.

However, this author does not include a construct, as well as complex, fascinating and of vital interest such as Organizational Intelligence. The authors confuse it with business intelligence. From there, the difficulty from the lack of theory and construction of instruments arises, and the need to generate research tools for assessing the degree of intelligence of a company, as an estimate to the meaning of this construct. However, it is known that the Organizational Learning is one of the needs, near to the Organizational Intelligence, according to Senge, available to the organizations to generate knowledge from the information and get with it, competitive advantages that reflect in the organizational performance.

The fact that much of the recent literature on business organization, refers to organizational intelligence, does not imply their complete understanding, due to a lack of conceptual frameworks that examine its multilevel nature and integrated into a single construct their processes, elements, factors, tools and lack of measurement tools useful for organizations to assess their degree.

This materializes the urgent need to find mechanisms aimed at achieving objective ways of measuring both the Organizational Learning as Organizational Intelligence. Knowing an approximate the degree of intelligence of a company, will

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

identify areas for improvement and develop strategies that lead to achieving organizational results expected.

The objective of this research is the analysis of the construct Organizational Intelligence, for its implementation, and provide key elements to be measured by an instrument scale.

THEORETICAL FRAMEMARK

The approach the author raises in this research to measure Organizational Intelligence, is presented in a broader context, which states that the Organizational Intelligence is the collective ability to integrate individual intelligence in the pursuit of sustainable development of the Organizational Learning, driven Knowledge Management for the five (5) disciplines Senge, monitoring the environment, in order to achieve constantly innovation. These drivers are highly correlated structure as a whole.

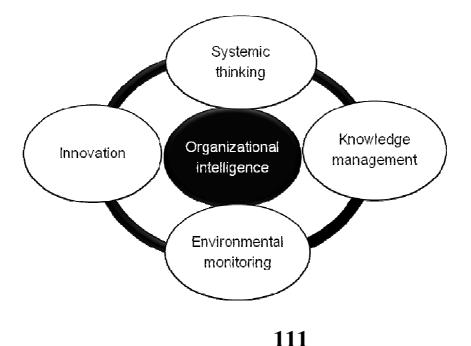
The graphical representation of the concept is presented in Figure 1, which shows that the Organizational Learning (considering the five disciplines of Senge) is the platform or substrate of an enterprise intelligence. However, the authors clarifies that the definition is approximate, as there are many aspects that touch the intelligence of a company, and is difficult to measure in absolute terms Organizational Intelligence, understood by Glynn (1996) as the ability to process knowledge for the best solutions for survival and profit in a competitive environment, looking like a process of integration of individual intelligence for decision-making processes in the organization. In a company with innovative and participative management culture reflects a high creative participation of the members. A company that has a high capacity for learning, has Organizational Intelligence and learning, are capabilities of the company are not

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

separated. The fact is that you wish to measure Organizational Intelligence in terms of their drivers, already mentioned. Another attempt to measure intelligence in an enterprise carried North and Pöschl (2003), who proposed a matrix of Organizational Intelligence, based on comparisons with other companies, and perform the analysis of the factors markets / competitors, customers, products, processes and employees.

The five (5) disciplines of Senge Learning Personal domain

This discipline is individual and refers to the ability of individuals to their development as a person, which has clarity in their personal vision, professional and what the organization wants from him, having clarity of reality and is committed to the desired results of the organization. It is necessary to be master of the principles underlying how to produce personal and organizational outcomes, people must have creative ability and willingness, this generates, according to Senge (1990), which is known as creative tension, so that the reality of a person



Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

Figure 1. Organizational Intelligence and its elements.

Source: Own (2011).

comes close to what wants, of course stress leads to making changes not only cognitive structure but attitudinal, which have elements of belief, emotional and behavioral.

In an Intelligent organization, people work with enthusiasm, passion for what they do, they feel pride in their company, they are constantly developing their personal vision on learning, know their strengths and weaknesses, foster teamwork, they learn to adapt and anticipate changes in the environment, align their vision and the organization. The company must identify the characteristics of Personal Domain with a view to strengthening and implementing mechanisms for members of the organization have a sustained creative behavior.

In relation to the Personal Domain, should be able to clarify, deepen and constantly refocus personal vision or where to go from one person and his future image is the discipline of learning and growing staff, clarifying personal vision, related with the world, through a proper management of our rationality and our emotions, clarifying of vision, centralizing the energy, drive, development of patience, seeing reality objectively and relate the Personal Learning with the Team Learning and Organizational Learning.

People are aware of their weaknesses and strengths in the organization, this awareness helps them find learning elements that lead to improving their personal vision and increase commitment to their organization. The fact of wanting to learn continuously, leads to self-realization, emotional energy to continue doing things right for their own benefit and for the organization.

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

Mental Models

Mental Models are deeply rooted assumptions, generalizations and internal images that influence the way of think, feel, understand and act of a person, are the mental maps, which let see the world in different perspectives, making them consistent (models) with observed reality, people make aware their models with effects in reality. The models are knowledge, beliefs, habits and customs transmitted, which are internalized. These Mental Models are the platform for thinking and decision making. Organizational Learning is promoted through the Mental Models that are shared with the teams in a continuous and sustained way. With group learning are modify the Shared Mental Models, is the way to approach the Organizational Learning. These mental models are means or instruments for raising the level of Organizational Learning.

Mental Models are reviewed rigorously and determine how people and organizations perceive the world and affect their attitude, images influence the way people think, understand and act. In this sense, enterprises should identify paradigms or models and establish mechanisms to eliminate those not interesting. By learning, the mind is ready to acquire new models, the existence of inadequate mental models, rooted, limit the ability to observe the facts objectively and hinder learning. This discipline refers to have new mind schemes and expand the thinking, if this is done, the person can see the options of the company in the future. According to the Mental Model, is understand the world and acts in a way. It is necessary to realize these models to align it with the strategic objectives of the organization.

Senge believes that the Mental Models must be brought to the surface, explore and modify them, creating new models that will serve the person to see an objective reality. It is very important for a company to apply inquiry and reflection to

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

our thoughts, emotions and everyday behavior. According to Senge et al. (1995) and Lanzas, Lanzas and Montoya (2005), models can enhance or hinder organizational learning. The author considers simulate scenarios to identify, modify and adapt mental models to solve problems.

Shared Vision

Create a Shared Vision refers to build a stimulating vision of future and motivate members of the organization, where members of the teams have the same identity, a sense of belonging and commitment, everyone feels part of a common entity. The Shared Vision allows changes in the real world, produces energy group to the common purposes of all members of the organization and this, achievement motivation and knowledge of what the organization expects from them and needs it. It's like an ideology that will yield long-term, where there is clarity in the roles of its members who are committed to provide visibility to the organization and the fulfillment of his vision. People do not only share knowledge and experience but axiological values and defend their organization.

The Learning Organization must have a Team Learning and develope the capacity of a team to create the results its members want in benefit of the organization. The key point is the individual's commitment to the vision of the organization. The directors and members build together the vision, aligning people vision with the organization. As noted by Senge (1990), Organizational Learning can only be achieved if people have among other things, a shared vision, where people learn because they want to, not because it is demanded. The vision should be specific, challenging, can reach out and accepted by most people, who should be revised to put their strengths in serve to the organization, is given by personal visions, which seeks to relate the personal, professional and work interests, it

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

enhances creativity to achieve common goals. The vision gives identity to individuals and organization, provides unity and alignment.

Team Learning

The Team Learning allows us to contrast the Mental Models, develop Shared Vision and emphasize learning rather than the team development process, to share visions, images of the future, work in teams using the knowledge, skills, abilities and competencies of individuals, using principles, strategies, methods and procedures for achieving the objectives of the organization.

There should be two-way, a flow of creative thinking, motivating and constructive, of the team to higher levels and of these the team. The teams set the tone for enhancing individual and group learning, which consolidates the Organizational Learning.

The Team Learning is a process of aligning and development of the capacity of a team to create the results its members and the organization want. The ideas generated by a team are more creative and innovative, allowing the contrast of Mental Models and perceptions and interpretations of the real world (León, Tejada and Yataco, 2003). These authors agree with Senge (1990). Teamwork, according to the author, is an enhancer of the generation and transmission of tacit and explicit knowledge, reason that should be considered based on the Knowledge Management for Organizational Learning achievement. The team produces generative learning, where teams must know how to work on them, know the processes, methods and techniques in their respective work areas and must have adequate technological support.

On the teams, as Leon, Tejada and Yataco (2003), the current status of the team must be known, understanding and realizing the construction of mental

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

models, shared knowledge and experience, managing a collective language and establish mechanisms for effective dialogue and debate, there must be alignment and function as a whole. For the team thinking and act synergistically, should have a shared vision and the organization must provide training equipment. These authors agree with Senge, who asserts that Team Learning allows to contrast the and Mental Models and the development of a Shared Vision. In Teamwork, its members contribute their skills, abilities and skills in a coordinated and committed way, aware of their individual responsibility to meet shared goals.

According to Socorro (2008), Teamwork is a skill specific to each person. Humans are not genetically programmed to work together, or should be, some show that talent and others not, this does not disposable to those who can not develop this competence, remember that some of the greatest geniuses in history have offered to world extraordinary products from the solitude of their studios or apartments. On the other hand, Ramirez (2006) define teamwork as the ability to work and make people work, collaborating with each other, the research on teamwork has limited, in general, to the description of the processes that characterize the most successful groups, thereby, the need for cooperation has been identified, participation and commitment to institutional goals. These studies assumed that, once identified these processes, could be replicated by other teams, to optimize its performance.

Environmental monitoring

Another key aspect or sub dimension, according to the author, is considered driver of Organizational Learning to give meaning to organizational intelligence, is monitoring of the environment. According to Prieto (2003), the monitoring of the environment can be understood as the ongoing effort to examine and diagnose the

Revista Científica Electrónica de Ciencias Gerenciales / Scientífic e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

organizational environment through the acquisition and analysis of information, internal and external origin.

Any organization, even more the intelligent, must have an active attitude towards the environment, so that it acquires the ability to detect any sign of change to identify opportunities and threats, thus, interpret the most urgent needs. Thus, the organization can identify significant sources of information and knowledge, which may be converted into shares, and subsequently incorporated into their stock of knowledge.

Some organizations embody the environmental monitoring through mechanisms that ensure contact between staff and customers, suppliers, competitors, research centers and universities or any other source of outside information. Among these mechanisms are considered benchmarking, market research, preparation of forecasts, the construction of future scenarios (Prieto, 2003), and according to the authors, business intelligence.

Innovation

Innovation suppose to implement previously unfamiliar ideas, leading to the emergence of problems, whose resolution leads to knowledge generation and activation of its dynamic evolution cycle. Organizationally, innovation requires the presence of beliefs and values entrepreneurs, to facilitate communication. Regarding the definition of the construct, Albornoz (2009) states that it is the introduction of new factors of production in society, which can offer a company stay located in a better competitive position. It refers to the market introduction of a new good or service, method, production process or organizational methodology. Create a source of supply of raw materials or intermediate products, implement a

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

new structure in a market or opening a new market in a country. To be considered as innovation, should be applied commercially and has utility in society.

Knowledge Management

According to Prieto (2003) is to recognize and govern all activities and support elements that are essential to confer on the organization and its members the ability to learn and affect the functioning of the apprenticeship system and the value of the organization in the market, a key tool for rational management of learning systems and achieve the success of the organization based on knowledge and processes.

How companies build, store, communicate, organize and apply knowledge about its activities and organizational culture, improving the learning of their employees is what is known as Knowledge Management (Prieto, 2003, Pan and Scarbrough, 1999).

The ability to transform information into knowledge and incorporate it as learning in the mindset, organizational capacity is important for a company to adapt to the turbulent environment (Nonaka and Takeuchi, 1995). Every company needs to strengthen the alignment between knowledge and learning processes, to improve their market positioning.

On the other hand, Riquelme, Cravero and Saavedra (2008) assert that knowledge management is the management of the factors involved in the formation and evolution of the stocks and flows of knowledge and results, allowing to reach the main goals of the company, these authors agree with prieto (2003).

In the context of this research the knowledge will be understood from the point of view of "Knowledge as Process" in which case knowledge management

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

will have as a key point will be the increase of stocks and knowledge flows in the dynamic processes generate, capture, transfer and apply knowledge.

Accepting that an organization can not itself generate knowledge, as knowledge generation is made possible by individuals, and to some extent, to groups of the organization (Prieto, 2003). Can be understood as knowledge generation to the creation of new ideas, the recognition of new patterns, the synthesis of separate disciplines, and development of new processes (Pavez, 2000).

For purposes of this research, the term capture refers to the way organizations perceive both tacit and explicit knowledge, achieving in this way, identify skills that went unnoticed in the organization.

The transfer, which occurs when individuals within an organization to transfer and share knowledge. By sharing, it increases and becomes more valuable, synergies are produced which make the overall knowledge gained qualitatively and quantitatively is greater than the sum of individual knowledge.

The transfer of knowledge has as main objective the identification of tacit knowledge of people or organization. Its purpose is to connect between those who call knowledge and those who possess (Peluffo and Catalan, 2002).

Moreover, the application of knowledge concern to the implementation of it, in the performance of tasks, decision-making processes, problem solving, among others, whether by an individual, in the context of a group or in the activities of the organization. In developing this process, knowledge is internalized by individuals who need it, though in a more direct way, knowledge can be applied to their internalization by individuals through training and job training (Prieto, 2003).

The failure of traditional management practices to efficiently manage tacit knowledge and its transformation into explicit, was what boosted the search for

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE

www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

new management strategies, as an organization needs to recognize the tacit knowledge dispersed among its staff, synthesize and incorporate this knowledge in organizational key activities to promote a continuous process of innovation, this was part of the reasons that led to the birth and study of a new management tool, that seeks to manage the knowledge of an organization that has been defined as Knowledge Management.

Knowledge management reflects the implementation of new ways of managing organizations, especially the so-called intangible assets that form the intellectual capital, strengthening the administration on two dimensions: Organizational Knowledge Management and Organizational Learning Management. That is, the organizations become in systems in that the center of value creation and / or benefits is the knowledge and ability to build it by learning (Prieto, 2003).

As key elements and drivers of knowledge management in this investigation are considered: Organizational Culture, Technology, Business Intelligence and Human Resources.

METHODOLOGICAL FRAMEWORK

The methodological framework of this research includes the type of research, research design, sources of data collection and research procedure.

Type of investigation

The type of research is exploratory documentary that, according to Arias (2006), is a process of search, retrieval, analysis, criticism and interpretation of secondary data, which are obtained from other research in documentary sources: audiovisual, print and electronic. As in all research, the documentary also seeks to

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

contribute new knowledge. The documents provide information (processed data) of a reality and the author interprets from the theory existent. It integrates the theoretical and empirical, relying on the knowledge acquired by the researcher, who analyzes the internal and external consistency of the theories to pinpoint its flaws or merits, or demonstrate its priority over others. The originality of the desk study is reflected in the approach, criteria, conceptualization, and overall, in the researcher thinking. At the same time, clarifies facts under a rigorous analysis of the theory. It addresses important redefinitions underpin new work proposals.

Research Design

According to Arias (2006) research design is the strategy adopted by the investigator to answer the questions or hypotheses. The design of this research is Bibliographic, through rigorous review of printed and electronic documents. The data search was done with order and systematization, where was placed the references that the researcher considered relevant to the subject.

Sources of data collection

As a source of data collection was used the documental analysis through printed and electronical sources. In the printed sources were used non-recurrent publications: books, pamphlets, thesis, promotion work and research reports and periodicals: journals and newsletters.

Among the used electronic sources including websites, online periodicals: magazines and newsletters and online non-periodical publications, books, reports and theses.

Investigation Procedure

Revista Científica Electrónica de Ciencias Gerenciales / Scientífic e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

The motivation of this research is to generate guidelines for measuring a company's Organizational Intelligence in terms of the capacity for Organizational Learning based on the five (5) disciplines of Senge, Knowledge Management, Environment Monitoring and Innovation.

The stages of this research were:

1. A comprehensive review of theory about constructs Organizational Intelligence, the five (5) disciplines Senge, Knowledge Management, Environment Monitoring and Innovation. The author did not found literature concerning to the measurement of Organizational Intelligence, did nor found accepted scales that focus on measuring the construct, The author noticed that many authors, confuse constructs of companies intelligence and business intelligence, assume they mean the same thing. This analysis allowed to observe that there are elements or common principles in different authors, in relation to the constructs analyzed, the author concludes that the construct Organizational Intelligence needs to be addressed regarding it as a function of knowledge management, the five (5) disciplines Senge, Monitoring of the Environment and Innovation.

2. Operationalization of the variable Organizational Intelligence, dimensions, subdimensions and indicators to cover the domain of the construct.

3. Establishing of the organizational practices.

Organizational Practices are mechanisms used by an organization to bring its employees the skills needed to lead the institution to achieve its objectives, are instrumental to form perceptions about the organization's emphasis on its principles, and affect perceptions, because they fulfill the function of pointing, communicate and reinforce those aspects that the organization expects of

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

workers, Gatewood and Riordan (1997). From the Organizational practices, the items will be formulated or reagents that constitute the measurement range instrument.

RESULTS AND DISCUSSION

The results of this research are input to measure the intelligence of a company, which yielded the practices of five (5) Organizational Learning disciplines, according to Senge's theory, the practices of knowledge management, surveillance environment and innovation, this in order to provide guidelines for the construction of a scale instrument that measures the construct Organizational Intelligence.

The operationalization of the construct Organizational Intelligence is presented in Table 1, where the author considers that the dimensions of Organizational Intelligence are: Knowledge Management, The five (5) disciplines Senge, Surveillance of the environment and innovation.

Revista Científica Electrónica de Ciencias Gerenciales /

Scientific e-journal of Management Sciences

/ PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela

/ REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET,

DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++]

Cita / Citation:

Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) **MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE**

www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

Table 1. Operationalization of the variable Organizational Learning

Variable	Dimensions	Sub dimensions	Indicators
Organizational Intelligence	Systemic thinking	Personal Mastery	
		Mental Models	Organizational principles and practices
		Shared Vision	practices
		Team Learning	
	Knowledge Management		Leadership
		Organizational	Terms of trust
		culture	Norms and values
			Team learning
		Technology	Systems and Mission and Vision
			information technology
			Communication
			Quality Assurance
		Human resources	Labor skills
		Business	Using business intelligence software
		Intelligence	Availability of information
	Environmental Monitoring	Monitoring <techniques< td=""><td>Benchmarking</td></techniques<>	Benchmarking
			Market research
			Forecast scenarios
	Innovation	Principles	Innovation practices

Source: Own elaboration (2012).

Organizational Practices are mechanisms used by an organization to bring its employees the skills needed to lead the institution to achieve its objectives, are

Revista Científica Electrónica de Ciencias Gerenciales / Scientífic e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

instrumental and form perceptions about the organization's emphasis on its principles, and affect perceptions, because they comply the function of pointing, communicate and reinforce those aspects that the organization expects of workers Gatewood and Riordan (1997). From the Organizational practices, the items will be formulated or reagents which constitute a scale instrument. Organizational practices considered in this research were:

Personal Domain organizational practices

1. The company offers suitable conditions for achieving personal and professional development of its employees.

- 2. Staff have a sustained creative behavior for the benefit of the company.
- 3. The staff identifies the strengths and weaknesses of him and the company.
- 4. The company provides the tools for individual learning.
- 5. The personnel that work has clearly what wants in the present and future.
- 6. The staff strives to achieve the objectives and goals of the company.
- 7. The company promotes and implements a system of performance evaluation.
- 8. In business meetings are held regularly to promote learning.
- 9. The staff is able to achieve their goals in business.
- 10. There is an ongoing plan to improve learning of their workers in the company.
- 11. In its strategic plan, the company includes five (5) disciplines Senge.

Organizational practices of Mental Models

1. The company promotes openness to new thoughts and reflect on them in order to rethink the way we see reality.

2. In the company new scenarios are simulated that modify old ones.

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

3. Managers or senior executives are aware of models or inadequate forms of

thought.

4. The company has mechanisms to explain the advantages and disadvantages of introducing new models or models of thought.

5. In the company, the staff share their ways of thinking.

6. All staff is trained in new technologies, procedures and practices.

7. There is clarity on how the company can introduce new mental models.

8. In the company it is identified, eliminated or modified inappropriate Mental Models rooted.

9. Staff share ways of thinking.

Practices of the Shared Vision

1. There is agreement in the company and its employees, as they like from each other.

2. The company fosters genuine commitment of the workers with her.

3. In the company, its management and employees construct together the vision of the company.

4. People feel they belong to a common entity.

5. In the company there is alignment between personal and professional interests of its members.

Team Learning Practices

1. Teamwork is encouraged and facilitated by the company.

2. In the company there are suitable places for people to meet, share and learn from each other.

3. Best practices, models and skills are shared across the teams.

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE

www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

4. The dynamics of group are focused on the task and the relationship between its members.

5. It facilitates dialogue, debate and develops a real thought together in teams.

- 6. The company knows the capacity of their workers to work in teams.
- 7. Workers receive from the company, information about working in teams.
- 8. Teams are rewarded for their achievements as a group.

Practice for Knowledge Management

1. Managers, executives and supervisors, foster workers to express their potential at work.

- 2. The Managers generate motivational strategies for workers to share knowledge.
- 3. The views of employees influence decisions that are taken daily at work.

4. The company allows freedom to their workers to pose problems to their superiors.

5. The management delegated to others to solve specific problems.

- 6. Leaders seek learning opportunities for them and for their workers.
- 7. The company carries out staff awareness to its values.

8. The staff is aware of the rules, regulations and procedures of the organization.

9. The institution promotes employees in the sharing of values.

10. Workers and conviction easily accept decisions by management.

11. The staff has faith in the actions and commitments of management and senior executives.

12. The company provides trust to its employees to report on matters that do not work.

13. The members of the company comply with the mission and vision of it.

14. Workers involved in formulating the vision of the company.

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE

www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

15. The company implements a system of quality assurance to improve processes.

16. The company applies techniques to measure the quality of service or product.

17. The processes of R & D are equipped with control mechanisms that facilitate review and monitoring.

18. In the company there are systems and information technology (Internet, intranet, etc.), which allow staff to obtain the necessary information.

19. They are designed and implemented management systems documentation and access to information and knowledge, supported by appropriate technology.

20. The company has PCs, servers and database.

21. In the company are networks of information technology.

22. The company is stored in an organized way the knowledge.

23. Communication to staff is timely and smoothly in any direction, with exchange of ideas through different media.

24. Information regarding the work of staff, is available at any time, quickly and easily.

25. Every employee has access to the Internet in the company.

26. There are strategies for the dissemination of knowledge for all members of it, to use in their daily activities.

27. Senior executives, managers and supervisors of the company are open and honest in their communications, ensuring that workers know what is expected of them.

28. The company has strategies to measure knowledge.

29. The company has defined the profiles of the charges.

30. The company has mechanisms to train personnel with the knowledge generated.

31. The company used pay and promotion systems for employees.

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

www.revisianegolium.org.ve/ num zz (and 9) pag 100-152

32. Exists and the company applies a system of personnel change.

33. Exists and the company applies a system of recruitment.

34. The company is applying technology as Datawarehouse, Data Mining, Datastart, Neural Networks, Balanced Scorecard (Balanced Scored) System and Decision Support.

35. The company ensures that all knowledge from internal and external, is available where required by business processes.

Environment Monitoring Practices

1. The company has mechanisms to know and understand the market and the behavior of customers and suppliers, and their changes.

2. Given the political, social, economic and technological developments, the company adapts its processes to these changes.

3. The company has consistently highly responsive to customer requirements.

4. The company has mechanisms to forecast scenarios.

5. In the company are institutionalized market research.

6. The company used benchmarking techniques.

7. They are referred to strategic alliances and agreements in strategic planning of the company.

8. The company has databases with customer information, which is used to making decisions.

Practice Innovation

1. The company encourages its employees to the development of innovative projects.

2. The company is overseen by a functional research and innovation, where scientific knowledge is generated and produced technology.

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE

www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

patenting and benefits 3. The company handles get from patents. 4. Patents registered cause impact on society, in the sense of satisfying needs of a large number of people.

CONCLUSIONS

The review of documents provided elements essential for understanding basic aspects, theoretical-methodological, in the construction of a measurement scale of organizational intelligence. There are references about this construct advanced and its drivers, but there is little literature that responds to the same measurement through research instruments.

On the establishment of the operationalization of Organizational Intelligence in its dimensions, subdimensions and indicators, managed to build the table of operationalization of the variable Organizational Intelligence and its drivers, concluding that the construct Organizational Intelligence is complex and multidimensional.

It was identified the basic aspects of what should be in each of the disciplines that make up the fifth discipline or Systems Thinking and operationalization of a set of organizational practices that will transform them into items on a scale to measure Organizational Intelligence.

LITERATURE REFERENCES

- Arias, F. (2006). El proyecto de investigación científica. Introducción a la metodología científica. (5^a ed.). Caracas: Episteme.
- Albornoz, M. (2009). Indicadores de innovación: las dificultades de un concepto en evolución. Revista CTS, 5(13), 9-25.

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

- Gatewood, R. y Riordan, C (1997). The development and test of a model of total quality: organizational practices, TQ principles, employee attitudes and customer satisfaction. *Journal of Quality Management*, *2*(1), 41-65.
- Glynn, M. (1996). Innovative genius: a framework for relating individual end organizational intelligences to innovation. Academy of Management review, *21(4)*, 1081-1111.
- Lanzas, A., Lanzas, V. y Montoya, L. (2005). Creación de empresas inteligentes, Cinco disciplinas que contribuyen al proceso. Scientia et Technica. Año XI. No 28.
- León, S.; Tejada, E. y Yataco, M. (2003). Las organizaciones inteligentes. Industrial Data, *6(002)*, 82-87.
- Nonaka, I. y Takeuchi, H. (1995): *The Knowledge-Creating Company*. Oxford: Oxford University Press.
- North, K y Póschl, A. (2003). Un test de inteligencia para las organizaciones, dirección del conocimiento: desarrollos teóricos y aplicaciones, editado por Ricardo Hernández Mogollón. Trujillo: Ediciones La Coria.
- Pan, S. and Scarbrough, H. (1999). Knowledge management in practice: An exploratory case study. Tecnol. Anal.Strat. mang.11:359-374.
- Pavez, S. A. (2000). La Gestión del Conocimiento en las organizaciones. Página Web en línea. Recuperado el 07 de julio de 2011, de http: www.gestiondelconocimiento.com
- Peluffo, M. y Catalán, E. (2002). Introducción a la gestión del conocimiento y su aplicación al sector público. CEPAL. Santiago de Chile.
- Prieto, I. (2003). Una valoración de la Gestión del Conocimiento para el desarrollo de la Capacidad de Aprendizaje en las organizaciones: propuesta de un modelo integrador. Tesis Doctoral. Universidad de Valladolid. Facultad de Ciencias Económicas y Empresariales, Valladolid.

Revista Científica Electrónica de Ciencias Gerenciales / Scientific e-journal of Management Sciences / PPX 200502ZU1950 ISSN: 1856-180 Edited by Fundación Unamuno / Venezuela / REDALYC, LATINDEX, CLASE, REVENCIT, IN-COM UAB, SERBILUZ / IBT-CCG UNAM, DIALNET, DOAJ, www.jinfo.lub.lu.se Yokohama National University Library / www.scu.edu.au / www.ebscokorea.co.kr, Google Scholar, www.bib.umontreal.ca [+++] Cita / Citation: Ángel Adrianis Gómez Degraves, Kariné del Valle Gómez Marquina (2012) MEASUREMENT OF THE ORGANIZATIONAL INTELLIGENCE www.revistanegotium.org.ve / núm 22 (año 9) pág 108-132

- Ramírez, M. (2006). Competencias basadas en la gestión del conocimiento del capital humano de la empresa Sistema Hidráulico Yacambú-Quibor. Recuperado el 10 de octubre de 2011, de <u>http://www.tauniversity.org/tesis</u>.
- Riquelme, A; Cravero, A. y Saavedra, R. (2008). Gestión del Conocimiento y Aprendizaje Organizacional: Modelo adaptado para la Administración Pública Chilena. Recuperado el 10 de Marzo de 2012, de <u>http://ceur-ws</u>. org/vol-488/paper3.pdf
- Senge, P. (1990). *The fifth discipline: the art and practice of the learning organization.* New York: Random House.
- Senge, P., Ross, R., Roberts, Ch., y Kleiner, A. (1995). La quinta disciplina en la práctica. Trad. Carlos Gardini. Barcelona: Juan Granica, S.A.
- Socorro, F. (2008). Trabajo en Equipo: una visión diferente. Pagina Web en línea. Recuperado el 07 de julio de 2011, de http://www.gestiopolis.com/organizacion-talento/una-vision-del-trabajo-enequipo.htm