



Observatories source of information: Concepts and theoretical review

Observatorios fuente de información: Conceptos y revisión teórica

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Abstract

Nowadays, information is a fundamental tool to improve competitiveness and success in organizations. Observatories through technological surveillance and competitive intelligence are a source of knowledge management. In Colombia, there is a multiplicity of topics in the observatories as a valuable support for decision makers of companies and institutions of public or private character and mixed economy. What criteria do the observatories implement as sources of information in the search for reliable data to their stakeholders, having as background that these particularize the variables in the creation of new knowledge, helping the actors (public, academic and business) to make the best decisions in the development of the regions in particular in the area of influence of UNIMINUTO Zipaquirá regional center?

This paper identifies concepts and makes a theoretical review of observatories in order to argue the feasibility of creating a competitive intelligence observatory in UNIMINUTO Zipaquirá regional center.

Resumen

En la actualidad la información es una herramienta fundamental para mejorar la competitividad y el éxito en las organizaciones. Los observatorios por medio de la vigilancia tecnológica y la inteligencia competitiva son una fuente de gestión del conocimiento. En Colombia se presentan multiplicidad de temáticas en los observatorios como un valioso apoyo para los tomadores de decisión de las empresas e instituciones de carácter público o privado y de economía mixta. ¿Qué criterios implementan los observatorios como fuentes de información en la búsqueda de datos confiables a sus Stakeholders, teniendo como antecedente que estos particularizan las variables en la creación de nuevos conocimientos, coadyuvando a los actores (público, académico y empresarial) a tomar las mejores decisiones en el desarrollo de las regiones en particular en la zona de influencia de UNIMINUTO centro regional Zipaquirá? Esta ponencia identifica conceptos y hace una revisión teórica de observatorios con el ánimo de argumentar la viabilidad en la creación de un observatorio de inteligencia competitiva en UNIMINUTO centro regional Zipaquirá.

Palabras clave/ Keywords

Inteligencia competitiva, observatorio, información, vigilancia tecnológica, gestión del conocimiento.

Competitive intelligence, observatory, information, technological surveillance, knowledge management.

Introduction

Nowadays organizations have a dynamic of exponential growth of permanent and rapid change, inducing the creation of organizations that compile and require open data or research of their interest, or organizations that process them as is the case of observatories. Having the clarity that their function is to capture, process and disseminate information through a knowledge management system, this statement

is the axis of development of competitiveness and success of organizations, where information is a fundamental tool for decision makers. For the authors Villarroel G, Comai, Karmelic-Pavlov, Fernández O, & Arriagada V (2015) state that the Design and implementation of an observatory with a unit of technological surveillance and competitive intelligence in this society, which provides data and information for use, which provides a better understanding of the environment.

However, the lack of knowledge of the different organizations and individuals of the activities and products generated by the observatories does not allow them to make assertive and advanced decisions within the framework of their environment, thus losing the possibility of using data and reliable transforming information by making use of new knowledge.

The observatories must generate spaces that allow them to dynamize their function as a contribution to their stakeholders and to the knowledge society, in general to those who are interested in the topics of their lines of research in the use of the data and reports generated. Giving academic support in the creation of a competitive intelligence observatory in UNIMINUTO Zipaquirá Regional Center, in addition to the above, 42 observatories located in Colombia are recognized and identified, particularly in Bogotá, central savannah in Cundinamarca. An own methodological proposal is formulated, which facilitates the construction of knowledge in their daily life, pertinent to the characteristics of the interests of this new observatory.

Materials and Methods

It began with the search and review of documents on observatory concepts, was conducted between June 2019 and April 2020, who used different databases such as Redalyc, Scielo, Dialnet, Scopus, Science direct, proquest, Ebesco. Using as keywords observatory, information sources, knowledge management. A study of this type makes it possible to trace different contexts in which the concept of observatory is defined. Ferreira, (2002) cited in the study by Lilian, Ferneda, & Hercules Antonio, (2018).

In addition to the above, we applied the methodology under the concept of "research that studies research" used by Slongo (2004), which systematizes and analyzes the academic production and its different approaches.

The articles selected in this study were characterized by identifying the author's credibility or experience in the subject and the methodological quality in the construction of the information. At the same time, the web portals of 40 observatories located in Colombia were searched, particularly in the Central Savannah in Cundinamarca and Bogotá DC, allowing a characterization of the observatories as sources of information.

In this sense, García (2010), citing Adam (1973), uses the word "information" from the classical Latin. The term information is a substantiation of the verb *informare*, which, being transitive, finds its greatest generality in the expression *aliquid informare*. The latter literally means to give form to an object and points to the development of a process, i.e., to management; therefore, in its very genesis there is a relationship between the two terms.

In their study Eneida and León (2014), point out information as a strategic resource, which is inherent to any organization. The use of it is linked to the specificities required by each institution and society in general to face the dynamics of the economy, the evolution of technologies and the development of social life. (Contardi 2005)

Similarly, García (2010) defines the concept of information management, citing Ponjuan (2004), as the process by which basic resources (economic, physical, human or material) are obtained, deployed or used to manage information within and for the society it serves. It has as a basic element the management of the life cycle of this resource and is developed in any organization.

A matrix was designed where the different observatory concepts are presented as an object of theoretical analysis. It shows a scarce use of repositories and observatories as tools to manage knowledge.

Based on this information management model and the proposed methodology presented by Guerrero and Erichsen. (2017) to identify the factors that influence social observatories in Brazil, from the perspective of information management. which we take as a reference to design a new proposal of information management system where search tools, analysis, and dissemination of information are integrated, and facilitates decision making based on useful, relevant and reliable information. It requires as input variables: the needs and demands of the target public, the priorities of the organization, the unstructured information, and the computer supports for its management.

Finally, the analysis of the concept matrix and the proposed information management system model showed how observatories are sources of data processing, manage knowledge, and provide tools for senior management decision-makers of their stakeholders.

Results

The definition of observatory according to the study by Pírela Morillo, Almarza Franco, & Pulido Daza (2018) is related as a set of actions organized with the purpose of interpreting realities, objects, actors, reconstructing situations, variables, indicators in order to process and generate information and data, which fertilize and support decision making.

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It is worth highlighting the contributions of Angulo (2009) who argues that observatories are a structured and organized system in permanent search of quality information, validating its origin, making analysis of the environment, monitoring it, building a new one, motivating its use in the design of strategies on the other hand Soares, Ferneda, & Do prado (2018).cite Silva (2014) who complements by stating that observatories or knowledge centers, must go beyond being databases or repositories these must assume a proactive and multifunctional posture in articulation with knowledge. (Tellez and Rodriguez, 2014).

According to De la Vega (2007), observatories are a tool for technological surveillance, which identifies changes in the data domain transformed into processed information as a result of the management and objectives of what is observed. As a result of this transformation and understanding the phenomena and identifying trends of the variables, anticipating future behavior and generating reliable products to the receivers.

In short, the observatories group knowledge or collective learning, compiling data and experiences, associated with the objectives in the construction of knowledge Correa and Castellanos (2014), generating added value by empowering the human being in the organizations being this a collaborative and cooperative strategy that when put into practice increases the volume and quality of information for observatories and stakeholders in the information (Angulo, 2009).

With all and the above, it is evident for knowledge management the application of a conceptual model, which integrates search tools, analysis and dissemination of information that facilitate decision making Moreno-Espino, Carrasco-Bustamante, Rosete-Suárez, &

Delgado-Dapena (2013), based on Deming's continuous improvement cycle to create products and services in which value is added to information, conceptualize on the tools of knowledge management due to the processing of the tools of knowledge management. Delgado-Dapena (2013) , based on Deming's continuous improvement cycle to create products and services in which value is added to information, conceptualize on the tools of knowledge management due to the fact that they process, measure, evaluate, project, associate technology in search of facilitating work through information on specific topics generating reports as stated by, De la Vega (2007), in his research Typology of Science and Technology Observatories. The cases of Latin America, in which findings, summaries, alerts are disclosed in order to facilitate the understanding of these topics by the interested parties to make decisions.

Knowledge management according to Jiménez, D et al (2019) states that it is at a level that does not allow identification and socialization of tacit knowledge, Godoy Espinoza et al (2017 p. 671) considers it as a systematic process that enables the conversion of knowledge of individuals and teams into collective knowledge in a way that allows obtaining sustainable competitive advantages.

However, for Herrera, Z. D. C. (2019 p.392). there cannot be a knowledge society in which there is a divorce between the university, society, private enterprise and the public sector, this interaction generates according to Gómez-Bayona et al, (2020 p. 15). models of intellectual capital that stimulate companies to the improvement and development of new value creation processes, Medina, et al,(2020 p.18) affirm that knowledge has become the most important intangible asset in the development of organizations.

According to the documentary analysis in the characterization matrix of the observatories in Bogota and Cundinamarca, as shown in the following graph.

It is evident that 21% of the observatories are oriented to the subject of politics and democracy. A 17% corresponds to the social sector and 12% to the business sector. It is also found that the observatories with themes of communications and astronomy have the lowest percentages (2 and 5%, respectively). It can be deduced that the topics of economic development, regional development and business in the department of Cundinamarca are not widely dealt with in the observatories under study.

The following is an analysis of the classification of the thematic areas of the 42 observatories identified in the geographic environment of Bogota and central Sabana. Education: these observatories seek to promote and interact with the actors of knowledge and its transfer, in accordance with the academic context and the development of the substantive functions, research, teaching and extension in their work. The products generated are disseminated through the Academic Magazine, newsletters, and job boards for students, teachers and alumni.

Social: These observatories promote the development of social projects aimed at the most vulnerable communities in order to transform and improve their quality of life, helping to create and strengthen public policies in search of the welfare of the general population with impact projects.

The products generated in this thematic area include: quality of life reports, trend reports, territorial characterization, technological surveillance, databases, infographics, georeferenced maps, presentations, newsletters, systematization of experiences and structuring of social technologies.

Politics and Democracy: These observatories seek to follow up and monitor regulations and jurisprudence in the different state bodies in order to reduce corruption and increase the effectiveness of government actions in their decisions, these are located at 100%. In the Special District of Bogota. The products generated in this thematic area are: Legislative and Judicial Follow-up Report, Analysis of reports generated by the different entities, Newsletters, quarterly magazines.

Health: The objective of these health observatories is to formulate, follow up and monitor the different factors that affect public health, the environment and their impact on the communities, supporting the creation of public policies in the Ministry of Health and Social Protection, in particular, the products generated in this thematic area are Bulletins, reports, documents, synthesis analysis on topics related to drug management, inclusion, the disabled, orphan diseases, among others.

Technology: These observatories characterize and monitor the e-commerce ecosystem in Colombia. They also analyze the phenomena, objects, events, relationships, dynamics and effects linked to the use and application of information technologies in contemporary reality.

The products generated in this thematic area are documents oriented to the use of media and technological mediations in articles of indexed journals.

Business: The business observatories are characterized by compiling useful, timely and accurate information on the impacts of the country's economic policies and their impact on companies, monitoring trade agreements, analyzing pros and cons in the different sectors and sharing public policy guidelines. The products generated in this thematic area include employability databases, market studies, articles, newsletters, reports and events.

Labor: In general, environmental observatories seek to rigorously monitor biotic systems and their effects of human interaction, to learn about and participate in cases of socio-environmental conflicts, corroborating compliance with established norms and the proposal of government policies in favor of the quality of life of fauna and flora and the protection of nature in general. The products generated in this thematic area are documentaries, reports, databases, statistics, communication between interest groups and public and private companies.

Communication: The Media observatory is an institutional project whose purpose is to contribute to the identification, analysis and discussion of problems inherent to communication (in its broadcasting, circulation and reception processes) and, above all, the way in which the informative function is fulfilled in Colombia's mass media. The products generated in this thematic area are media analysis, audience formats and bulletins.

Astronomical: The astronomical observatories seek social appropriation of science and technology through the creation of training and research strategies in space sciences. The products generated in this thematic area are training courses in astronomy and training and disciplinary research seedbeds.

The Centro Progresía EPE is a unit of academic management, administrative management of UNIMINUTO that contributes to the social projection. The strategies of the Centro Progresía EPE are derived from the Educational Project of Uniminuto and the Social Projection Policy. its purpose is to provide extension services and open opportunities for the consolidation of the life project of the Students and Graduates, through more education, more opportunities in

entrepreneurship, employability and professional practice as the experience of the first job.

In order to carry out this task, the Zipaquirá Regional Center has been negotiating a series of inter-institutional agreements with businessmen in the area with a view to incorporating the needs of the companies and the training processes taught in the classrooms.

The most important subsectors as strategic allies are the Services Sector with a share of 20.3%, the Education Sector with a share of 19.2%, the Solidarity Economy Sector with 16.9%, and the Financial, Health and Transportation Sectors with the lowest share.

The percentage level of companies in the service sector identified as 71%, 20% in the manufacturing sector and 9% in the primary sector, identifying that the tertiary service sector may be the stakeholders in the competitive intelligence observatory that is being developed in UNIMINUTO Zipaquirá Regional Center.

Conclusions

After reviewing the theoretical concepts, it can be affirmed that observatories are a source of information transformation that gathers contextual phenomena and generates reports for decision makers.

From the analysis of the 42 observatories in Bogota and the central savannah, no observatories oriented to the productivity and competitiveness of small and medium-sized entrepreneurs in terms of competitive intelligence were identified. It is proposed the creation of an observatory that meets the interests of small and medium-sized entrepreneurs and contributes to their permanence over time.

There is no real organizational culture in the region's companies towards competitive intelligence and innovation by managers in the organizations, which implies that many of them are not aware of the existence of observatories or entities that provide key information inputs for decision making.

The Corporación Universitaria Minuto de Dios "UNIMINUTO" in the regional center of Zipaquirá has the opportunity to develop with entrepreneurs and local governments, a competitive intelligence observatory oriented to regional, economic and business development starting in the service sector and designing strategies to generate new knowledge as input for decision makers.

The United Nations (UN) has proposed sustainable development objectives in search of reducing poverty and inequality in humanity, inducing governments and institutions to contribute their grain of sand with this purpose, which is why the observatories promote projects that contribute to these within the framework of innovation and construction of new knowledge.

By their nature, observatories promote multidisciplinary bibliometrics in their research, making use of statistical, sociological and informatics tools, managing the fulfillment of research objectives using databases in open access documents.

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