Theorization on case studies in business intelligence management on intellectual capital

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Abstract. The purpose of this research is to generate a phenomenological approach to business intelligence among businessmen in Norte de Santander. This information is crucial in order to increase competitiveness and improve processes and is directed toward intellectual capital as a determining factor in this knowledge. The method used was based on the theory that uses phenomenology to unveil the experiences of key informants, who chose four entrepreneurs from different economic sectors in the area. This research revealed the lack of knowledge managers have about knowledge-based management and the trends that it has as a determining factor in improving competitiveness for the organization.

1. Introduction

The current era of organizations is basing management on knowledge, which is perceived as an added value of great competitiveness in the organization [1]. To understand the current position of knowledge within companies it is important to consider the value structures of organizations. Understanding this, it is possible to identify in the companies that the characteristics of great competitiveness and that can give added value, within those that are found internally in the management of knowledge and in them is the business intelligence and the intellectual capital, being a vital tool that helps the efficiency of the processes and competitiveness in the organization.

Business intelligence is defined by [2], are those business management resources that current and modern organizations can count on to make the most of all the information they have about their customers and suppliers. These can be defined as assets that can radicalize organizational improvement [2], defines the benefits that business intelligence can bring to companies, addressing information based on tangible and intangible resources, is because this article is based on the management of intangible assets for the management of information. Business intelligence is based on the management of information for competitive purposes, it has tools that help to achieve this goal such as data min, but this work focuses on the information that may be lost in organizations and that also position the company as is the intellectual capital, being part of knowledge management and defined [3]. The intellectual capital consists in allowing a radical change in modern companies, allowing to improve their offer of
goods and services, reaching previously unattainable markets, and generating new types of relationships with partners, customers, and suppliers - that allow them to create competitive advantages. This is directed to all the ideas and creativity that can be created in organizations, being an added value that due to its intangibility is forgotten and not appreciated by the managers and other personnel that make up the organizations and companies of this millennium who have taken advantage of this, have increased their competitiveness to improve their internal processes in order to increase competitiveness in the different world scenarios.

This capital framed in the relational capital, the human capital and the structural capital, managing in this way these dimensions to be able to establish the information that can be taken advantage of on the business intelligence (see Figure 1).

In this order of ideas, business intelligence bases its added value on the information that organizations are losing and do not take advantage of to improve their processes, but the robust organizations that have had a trajectory are the ones that have taken advantage of this situation to be able to scale where different types of situations are currently happening that are affecting the organization [4]. Business Intelligence acts as a strategic factor for a company or organization, generating a competitive advantage that provides privileged information to respond to business problems. This information that is generated through business intelligence is vital for the growth of the company through the different dimensions where decision-making can be affected, it is there where directionality towards intellectual capital is focused, being this an intangible value little perceived and not valued [5]. Loss of knowledge in certain functional areas of the company. After these setbacks can create demand for loss of knowledge, essential employees with that knowledge can be passed over.

Figure 1 Components of intellectual capital [6].

This knowledge can be generated and directed towards the foundations of intellectual capital, one of the most important being human capital [7]. The human capital of a company, organization, region or country it is the cornerstone, the source of development and therefore one of the factors that generate competitiveness. People are the ones who add value to an organization from their workplaces. So, you also have the structural capital being [8]. Defined as the element that allows the creation of wealth through the transformation of human capital work. All these dimensions are those that are understood to manage the information that will give value to the company, since it is defined by the processes that people carry out in their work units generating wealth and added value, this knowledge is the implicit one that has internalized for its learning, achieving the efficiency and effectiveness of the processes. And the third element that makes up intellectual capital is relational capital. Structural capital is made up of everything that has fostered the organization and that distinguishes it from others [9]. It is represented by the knowledge of people that is integrated into the internal processes and technologies of the organization. It is of importance for organizations since it takes advantage of business intelligence based on the parts of intellectual capital, since it can generate information from anywhere in the organization but is directed to this work in this way generating an added value in these two streams within knowledge management. These dimensions of knowledge are highly advantageous for organizations [10,11]. Is achieved - Align individual objectives, provide effective channels of communication equal for all parties. - Identify where the source of knowledge is focused and how to convert and distribute it to generate intellectual capital. - To carry out research and development of activities that give it a concept of permanent innovation and improvement of each of the processes that are carried out. - Establish follow-up mechanisms to measure the results of the knowledge generated. – Likewise [10] to make the decision making and execution processes more efficient and assertive, using all the resources it has, thus optimizing its performance and response capacity. To multiply knowledge,
by taking it from the individual to the collective. Create a competitive advantage through the generation of knowledge-oriented business strategies.

In this way, we address the companies of Norte de Santander in Colombia, we seek through the managers of several organizations, not looking for the result of all companies but four cases being the largest companies in this region and power describe business intelligence in intellectual capital, revealing the states of consciousness of these managers that, through the instrument, will leave key information about these scenarios, and be able to start studying these companies that are significant in the area [12], that is why the sample was based only on our organizations and descriptively by means of a phenomenological study which is carried out through of key informants and this is not intended to generalize the behavior of all managers but the cases under study.

2. Method

For this work, the approach was phenomenological, through the fundamental theory [12]. It is an analysis methodology linked to data collection, which uses a set of methods, applications systematically, to generate an inductive theory in a substantive area. The final product of the research is a theoretical theory, or an integrated set of conceptual hypotheses, in the substantive area under study [13]. From phenomenology, to be aware of an object is not to have a mental content, but to have an act towards that object and, in every act of consciousness, it is not the same. It addresses the experiences of those key informants who are those who left the categories through the interviews applied and that can generate a theoretical approach to the phenomenon studied. The most important information that is composed in the present study are 4 managers of companies in Norte de Santander, being the largest in the area with a maximum of 100 employees each, and who were interviewed, in a company in the footwear sector, a restaurant, a pharmacy and a food distributor, these managers, were the keys to manage the information of the chains of stores of each company (see Figure 2).

Based on the method used in this document, the following questions were applied to key informants:
1. How to manage knowledge management in your company? 2. How is business intelligence applied in your company? 3. How do you manage the intangible management of your company? 4. Do you know the value of information to improve the processes of your company?

![Diagram](https://via.placeholder.com/150)

**Figure 2:** Theorization process.

3. Results

3.1. Answer to question 01: How do you manage knowledge management in your company?

- Informant 01: The management of the company has always been conservatively managed under a scheme based on family tradition and with the perspective of increasing production and improving the skills of employees.
- Informant 02: As I don't know the conceptualization, however, management has always improved in favor of employees based on their results, as a way to improve sales through motivation.
- Informant 03: The Company works under a traditional management scheme where different hierarchical levels are managed that have their responsibilities and each unit uses its knowledge to improve its internal processes.
- Informant 04: This is managed through employee training to provide better service and increase production, thus improving internal and external processes.
3.1.1. Analysis of question 01. The management in companies is being handled under conservative concepts and these are based on trends based on scientific administration that have no dimensions under the conceptualizations of knowledge management, within the most prominent categories that could emerge is the lack of knowledge of models based on intangible management and even more so on management of business intelligence and its importance.

3.1.2. Emerging categories Question 01. Traditional administration, lack of knowledge (see Figure 3).

3.2. Answer to question 02: How do you manage the intangible management of the company?
- Informant 01: intangible management is handled only in customer service.
- Informant 02: Intangibles have been tried to improve but it has been difficult to control them in the processes because they are left all the time in the tangible assets.
- Informant 03: This management is handled with the tangible ones but is not given a direct importance to this as such.
- Informant 04: this is not handled directly, only the assets and liabilities in the financial part are kept under control.

3.2.1. Analysis of question 02. Companies have not defined intangible management in companies and even more so, it is not taken into account for their organizational development or to increase competitiveness, they focus only on financial assets.

3.2.2. Emerging categories Question 02. financial assets, lack of knowledge of intangible assets (see Figure 3).

3.3. Answer to question 03: How do you apply business intelligence to your business?
- Informant 01: This does not apply to the company as only strategic plans and goals are established.
- Informant 02: I don't know business intelligence management and I work with the normal administration that has been in place.
- Informant 03: The information that is handled in the company by means of business intelligence is intended to be used as an advantage however sometimes there is no time or personnel that can be dedicated in this direction.
- Informant 04: The Company is traditionally managed under normal management paradigms and business intelligence is not managed.

3.3.1. Analysis to question 03. These companies do not have the knowledge directed towards business intelligence to briefly point out the knowledge that can be used to improve the competitiveness of the organization's processes.

3.3.2. Emerging categories Question 03. Lack of knowledge of NI, time of processes (see Figure 3).

3.4. Answer to question 04: Do you understand the value of information for improving business processes?
- Informant 01: if it has a fundamental value to be able to determine the weaknesses of the company and to be able to attack them in time.
- Informant 02: I imagine that this value lies in being able to make an evaluation and see how the organization works and thus be able to improve much more.
- Informant 03: This helps us in the company to know all the situations that can arise.
- Informant 04: The most important thing about being able to know what is going on in the organization is being able to control the processes to help them with a possible novelty.
3.4.1. Analysis to question 04. The knowledge that the managers of the different companies know that information is a fundamental value to be able to improve, however, they do not know how far this information can go and how much can be done to use it strategically, since most of them only use it to improve their internal processes.

3.4.2. Emerging categories Question 03. Lack of knowledge of Business Intelligence, time of processes (see Figure 3).

4. Theorization

The companies of Norte de Santander, it is revealed that they continue under traditional management trends based on the theories of scientific administration that were implemented in Latin America in most of the organizations, and have been concerned about the processes and evolve those processes but not in directing their efforts in updating management trends towards the competitiveness of the organization to the scenarios of the companies of the millennium which are based on knowledge management, these organizations do not have defined management models that can help to raise the competencies of the companies and improve the processes in an integral way. In these steps, intellectual capital is presented as a tool that highlights the importance of the three fundamental pillars such as human resources, structural and relational resources, being essential to raise the integral competencies of the company based on the intangible aspects of it and these dimensions are managed only to manage tangible information of the organization without perceiving that the intangibility has given great benefits to large transnational companies that have already gone through the basic processes, and this information managed from the point of view of business intelligence that information can be collected with the tools of this trend and can be used in the processes through the decision making of the managers and leaders of the organization.

Within the contexts of these organizations and that are in a place economically affected by the situation of the country such as Venezuela, companies are affected and must consider options aimed at improving management skills in order to improve the skills based on the current situations that the organization is going through, and clinging to traditional trends is what is damaging these organizations and not going out to try new ways to lead companies.

5. Conclusions

The research was formulated under the premises to know what was happening in the organizations of Norte de Santander by means of the experiences of the managers of said institutions, this through a phenomenological study that was carried out through interviews with the different key informants that handle said information, in this way it was possible to reveal in the theorization the lack of information that the managers have in these aspects and that continue managing traditional models based on traditional administration giving value to the tangible elements of the company and not to the intangible assets being these an essential factor to increase competitiveness. The research was based on the trends of intellectual capital and business intelligence being these part of the knowledge management in companies, all this information that was deduced inductively leads to the fact that companies are losing an added value that they have and that could be a fundamental part when it comes to organizational growth and position the organization towards a competitive path, as a recommendation based on this work we encourage companies to pay attention to their efforts to take into account this information and improve the external and internal processes of the company.
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