Knowledge management in small companies in Tepic, Mexico

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Resumen

La administración del conocimiento ha tenido un considerable avance en años recientes, lo cual ha incidido en la aparición de esudios sobre cómo una organización puede adquirir, almacenar, desarrollar y compartir el conocimiento generado por sus miembros. Este estudio explora y analiza 40 pequeñas empresas de menudeo en Nayarit, mediante la metodología propuesta por el eKnowledge Center (2000), cuya encuesta se utiliza como modelo de administración del conocimiento en las empresas estudiadas.

Abstract

Knowledge Management has had a considerable development in recent years, implying research studies about how an organization can acquire, storage, develop and share the knowledge generated by its members. This study explores and analyzes 40 small retailing enterprises from Nayarit, Mexico, using the methodology proposed by eKnowledge Center (2000) whose survey is used as a model to measure the knowledge management in the studied enterprises. Finally some possible future work is described and some conclusions are made.

Palabras clave: administración del conocimiento, adquirir, almacenar, desarrollar y compartir conocimiento, eKnowledge Center
Keywords: Knowledge management, acquisition, storage, development and sharing of knowledge, eKnowledge Center

Introduction

In second half of the century the 20 data bases could be bought and be sold, being "management of data base" a specialty taught in the schools. The impor-

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tance of the data was in its integrity and precision, like at the present time, that this already is given by fact. Towards the years 70s and 80s are begun to happen of the data and it is oriented in the information, along with consider that data are useful really for the company and the construction of information systems is begun by management, the use of the computers. The tendency of the globalization that is accentuated in 90s is a great catalyst for the appearance of the management of the knowledge; since the necessity to compete in global markets and to offer new products with greater rapidity and to ampler markets, makes patent the necessity of we know what we know how and to ask itself what we would have to know. Three are for Davenport and Prusak (2001) the precedents of the management of the Knowledge from an intellectual point of view:

1. *The economy.* They were economists, like Arrow (1962), who identified for the first time the importance of the knowledge and the learning in the organizations.
2. *Sociology.* From the slope micro, the study of the complex structures of internal networks and communities has a great relevance for the management of the knowledge.
3. *The philosophy and psychology.* The same concept of knowledge and its use have one long tradition in philosophy and psychology. For example, the distinction between tacit and explicit knowledge comes, in last instance of the Aristotelian philosophy. This way philosophical one will begin to define the types of Knowledge.

Types of Knowledge

A form to classify the knowledge is if this it is considered superficial or deep; first it indicates minimum understanding of the area problem. And the deep one is acquired through years of experience. The knowledge based on the "knowledge like" or accumulation of lessons of experiences is that that rare time is documented. The knowledge as it is what distinguishes an expert of the novice. This one, not this in a book this based on the experience. Tacit knowledge consists of the hands-on skills, best practices, special know-how, heuristic, intuitions, and so on. Tacit knowledge is personal knowledge that is hard to formalize or articulate (Kim, 2000). The tacit knowledge, is the one that this within the human mind through the experience and the work. This it is the used knowledge to create

knowledge and the best form to transfer it is through engage in a dialog direct in confidence, difficult to be transmitted and/or communicated to be transformed into explicit.

Explicit knowledge is rule-based knowledge that is used to match actions to situations by invoking appropriate rules (Kim, 2000). Explicit knowledge is used in the design of routines, standard operation procedures, and the structure of data records. The knowledge that is codified and digitized in books, documents, reports, paper, memos, and courses. This tacit knowledge can be transferred more easily that. This way we obtained the interchange of knowledge (Table 1).

Table 1. Types of Knowledge

	To Tacitus	To explicit
Of Tacitus	Socialization	Externalization
Of explicit	Internalization	Mixture

Source: own elaboration.

In this way the knowledge can be concluded that what and so that, they are those explicit knowledge that can be transformed to knowledge and knowing how and who is rather tacit knowledge that is more difficult to be codified and to be measured. Having identified the antecedents that they have caused that this idea that perhaps began like something isolated or a concept associated to the philosophy and a concept but modern call reengineering, can be seen, that several expert authors in the subject, with base in a set of ideas tried to join these ideas in a concept, therefore they are had between several but these definitions of Management of the Knowledge Management (KM).

Knowledge Management

A definition of KM It is the process to collect the knowledge in where this it exists—data bases, in paper, the hands of the people—and to distribute this where it can help to produce the best result (Hibbard, 1997). This concept is arising again as an interdisciplinary model leading with all the aspects of the knowledge within I answer of the organization, including: creation of knowledge, codification, to share it and to know as those activities promote the learning and the innovation. For Taft (1999), it consists of the classification, dissemination and

categorization of information and thoughts of the people in an organization. Knowledge management is a discipline that promotes an integrated approach to identifying, managing, and sharing all of an organization's knowledge assets, including unarticulated expertise and experience resident in individual workers.

Knowledge management involves the identification and analysis of available and required knowledge, and the subsequent planning and control of actions to develop knowledge assets so as to fulfill organizational objectives (Kim, 2000). Knowledge management is defined as the process that creates or locates knowledge and manages the dissemination and use of knowledge within and between organizations (Darroch, 2003).

Finally Davenport and Prusak (1998) give the following definition of the knowledge, definition that it sustains to the development of this one model:

> Knowledge is fluid mixture of experiences, values, contextual information and experts whom a structure provides to evaluate and to incorporate new experiences and information. This is originated and applied in the mind of the connoisseurs. In the organizations, this one frequently arrives to be shaped not only in documents; but also in organizational routines, processes, you practice and norms.

Knowledge has been recognized as a key corporate asset and the only source of sustainable competitive advantage. One must effectively apply, manage, and utilize organizational knowledge to sustain competitive advantage (Fui-Hoon *et al.*, 2005) (Figure 1).

Figure 1. Research model
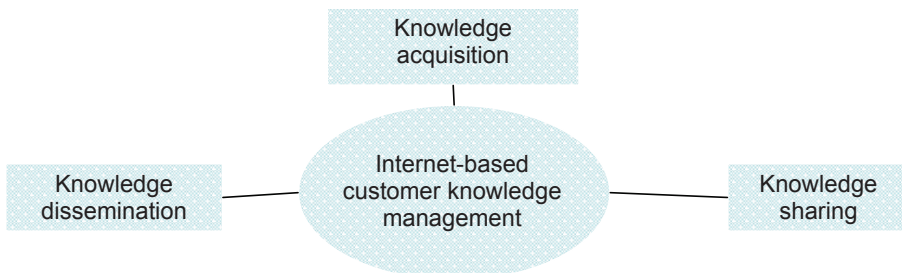
From Fui-Hoon Nah, F., Siau, K., Tian, Y. (2005). "Knowledge Management Mechanism of Financial Service Sites: How can we effectively acquire, use, and manage knowledge via the Web?." *Communications of the ACM*. Vol. 48: 117-123.

Knowledge management was introduced to the business world to help companies create, share, and use knowledge more effectively. The most important business processes are often found in the company's value configuration. A value configuration shows how the most important business processes function to create value for customers. The best-known value configuration is the value chain. Knowledge is a renewable, reusable and accumulating resource of value to the firm when applied in the production for example of legal services (Davenport, 2000). As we continue to talk for example of a legal firm, it may be understood as a social community specializing in speed and efficiency in the creation and transfer of legal knowledge (Nahpiet, 1998).

The technological factor

Knowledge can come from a variety of different sources and relate to a broad spectrum of issues facing a firm (Darroch, 2003). Knowledge management is not a technology; however, technology is fundamental to the knowledge management process. Knowledge is the new organizational wealth. It underpins an organization's worth, fuels profitable growth, and drives stakeholder value. The term "knowledge assets" denotes core competencies, processes and human potential that together create value for a company. Perhaps the biggest barrier to the widespread implementation of knowledge management practices is the demand placed on organizational resources by other priorities (Duffy, 2000).

Knowledge management technology projects can be classified into four categories or stages. The first stage is general IT support for knowledge workers. This includes word processing, spreadsheets, and e-mail. The second stage is information about knowledge sources. An information system stores information on who knows what in the firm and outside the firm. The system does not store what they actually know. The third stage is information representing knowledge. The system stores what knowledge workers know in terms of information. The fourth and final stage is information processing. An information system uses information to evaluate situations (Gottschalk *et al.*, 2003).

The advancement of the internet and e-commerce technology provides companies not only with new ways to create knowledge, but also with opportunities to improve their ability to manage and utilize knowledge (Siau, 2000). To achieve the goal of KM, we need a systematic approach to identify and capture information and knowledge about company processes, products, services, markets, cus-

tomers, and competitor, and to share them for the greater goal of organizational well being and performance (Bushko et al., 1998). Knowledge acquisition relates to the location, creation or discovery of knowledge (Darroch, 2003). Knowledge management systems (KMS) are IT-based systems developed to support and enhance the organizational processes of knowledge creation, storage/retrieval, transfer, and application (Alavi *et al*., 2001).

Knowledge management involves the identification and analysis of available and required knowledge, and the subsequent planning and control of actions to develop knowledge assets so as to fulfill organizational objectives. Knowledge-based systems forge new partnerships that bring together the organization's capabilities to create and use knowledge, organize knowledge, and build infrastructures that enable the effective management of knowledge (Kim, 2000).

The knowledge component will mainly be found in the services of a value network, as information systems are made available to customers to exchange relevant information (Stabell, 1998). The most important business processes are often found in the company's value configuration. A value configuration shows how the most important business processes function to create value for customers (Davenport, 2000). Schwartz *et al*. (2000) develops a knowledge management model based in the internet, where the fundaments are the organization (Figure 2).

Figure 2. The Internet-based knowledge management
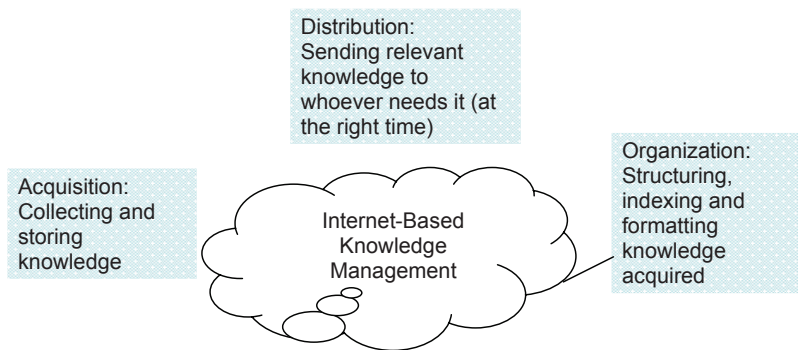
From Schwartz, D.G., Divitini, M., Brasethvik, T. (2000). *Internet-Based Organizational Memory and Knowledge Management*. Hershey, PA. Idea Group Publishing.

Value cannot only be created in value chains. Value can also be created in two alternative value configurations: value shop and value network. The value shop

is a company that creates value by solving unique problems for customers and clients. Knowledge is the most important resource, and reputation is critical to firm success. Often, such companies are called professional service firms. A value network is a company that creates value by connecting clients and customers that are, or want to be, dependant on each other. The knowledge component will mainly be found in the services of a value network, as information systems are made available to customers to exchange relevant information (Stabell, 1998).

Human factor

The change and the innovation have two types of enemies, those that see in her the minimum threat and those that do not gain anything with her. For that reason of entrance a great majority will not support the change and the innovation.

This way changing the culture of the organization to obtain an efficient handling of the Management of the Knowledge; it will be tried to begin to create the Company of the Knowledge, taking into account the personnel integration of the organization, the company and until of the own clients of the company (Arbonis, 2001).

It is conventional wisdom that a knowledge management system must fit the organization's existing culture, norms, and incentive schemes; lacking such a fit, the outcome is highly uncertain (Gallivan, 1997). A business practice is seen as a frequently repeated act, habit or custom performed to a recognized level of skill. It is often thought of as the no codified "know-how" resulting from human experience, improvisation and innovation. One of the key benefits attributed to Knowledge Management has been the ability to share best practices across large organizations. The drive for best practices is coming from organizations wanting to engage in inter-enterprise collaboration, instigating a demand for a common way to implement inter-enterprise business processes that is independent of the technology used to support them (Lee, 2005).

The expectations were that KM would be able to improve: growth and innovation in organizations; productivity and efficiency (reflected in absolute cost savings); costumer relationships; employee learning, satisfaction, and retention; and management decision-making. It has arguably failed on all counts. The reason for this failure was the unrealistic expectation that human organizational behavior could be changed, in all kinds of positive ways, by persuading people of the wisdom of capturing, sharing, and archiving knowledge.

Unfortunately, people change their behavior only when there is an overwhelmingly compelling argument to do so (not the "leap of faith" on which much of KM predicated), or where there is simply no alternative (Pollard, 2005).

1. Innovation is achieved by listening to customers articulate business needs and developing creative solutions that address them.
2. Employee learning is improved on the job, learning one-on-one from those doing the job now, and by making mistakes.
3. Decision-making is improved when management and frontline people know their business, know their customers, know the business environment, and apply this knowledge intelligently.

The knowledge society is a long-run structural change in the economy; the production, dissemination and use of knowledge will play a prominent role as a source of wealth creation and exploitation. Learning is critical to such a society in terms of accommodation, assimilation and transformation, dependent on issues, context and conditions, and to individuals, organizations and nations in terms of new skill formations to be able to produce new knowledge (Lindley, 2003).

Knowledge management is a business activity with two primary aspects (Roth 2004):

1. Treating the knowledge component of business activities as an explicit concern of business reflected in strategy, policy and practice at all levels of the organization.
2. Making a direct connection between an organization's intellectual assets-both explicit and tacit.

Proper KM ensures that individuals at all levels of an organization have access to the information they need to accomplish their own tasks while also helping to fulfill the organization's overall goals. Before an organization can begin to implement km, its culture must actively support the collection and dissemination of information and the use of knowledge. The culture must foster trust, active leadership and sharing, and must acknowledge that collecting and using knowledge takes time (Shockley, 2000). The challenge for today's information professional is to identify the information that is needed to optimize the achievement of organizational objectives, who it is needed by, how it will be used, its source and how it flows through the organization and between the organization

and its external environment. The information audit is an established management methodology that will address all of these issues. There is no generic model for developing knowledge management strategy as each organization has unique needs that must be identified and understood. To develop a knowledge management strategy that incorporates the management of both tacit and explicit knowledge it is critical that the knowledge creation process is understood and that the understanding extends to the role of the people involved in the process (Haczel, 2000).

Methodology

Among the methodologies most used for know the means the knowledge is acquired, or when a new one is intended to be generated, we may mention the methodologies used by Liebowitz (2000) and O'Dell (1996). Liebowitz recommend several steps related with the knowledge, starting with the transformation of information in knowledge, identify the knowledge, organize, learn and to share the knowledge. While O'Dell starts with the identification of knowledge, and then to collect, to adapt, to organize apply, and share the knowledge. For this case the methodology proposed by the eKnowledge Center (2000), an organization specialized in knowledge management. They propose a survey as a tool to measure the knowledge management in several dimension and purposes:

- Events, activities, facts and goals, with the idea to be sure that the project or program of KM has a positive impact in the measuring process.
- Players, activities, times, objectives, innovations, feelings, goals and metrics, with the idea of determinate the organization's primary knowledge sources, and the methods used to acquired it.
- The entire dimension, with the idea of developed a good image of the future in the knowledge's environment, and to present the needed goals needed to be reached.

A survey was applied to 40 small enterprises oriented to the retailing industry, all them from Tepic, the capital city of the State of Nayarit, in Mexico. The survey was applied to three middle managers from each enterprise, in order to perceive if there were homogeneous in their comments related to the way of how the KM is realized and what elements they consider necessaries. The questions used

in this study were coincident with the structure proposed by the eKnowledge Center.

Results

As we can observe (Figure 3), the organizational culture is oriented to built the customer relationships in a 40% of the participants. Tied are the support and cooperation and search for results. The main activity for the transmission of the knowledge management is training, with a 60% and far from communication process in a 20% (Figure 4).

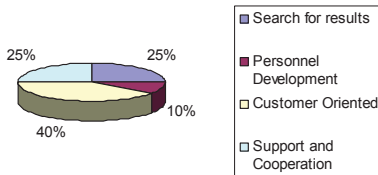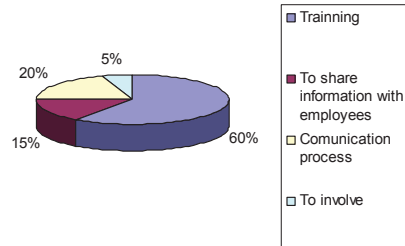Figure 3

Organizational Culture to Develop

- Search for results
- Personnel Development
- Customer Oriented
- Support and Cooperation

Figure 4

Activities for Knowledge Management

- Trainning
- To share information with employees
- Comunication process
- To involve

The performance of the managers on knowledge is divided between personal supervision 40% and a vision of customer satisfaction 30% (Figure 5); also here the orientation of the small enterprises is oriented to the customer. Learning on right or wrong (Figure 6) is based in new principles and values (55%), far more than experience application (25%).
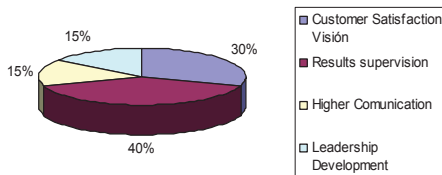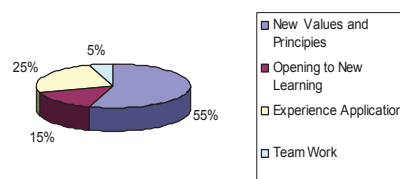
Figure 5

Managers Performance on Knowledge Management

- Customer Satisfaction Visión
- Results supervision
- Higher Comunication
- Leadership Development

Figure 6

Learning on Right or Wrong

- New Values and Principies
- Opening to New Learning
- Experience Application
- Team Work

For the generation of knowledge by the team work (Figure 7), more than the half is measure by the objective's accomplishment (35%) and the aligned objectives. The measure of KM goals is based in a 55% (Figure 8) by the profits and sales, twice than the vision and previous statistics.
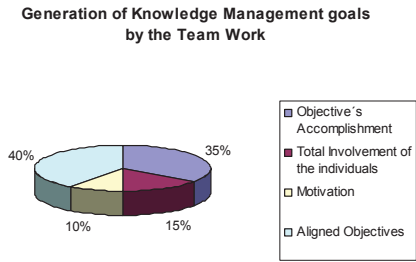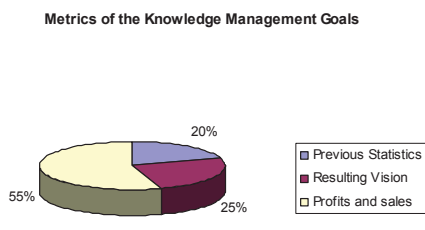
Figure 7

Figure 8

Generation of Knowledge Management goals by the Team Work

40%
35%
10%
15%

- Objective´s Accomplishment
- Total Involvement of the individuals
- Motivation
- Aligned Objectives

Metrics of the Knowledge Management Goals

20%
25%
55%

- Previous Statistics
- Resulting Vision
- Profits and sales

The structure shown for Figure 9, shows that small and medium enterprises focus primarily on reaching results and income, where there exists a customer oriented culture as a starting point to their KM process, followed by a training process, usage of experience, and the generation of new values and beliefs, to finally reach their objectives.

Figure 9. KM model for small companies from Tepic, Nay.

CUSTOMER ORIENTED CULTURE

TRAINING

EXPERIENCE

NEW VALUES & BELIEFS

SEARCH FOR RESULTS & INCOME

ACHIEVING OBJECTIVES
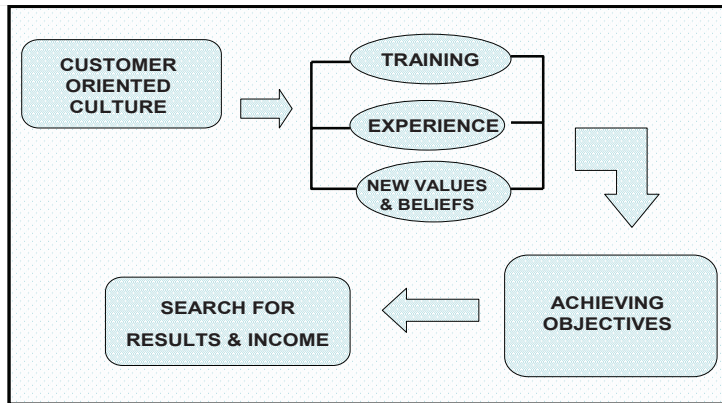
In the structure, the following deficiencies can be detected:
- There is no leadership development;
- Organizational culture does not foment high achievement teams;

- Internal communications processes do not cultivate intercommunication networks and group feedback;
- The type of authority searched for is that of constant supervision, which in KM must lead to self supervision;
- Low encouragement to multifunctional learning and group decision making;
- Directors´ performance regarding KM processes does not enhance the need to encourage superior levels of responsibility, as well as, individual and team empowerment;
- Regarding the use of technology in KM just computers and computer systems are well known, but there is a complete ignorance regarding technologies and methodologies for the systemic development of KM;
- Few information is shared with personnel, creating demotivation and a lack of commitment;
- There is lacking internal feedback, regarding issues inside and outside the organization;
- Personnel involvement in work teams is a frequent topic, but actions are incongruent with theoretical explanations;
- KM goal metrics do not focus on all aspects knowledge search, as well as their processes, they solely aim to revenue metrics.

Conclusions

The present piece of research shows KM theories and concepts from several authors such as Davenport, Prusak, Kim, Duffy, Pollard, who have developed KM application processes in several studies.

Surveys were applied on 3 medium level directors from 40 small commercial enterprises in Tepic, Nayarit, Mexico. It is perceived that they have little notion of what KM implies, with a primary approach on developing customer oriented cultures, but only in theory, because their processes do not stimulate or motivate employees to focus on the customer.

Surveyed companies show that KM technology is practically non existing to them, given the fact that they do not know how to generate, process, implement, communicate, and develop new knowledge in a systemic manner, which requires training reinforcement in that aspect, to foment a KM culture towards each and every member of the organization.

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