LEARNING ORGANIZATION OR KNOWLEDGE MANAGEMENT – WHICH CAME FIRST, THE CHICKEN OR THE EGG?

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Abstract. The need for organizations to become learning organizations grows. To be a Learning Organization (LO) requires Knowledge Management (KM), which in turn is dependent on a LO. It is like the chicken and the egg. It is impossible to answer the question which came first, and they are both dependent on one another for success. Literature emphasizes LO or KM, despite the fact that they are dependent. An organization that wants to become a Learning Organization must pay attention to both, and therefore there has to be a shift in emphasis to LO and KM. This paper addresses this problem. It maps LO to KM, and presents, in a holistic manner, a conceptual model of LO and KM. In future work this model aims to be a basis for developing guidelines for how to introduce LO and KM.

1. Introduction

“The ability to learn faster than your competitors is the only lasting competitive advantage” as a professional in Sweden, working as a HR manager, put it. The need for organizations to learn and change is growing these days [17]. If an organization learns more slowly than the environment it is doomed [29]. In a way all existing organizations must therefore be learning ones. Anyway, the concept Learning Organization (LO) refers only to organizations that are good at Organizational Learning (OL) [27]. LO focuses on an organization as an entity, a form of organization [15], [25], [32] and OL on the process of learning, learning activities or processes in the organization [15], [25], [32]. OL and LO share ideas, and both are concerned with processes for acquiring information, interpreting data, developing knowledge, and sustaining learning [13]. How an organization manages its knowledge is therefore crucial for organizational development [5]. Knowledge management (KM) is about managing knowledge. KM includes activities such as creating, organising, sharing and using knowledge [31]. IT is a prerequisite for effective KM (e.g. [15], [23], [31]), which means that IT supported KM is an important part of KM.

According to Swan et al [26] there has been a shift in emphasis in the literature from LO to KM. This shift is linked to both a decrease in people management and development themes, and to an increase in IS/IT and intellectual capital [26]. Our literature review supports this, but also indicates that the number of articles addressing LO has increased over the recent years. Irrespective of what is emphasized, the fact still remains that there should be another shift aiming at emphases both LO and KM. If literature addresses both, they do it in a too superficial manner. KM and LO cannot survive without the other [15]. An organization that wants to become a learning organization must therefore pay attention to both in parallel. This requires both an understanding of their different properties and goals, and also of their relationships. This paper addresses this problem. The goal is to map LO and KM and to present a theoretically based conceptual model of LO and KM, aiming to serve as a basis for developing guidelines for how to introduce KM and the work to become a Learning Organization. The method is a literature analysis. The main target groups of the results are practitioners in strategic positions, and researchers in the area of KM and LO.

The paper is organized as follows: Section 2 sums up the theoretical background, Section 3 presents the comparative analysis, and Section 4 presents the conceptual model, while Section 5 closes with discussion of results and future work.

2. Background

The literature review covered Learning Organization literature as well as KM literature. LO and KM have been theoretically analyzed, and important concepts, “keywords”, in each domain have been identified. Based on our literature study we briefly discuss (Section 2.1) what a LO is, and what KM is (Section 2.2). Identified keywords are written in italics.
2.1. What is a Learning Organization (LO)?

An organization is a group of individuals. A group has evolved a culture, with the strength of that culture dependent on the length of group’s existence, the stability of the memberships in the group, and the emotional intensity of the actual historical experiences they have shared [22]. Consequently, it takes time to foster a new culture, e.g. a learning one. A Learning Organization has a culture that supports learning and innovations both by individuals and by the organization itself [29]. The environment promotes a culture of learning, a community of learners, and it ensures that individual learning enriches and enhances the organization as a whole [5], [19]. The process of learning must ultimately be made part of the culture, not just be a solution to a given problem [22].

Learning organizations demand a new view of leadership, leader as designer [24]. Culture begins with leadership, but because culture is the result of a group’s accumulated learning the culture itself will later define the wanted leadership [22]. The first step in building a learning organization requires a leader who inspires the vision of the learning organization [24]. To be a LO has no value in itself, it must always serve the broader aims of the organization [7]. Shared visions emerge from personal visions [24]. A Learning Organization has a design and a culture which takes into account the needs of the individuals in the organization [14], and in a LO members know why. In other organizations they know how [12].

A LO is organized in such a way that it scans for information in its environment, creates information by itself, and encourages individuals to transfer knowledge between the individuals in team [12]. This must be guided by the structure and by the vision that is guided by the strategic leadership of the organization [12]. Employees must have time for learning and management must regard learning as real work [7]. In a learning organization work processes must integrate attention to every aspect of knowledge [4]. The processes must enable knowledge dissemination and the culture must encourage knowledge sharing.

Learning is when changes in knowledge happen inside an individual, and learning and accumulation of (new) knowledge always starts with the individual [12]. Individual learning does not necessarily imply changes in organizational knowledge. Organizational knowledge is knowledge independent of specific members in the organization, e.g. knowledge in knowledge repositories, and knowledge embedded in policies, and routines. Organizational Learning (OL) is considered to depend on the collective cognitive processes of individuals [32]. Individuals can be regarded as subsystems in the organization. The concept of LO regards the organization as an entity and focuses what the characteristics such that encourages its members may learn. OL, on the other hand, focuses on how learning is developed in an organization [32]. 

Learning that changes the strategies, but leaving the values unchanged, is often referred as Single loop learning, and learning that results in changes in the values as Double loop learning [3]. According to Kezar [13] there are differences in these two areas of study:

- LO tends to focus more on external threats as the reason for fostering learning.
- OL tends to focus more on internal concerns for performance and learning as part of condition of human beings within settings.

A LO must be able to meet demands of both its internal and external environments [32]. Some argue that LO is a vision. OL is a continuous learning cycle and an organization can never come to a point in time when it can declare itself a LO. On the other hand, no organization can be in a constant state of learning and declare itself to be practicing OL [9].

According to Senge [24] the core of learning organization work is based upon five “learning disciplines”, each providing a true dimension in building an organisation that can truly learn:

- Personal mastery
- Mental models
- Team learning
- Shared vision
- System’s thinking

Senge’s five disciplines are integral components in a learning organization, providing tools and methods that are applicable and useful in the process of OL [9]. Each of the five disciplines can be thought of on three levels: practices, principles, essences. These levels are on accordance with the three levels of Van Gigch [28].

2.2. What is Knowledge Management (KM)?

Knowledge Management (KM) is a divergence from the literature on the LO [26]. Learning in organizations requires individual personal knowledge to transform into information that other members of the organization can use [12]. KM refers to the process in which organizations assess the data and information that exist within them, and is a response to the concern that people must be able to translate their learning into usable knowledge [13]. During the KM process the knowledge goes through different changes, and there are knowledge losses, both desirable and undesirable, where undesirable losses should be minimised as much as possible [1].

OL requires KM [15]. A LO focuses on the learning process, and KM focuses on the result, the output from the learning process [15]. The aim of KM is to create value for the organisation. It includes activities such as creating, organising, sharing and using knowledge [31]. Most people in the organization that perform KM activities need to carry out KM activities in their normal day-to-day activities [7].
An organization learns and builds knowledge with different purposes and methods, and we need to think about it from the perspective of how they accumulate knowledge, insights, and valuable expertise over time [30]:

- In people: Train and educate people in order to transfer skills and know-how, improve ways of performing tasks
- In repositories outside people: Document knowledge and build databases in order to distribute knowledge
- By embedding: Embed knowledge in standards, technology and operating practices in order to improve technology and the way it is used

In the perspective of knowledge as a product all these three assume that the actual knowledge is identified and captured. They also overlap, contribute and support each other. As we see it the second way, to build knowledge in repositories outside people, can be compared to the organizational memory which in turn contributes to the other two. Capture knowledge and store it in an IT system and you have the rudiments of a KM process [21]. To create knowledge is to use information for a productive purpose in a certain context [12]. Creation of new knowledge is a critical component of an organization’s ability to learn and adapt [15].

In order to provide value KM has to be adapted to business and knowledge processes [20]. KM must have a vision (e.g. [7], [8], [11], [17], [16], [20]). Which business goals should the codified knowledge support? Setting goals is a management issue (e.g. [7]), and management has a central role in KM (e.g. [8], [11]).

In the view of knowledge storage, dissemination and sharing, IT is a prerequisite for effective KM [15], [31], and KM therefore involves a combination of technical and human elements (e.g. [7], [6], [31]). The actual KM is carried out by people [6]. That technology is used effectively to communicate is one prerequisite of a learning organization [21]. Certain kinds of technology can be considered as better drivers or facilitators for achieving the status of learning organization [25]. Semantic Web technology is a potential catalyst for learning organizations [25]. The organizational culture constrains the efficient use of IT tools designed to facilitate knowledge creation, capture, storage and distribution [18]. The most critical factors for successful KM are strategy and organizational culture, closely followed by IT support [10].

### 3. Mapping LO and KM

A comparative analysis between LO and KM has been made in order to identify relationships, differences and similarities. The analysis originates from the keywords in Section 2.1 and 2.2. A summary from the analysis is presented in Table 1. The leftmost column presents the keyword, the middle column includes a brief comments about its appearance in LO, and the rightmost column its appearance in KM. The keywords are presented in the same order as they have appeared in Section 2.

<table>
<thead>
<tr>
<th>Keyword</th>
<th>LO - &quot;an entity”, which requires KM</th>
<th>KM - &quot;a process”, which assumes a LO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culture</td>
<td>A LO has a learning culture. (e.g. Personal Mastery, Team Learning, Mental Models)</td>
<td>Culture constrains the efficient use, because KM is carried out by individuals</td>
</tr>
<tr>
<td>Leadership/management</td>
<td>Leadership fosters the culture</td>
<td>Management has a central role, but acts within a culture</td>
</tr>
<tr>
<td>Vision</td>
<td>A shared vision is necessary</td>
<td>KM must have a vision</td>
</tr>
<tr>
<td>Work processes</td>
<td>A LO integrates attention to every aspect of knowledge</td>
<td>KM must be integrated</td>
</tr>
<tr>
<td>Organizational Learning</td>
<td>A LO is good at OL, OL is a collective cognitive process</td>
<td>Knowledge is the result of OL</td>
</tr>
<tr>
<td>External factors</td>
<td>Must meet these demands</td>
<td>---</td>
</tr>
<tr>
<td>Internal factors</td>
<td>Must meet these demands</td>
<td>Constraints the efficient use, e.g. culture and IT</td>
</tr>
<tr>
<td>System’s thinking</td>
<td>How a LO thinks about the world</td>
<td>---</td>
</tr>
<tr>
<td>Organizational Memory</td>
<td>---</td>
<td>E.g. data repository</td>
</tr>
<tr>
<td>Technical</td>
<td>---</td>
<td>Is a prerequisite</td>
</tr>
</tbody>
</table>

The analysis shows that most keywords appear in both domains. This is not surprising considering the fact that a LO requires KM, and KM in turn assumes a LO. As visualizes in Table 1 there are four factors that only appear explicit in one domain:
• Factors only in LO:
  o External factors
  o System’s thinking
• Factors only in KM:
  o Organizational Memory
  o Technical

This phenomenon indicates that LO and KM are on different levels of abstraction with different focus and purpose. We first discuss why we assume this in the perspective of External factors and System’s thinking, and then in the perspective of Organizational memory and Technical.

A LO is about the whole organization which in turn is a part of the world. As a sub-system in the world the organization must interact with other sub-systems in the world and also manage external factors outside the organization, e.g. competitors, and customers. This is necessary for survival. KM is performed in the organization, it’s a sub-system in the organization. KM is therefore more focused on internal factors inside the organization. When KM literature mentioned external factors they do it in an implicit way and talk about it as factors that the organization must manage. How efficient KM is depends on internal factors. KM discusses internal factors in terms of constraints. When LO discusses internal factors it is mostly in the view of meeting internal demands. An organization consists of individuals, and meeting internal demands is therefore about meeting demands from members in the organization. Each member has its own image of itself in relation to the organization. The organization’s practice stems from these images, which the members remake when conditions change [3]. Each individual is a sub-system in KM, and in that perspective it is strange that system’s thinking to our knowledge not explicit is discussed in this domain. On the other hand, to have system’s thinking when discussing LO, implies this approach also to KM.

The organizational memory refers to stored knowledge and aims to enable knowledge sharing and knowledge reuse. It corresponds to that type of KM which accumulates knowledge outside people [30]. In the perspective of knowledge storage, dissemination and sharing, IT is a prerequisite for effective KM [15], [31], and we can therefore see that Organizational Memory and Technical are tightly coupled. Both regard knowledge as a product, which is in line with KM. Knowledge is an input to and/or a result from OL. KM regards OL as a process that transforms knowledge. A LO is good at organizational learning, and views OL more as a collective cognitive process. LO literature does not explicit discuss organizational memory; it discusses organizational knowledge, where organizational memory is a part. The Learning Organization is so much more than KM, and has its focus on a higher level. A LO is more about fostering a learning culture, and developing structures that support learning. Of course efficient use of IT in turn will support learning structures, but a LO focuses on learning structures in general, where IT is only one part. Therefore it is natural that LO does not have a technical focus. As we see it a LO more or less takes IT for granted in the same way as with mail, telephone, documents etc.

Our analysis based on the four keywords that did not appear in both domains strengthens the indication that LO and KM are at different levels of abstraction. This is also supported in those cases where the same keyword appears in both domains. A LO has a learning Culture, “is” the culture, but KM is limited by the culture. The same type of relation results in the fact that LO literature mainly discusses Leadership, and KM literature Management. Leadership creates and changes culture, and management or administration acts within a culture [22]. Both KM and LO must have a Vision, but in LO literature the importance of a shared vision is stressed. KM as an isolated event could be successful even if the vision is not shared, but an organization must have a shared vision to be able to develop a learning culture. On the other hand, KM aims to support the organization to be a LO, and in that perspective KM also needs a shared vision. The keyword work processes is the only one that appears in the same way in both domains. Both LO and KM literature discusses the importance of integrating aspects of knowledge in these processes. The remaining keywords identified in both domains, Internal factors and Organizational Learning, were discussed when analyzing the four keywords which only appear in one domain.

Our comparative analysis has clearly shown relationships, differences and similarities between LO and KM. In a simplistic way we can say that LO and KM is about the same thing, but with different aims and on different levels. In the view of Van Gigh’s [28] three levels of inquiry, LO can be compared with the Reflecting level – “Why” – level, and KM with the Diagnostic level – “What to do” – level. A LO aims to support learning. Learning implies changes in knowledge. A LO therefore requires to manage knowledge effective, and effective KM is what to do in order to fulfill this requirement. KM aims to support distribution of knowledge, of course in turn aiming to support learning. LO requires KM, and KM assumes a LO. A LO is on a higher level and includes so much more than KM. Work processes must enable learning and integrate every aspect of knowledge. As we see it, this indicates that work processes in a LO can be regarded as an important connection between LO and KM.

A LO can be regarded as the system, which includes the subsystem KM. This is in accordance with Senge’s idea that system’s thinking must be the conceptual cornerstone [24]. Consequently, a change in KM affects the organization, and a change in the organization, e.g. the culture, affects KM. As a result the process to become a Learning Organization must take place on both levels. Enabling organizations to become learning organizations therefore requires introducing LO as well as KM. A LO has a climate
and a culture which sees knowledge sharing and learning as something necessary and positive. On an individual level, everybody wants to contribute with their knowledge, and also to take part of other people’s knowledge. In the daily work this knowledge work must be an integrated part. KM aims to support this, and is in a way a concrete connection between the individual and organizational level.

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4. A Conceptual Model of LO and KM

Based on our literature analysis we have developed a holistic conceptual model including both LO and KM. Even if the holistic perspective implies that the model is on a fairly generalized level, it is necessary if the aim, to serve as a basis for developing guidelines for how to introduce KM and the work to become a Learning Organization, should be fulfilled. The model is presented in Figure 1.

![Figure 1. A Conceptual Model of LO and KM](image)

The work of Senge [24] has been widely referred to by both academics and professionals. It covers the main aspects found in our literature review about LO. This implies that Senge’s work about the five disciplines should be a central part of the conceptual model. The fifth discipline, *System’s thinking*, is the conceptual cornerstone that underlies all of the disciplines. It is a cornerstone of how learning organizations think about the world, and how they look at the world. Thus the conceptual model is shaped as an eye which regards the world from a system’s perspective. *Personal mastery, Mental models, and Team learning* are as we see it different perspectives on the organizational culture. Culture is the result of the organization’s accumulated learning about values, assumptions etc. It evolves with the strength of that culture; in turn dependent on the length of its existence, the stability of the individuals’ membership, and the emotional intensity of the actual historical experiences they have shared [22]. It is the leader who initiates this process by imposing his or her beliefs, values, and assumptions, but culture only arises when individuals’ assumptions lead to shared experiences [22]. The importance of a *Shared vision* is well stated in the literature. There cannot be a learning organization without a shared vision [24]. A shared vision is a part of the organizational culture. The importance of the vision is well stated in literature, and
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the conceptual model must therefore place great emphasis on this. As consequence, it should be an obvious part of the Learning Organization, and not only of the organizational culture.

In accordance with our analysis the model regards LO and KM as system and subsystem. They are two inseparable parts when an organization wants to become a learning organization. A LO can be compared to a learning system with distinctive characteristics that are able to meet the demands of its internal and external environments [32]. The model clearly shows different types of both external and internal demands.

Learning and knowledge-creating is performed by individuals, but it is important for the organization to provide the appropriate context for them [17]. A LO is an environment that promotes a culture of learning, and that ensures that individual learning enriches and enhances the organization as a whole [13]. This environment requires a shared vision. To build this type of culture including a common vision is a management responsibility. KM aims to create value for the organisation [31]. It enables individual learning, and in an organizational perspective this individual learning contributes to both the organizational learning and processes. All in order to reach business values. KM must also be integrated into every mission critical business process [15], and be adapted to business and knowledge processes [20]. When an individual learns something he or she obtains new knowledge, which will be stored (hopefully) in their personal memory and used both in its present form but also as a basis of transformation to new knowledge. In order to stimulate learning of other members in the organization the knowledge has to be stored in the organizational memory, e.g. in books, documents, databases etc. Learning results in more potential knowledge to store, and in this perspective we consider that an organization can learn. The organizational learning depends on individual learning, and when an individual has learnt the organization as a whole has learnt. This is in accordance with the System’s thinking of Senge [24].

Individual learning becomes organizational knowledge when organizations function as holding environments for knowledge, and when organizations directly represent knowledge in the sense that they embody strategies for performing complex tasks that might have been performed in other ways [3]. One part of organizational knowledge is stored in IT-supported repositories, organizational memories. When stored knowledge is shared and used it gives rise to learning and possible new knowledge. KM is concerned with new knowledge. It supports organizational learning by both taking care of the result, the knowledge, and making the result reachable for individuals in the organization. Therefore it stimulates learning and the creation of new knowledge. KM is a prerequisite for a LO, the learning culture must assume that accurate and relevant information must be capable of flowing freely in a fully connected network [22], but KM’s efficiency is in turn dependent on the LO.

5. Discussion of Result and Future work

The goal of this paper was to map LO and KM to present a theoretically based conceptual model of LO and KM. The comparative analysis shows how they relate, and the conceptual model visualizes this. LO and KM are dependent on each other, and KM can be regarded as a subsystem of LO; changes in KM results in changes in the organization and vice versa. The strong relationship between them is clear, and the process to become a LO must include KM. It is like the chicken and the egg, it is impossible to answer the question which came first. Furthermore, if the whole organization is the system in the view of LO, what is the system in the view of KM? Possible answers to this question are both knowledge and individual. Both these answers indicate that KM is on a more detailed level compared to LO, which is in accordance with our earlier analysis. Further discussion about this is outside the scope of this paper.

The aim of the work presented in this paper is to serve as a basis for developing guidelines for how to introduce KM and the work to become a Learning Organization. This work is already in progress, and has so far resulted in an initial version of a maturity model (see [2]). Future work will focus on characterizing and detailing this maturity model in order to develop guidelines for how to introduce KM and the work to become a Learning Organization, as well as for how to measure maturity from this perspective.

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