Empowerment, knowledge conversion and dimensions of organizational learning

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Abstract
Purpose – Research on antecedents of organizational learning generally ignores the fact that organizational learning is at least a two-dimensional construct and that its dimensions may be conflicting. This research often fails to investigate the simultaneous effects of antecedents on these dimensions. To address this gap in the literature, this paper aims to discuss the effects of empowerment and knowledge conversion, two factors often considered to be important antecedents of organizational learning.

Design/methodology/approach – The approach adopted involves a review of and reflection on the pertinent literature on learning organizations, organizational learning, empowerment and knowledge conversion.

Findings – It is found that both antecedents have contradictory effects on two dimensions of organizational learning. Empowerment affects second-order learning in a positive sense, but first-order learning in a negative sense. Knowledge conversion is positively related to first-order learning, but negatively to second-order learning. Thus, it appears that efforts to improve organizational learning on one dimension may have (unintended) effects on the other, unmeasured dimension.

Originality/value – The paper connects disjointed streams of theory and research in a novel way that is of interest and importance to both the academic literature and to organizational practitioners.

Keywords Learning organizations, Organizational learning, First-order learning, Second-order learning, Empowerment, Knowledge conversion, Workplace learning, Knowledge management

Paper type Literature review

Introduction
The importance of learning in and by organizations has been recognized by organization scientists at least since the early 1960s (e.g. Chapman et al., 1959; Cyert and March, 1963; Cangelosi and Dill, 1965). In particular, in the last two decades the interest in organizational learning and learning organizations has been growing, as evidenced by a continuously increasing output in journals and books (Bapuji and Crossan, 2004), and an increasing number of reviews of the field (e.g. Easterby-Smith and Lyles, 2003; Ortenblad, 2004; Shipton, 2006).

Obviously, the concepts of learning organization and organizational learning diverge in terms of structure versus process. But there are some other important differences between them. On the one hand, most of the literature on learning organizations in the past decades has adopted a prescriptive, practice-oriented
approach, directed at developing learning organizations (Easterby-Smith and Araujo, 1999; Ortenblad, 2002; Tsang, 1997). However, recent retrospective accounts of the field have tended to become somewhat pessimistic about the concept of the learning organization. It is argued that this concept seems to have lost much of its practical and scientific value and that its conceptual clarity should be improved (e.g. Ortenblad, 2007; Smith, 2008), while some even argue that it should be abandoned altogether (Grieves, 2008).

On the other hand, most of the literature on organizational learning in the past decades has adopted a scientific, descriptive approach, directed at analyzing organizational learning. Contrary to the work on learning organizations, the outcomes of this literature have generally remained insignificant for organizations, as they were not translated in practical instrument development or consultancy practices. However, an increasing number of studies have addressed these practical concerns by identifying influential antecedents, i.e. organizational factors and mechanisms that affect an organization’s capability for learning (e.g. Alegre and Chiva, 2008; Chiva and Alegre, 2009; Galer and Van Der Heijden, 1992; Goh, 2003; Gómez et al., 2005; Harvey and Denton, 1999). Given the apparent pessimism about the learning organization concept, this appears a promising alternative route towards developing the practical value of the general idea of learning in and by organizations.

In the literature on organizational learning a variety of antecedents has been recognized, related to organizational structure, delegation and participation in decision making, knowledge transfer and integration, learning climate, managerial leadership and commitment, and clarity of vision, mission and purpose. Among these antecedents, two appear to be most influential and well-researched. The first is empowerment, referring to the degree of decentralization of decision-making responsibilities in organizations (e.g. Alegre and Chiva, 2008; Argyris, 1998; Chiva and Alegre, 2009; Goh, 2003; Jansen et al., 2006; Ortenblad, 2004; Pearn et al., 1995; Visser, 2008, 2010; Watkins and Marsick, 1993). The second is knowledge conversion, referring to the degree to which knowledge is being tacitly and explicitly disseminated throughout organizations (e.g. Darling et al., 2005; Goh, 2003; Gómez et al., 2005; Hansen et al., 1999; Hislop, 2005; Jansen et al., 2005; Nonaka, 1994; Nonaka et al., 2001).

However, with few exceptions (e.g. Jansen et al., 2005, 2006), these studies do not attempt to systematically investigate the effects of antecedents on organizational learning, while admitting and appreciating that organizational learning is a concept with conflicting dimensions, on which these antecedents may have contradictory effects. The purpose of this review paper is to reflect on these dimensions of organizational learning and to identify contradictory effects of these antecedents.

The structure of the paper is as follows. In the next section dimensions and antecedents of the concept of organizational learning are discussed and reviewed. From this review the two antecedents empowerment and knowledge conversion are singled out and their effects on the dimensions of organizational learning are examined. Finally, limitations are discussed and implications for managerial practice and directions for future research are provided.

**Organizational learning: dimensions and antecedents**

For the purpose of this paper we regard organizational learning as the “detection and correction of error”, whereby an error is defined as the discrepancy between what
members in an organizational context aspire to achieve and what they actually achieve (Argyris and Schöen, 1978, p. 2; 1996; March and Olsen, 1975). Along these lines, there appears a certain amount of conceptual agreement in the literature that learning may be accomplished along two dimensions. In its first, basic dimension, learning is action-oriented, routine, and incremental, occurring within existing mental models, norms, policies and underlying assumptions. In its second, higher dimension, learning involves changing mental models, norms, policies and assumptions underlying day-to-day actions and routines (e.g. Argyris, 1996; Arthur and Aiman-Smith, 2001; Miner and Mezias, 1996; Visser, 2007). The more complex, dynamic and turbulent the organization’s environment, the more necessary the second, higher form of learning is considered to be[1].

In the literature these two dimensions appear under a variety of labels: single-loop and double-loop learning (e.g. Argyris and Schöen, 1978, 1996); lower-level and higher-level learning (Fiol and Lyles, 1985); first-order and second-order learning (Adler and Clark, 1991; Arthur and Aiman-Smith, 2001; Lant and Mezias, 1992; Virany et al., 1992); exploitation and exploration in learning (Levinthal and March, 1993; March, 1991); incremental and radical learning (Mine and Mezias, 1996; Sörensen, 2002); passive and active learning orientation (Sadler-Smith et al., 2001); adaptive and generative learning (Senge, 1990); local search and long jump (Levinthal, 1997), to mention just a few. In the remainder of this paper we adopt the terms first-order and second-order learning to cover these two dimensions.

There is, however, less conceptual agreement in the literature on the exact nature of the relationship between first-order and second-order learning. On the one hand, it is often recognized that both dimensions of learning are essential to organizational survival and that they need to be addressed simultaneously, a notion referred to as ambidexterity (Duncan, 1976; Raisch and Birkinshaw, 2008). First-order learning is necessary for an organization to be aligned and efficient in its management of current business demands, while second-order learning is necessary to be adaptive to changes in a rapidly changing environment and to manage future business demands. A well balanced combination of the two types of learning will lead to long-term organizational success (Easterby-Smith and Prieto, 2008; Jansen et al., 2006; Levinthal and March, 1993).

On the other hand, it is often acknowledged that the relationship between first and second-order learning may be conflicting. As both dimensions compete for the same limited available resources, efforts to enhance learning on one dimension may limit success on the other (Levinthal and March, 1993; March, 1991). Additionally, first-order and second-order learning may actually exhibit reciprocal disrupting effects. First-order learning involves adapting actions and routines within existing (mental) frameworks and underlying assumptions, whereas second-order learning challenges the very frameworks and assumptions that underlie such actions and routines. Learning in one dimension thus complicates or inhibits learning in the other dimension (Adler and Clark, 1991; Wang and Rafiq, 2009). This makes the two dimensions of learning more or less incompatible (Gharajedaghi, 1999) and organizations may have to face trade-offs in learning.

While most students of organizational learning seem to acknowledge that organizational learning is at least two-dimensional and that these two dimensions may
be conflicting, studies on antecedents of organizational learning appear to neglect this notion in at least four ways.

First, when looking at the definitions of organizational learning used in these studies, we often find that they do not reflect the two-dimensionality of organizational learning. For example, Harvey and Denton (1999, p. 899) regard organizational learning as “the distinctive behaviors that are characteristic of a learning organization”, which is a theoretically ‘empty’ definition. Others, however, do define organizational learning in terms of knowledge acquisition and use, but do not indicate whether this knowledge originates from changing routine behavior (i.e. first-order learning) or from changing mental frameworks (i.e. second-order learning). Such definitions of organizational learning include “an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights” (Garvin, 1993, p. 80), or “the propensity of the firm to create and use knowledge” (Sinkula et al., 1997, p. 309), or “the development of new knowledge or insights that have the potential to influence behavior” (Slater and Narver, 1995, p. 63).

Second, some authors do recognize that antecedents of organizational learning may affect different dimensions, but deliberately choose to focus on a single dimension. For example, Galer and Van der Heijden (1992, p. 6) explicitly mention the distinction between single loop and double loop learning, but in their article they indicate that “learning will be interpreted in the ‘double loop’ sense of the word”. The same is true for Nevis et al. (1995, p. 83), who state that the learning process includes three areas: knowledge acquisition, knowledge sharing and knowledge utilization and that, in order to improve their learning capacity, organizations may decide to focus on any of these areas. However, they add to this that, while it may be necessary to address all areas of organizational learning simultaneously, “focusing on a single area is more manageable”.

Third, in some contributions the two-dimensionality of organizational learning is acknowledged, but not when investigating the effects of antecedents. For example, Slater and Narver (1995) acknowledge the difference between adaptive and generative learning, but when discussing antecedents of organizational learning, the authors use their initial definition as the dependent variable, not clearly distinguishing between the two dimensions. In discussing their set of organizational antecedents, they do not address how each of these affects each of the dimensions.

Finally, in other instances the two-dimensionality of the concept is acknowledged and actually used when investigating the effects of antecedents. However, here it appears that dimensions are treated as being independent and as having different and exclusive antecedents. For example, Gómez et al. (2005, p. 717) consider organizational learning as a complex multidimensional construct and therefore argue that, to exhibit a high degree of learning, the organization “should show a high degree of learning in each and every one of the dimensions defined”. These dimensions include managerial commitment, systems perspective, openness and experimentation, and knowledge transfer and integration. For each of these dimensions they discuss related antecedents. They do however, relate these antecedents to one dimension only, and ignore the possibility that antecedents might affect other dimensions as well.

The conclusion seems warranted that research on antecedents of organizational learning does not always pay attention to the fact that organizational learning has different dimensions, that these dimensions may be conflicting, and that antecedents
Empowerment and organizational learning

The concept of empowerment was introduced by Kanter (1983) as a successor to the older command-and-control approach, in which power in organizations is centralized and in which management directs employees what to do and how to do it. In an empowered organization, power has largely been decentralized to employees of lower echelons, giving them a responsibility to make their own decisions (Randolph, 2000). Empowerment may be defined as “the process of enhancing an individual’s or group’s capacity to make purposive choices and to transform those choices into desired actions and outcomes” (Alsop et al., 2005, p. 1). Elements associated with empowerment typically include authority delegation, motivation, job enrichment, autonomy, self-leadership, high-involvement and participative management, although not all of these elements appear in empirical practice (Jaw and Liu, 2003; Lee and Koh, 2001; Lopez et al., 2006).

Empowerment affects organizational learning in various ways. In a decentralized, flat, team-based organizational structure, employees have the opportunity to evaluate their work effectiveness and to suggest measures for improvement, thereby replacing old routines by new ones. This flexibility helps the organization to adapt to a rapidly changing external and internal environment, with employees becoming more adaptive to present circumstances and more predisposed towards innovative behavior (Drumm, 1995; Örtenblad, 2004; Scott and Bruce, 1994).

Important in relation to empowerment is the distinction between internal and external commitment. External commitment refers to contractual compliance in which employees do what is expected of them by others. In this type of commitment, management defines the objectives, goals and plans. Internal commitment, on the other hand, refers to the participation of employees in defining goals and performing standards, making employees feel more involved in accomplishing their tasks. Employees are no longer merely concerned with how to effectively carry out their prescribed tasks, but they become actively involved with the underlying mental models, norms, policies and assumptions of their work, thus increasing reflection and learning (Argyris, 1998; Randolph, 2000).

Although most authors seem to agree on the positive effects of empowerment on organizational learning, others have pointed at negative effects. For example, Chang and Harrington (2002) argue that, as business practices are placed under the responsibility of lower echelon employees, they are adapted to local conditions. Therefore, the degree of knowledge sharing is likely to diminish, since what works in some conditions might not work in other conditions. Or, even if conditions are similar, lessons learned from individual experiences may not be captured at the organizational level, since empowerment through a decentralized approach implies that organizations must reduce standardization in the form of work standards, formalized guidelines, procedures and policy manuals shared by the entire organization (Bowen and Lawler,
A reduction of capturing knowledge in routines and formalized guidelines logically means a restriction with respect to reusing existing knowledge. Mills and Ungson (2003) also argue that the limits of empowerments have not been well articulated in the literature. They state that the concept of empowerment might lead to opportunism as employees may focus their attention on making divisional, rather than organizational, profits, placing the interests of the employees’ own division above the interests of the entire organization. This may induce a poor flow of information across divisions, as organizations start to behave as internal markets, with knowledge as a trading resource. Thus, empowerment may limit the dissemination of knowledge and restrict the organization in reusing existing knowledge.

Another negative effect of empowerment is explained by Alvesson and Willmott (1992). They argue that, on the one hand, empowerment (or emancipation as they call it) may provoke employees to challenge existing norms and to call into question long-established belief systems, which is necessary for innovation. On the other hand, this may also “estrange the individual from the tradition that has formed his or her very subjectivity” (Alvesson and Willmott, 1992, p. 447). This may cause a loss of a sense of shared identity, which is a key factor in providing direction for organizational learning (Senge, 1990).

It may be concluded that empowerment is an important antecedent to organizational learning, but that its effects on learning are not uniformly positive. This becomes more comprehensible when the effects of empowerment are related to the different dimensions of organizational learning: first-order and second-order. With this in mind, it seems that empowerment improves the development of new knowledge as it allows organizational members to develop their own ideas and practices and to adapt to local current circumstances. It provides employees with the ability to reflect on the underlying governing values of their work and to come up with new solutions. Therefore it seems that empowerment positively affects the second-order dimension of organizational learning.

On the other hand, empowerment may at the same time lead to individualistic approaches and fragmented learning experiences that may not become embedded at the organizational level, due to experiences being connected to specific (local) conditions or due to a weakened link to organizational routines. Empowerment may also lead to a limited reuse of existing knowledge as a result of opportunistic behavior, instigated by the decentralization of decision-making responsibilities. Therefore, it also seems that empowerment negatively affects the first-order dimension of organizational learning (see left side of Table I).

Knowledge conversion and organizational learning
Knowledge conversion refers to the creation of new knowledge through the interaction between tacit and explicit knowledge (Nonaka, 1994). Nonaka (1994) presents four modes of knowledge conversion:

1. Socialization;
2. Combination;
3. Externalization; and
4. Internalization.
Socialization is the process in which tacit knowledge is transferred through shared experiences in joint activities (Nonaka et al., 2001). Traditional apprenticeship, in which an apprentice learns a skill from a master, and on-the-job-training are typical examples. Combination is the process in which explicit knowledge is paired with other explicit knowledge that is more complex and systematic through specific media. Externalization is the process in which tacit knowledge is articulated as explicit knowledge. By means of externalization tacit skills are made concrete, for example through a manual, database, or specific knowledge management methodology (e.g. Rubenstein-Montano et al., 2001). The process of internalization is the embodiment of explicit knowledge into tacit knowledge. In this process people acquire know-how through experiencing explicit knowledge (Nonaka, 1994; Nonaka et al., 2001).

Knowledge conversion affects organizational learning in various ways. Lessons learned from previous error detection and correction constitute new knowledge, which through the various personal and impersonal processes mentioned above is being converted for organizational use. For example, Darling et al. (2005) focus on the effect of knowledge conversion on organizational learning through the use of after-action reviews, in which implemented actions are evaluated. These after-action reviews create a tight feedback cycle between thinking and action, thereby converting insights, identified mistakes and successes into best practices and standards so that they can be used again.

Knowledge conversion may also aid in new product development. Formal routines need to be adopted so that knowledge can be used in future development projects. This encourages employees to focus their attention on prior projects and their outcomes when they start working on new projects. According to Marsh and Stock (2006, p. 426), one way of retaining knowledge is through articulation or codification, by which tacit

<table>
<thead>
<tr>
<th>First-order learning</th>
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<tr>
<td><strong>Negative effects</strong></td>
<td><strong>Positive effects</strong></td>
<td>Individualistic approaches and fragmented learning experiences are not embedded at the organizational level</td>
<td>Converting insights, identified mistakes and successes into organizational standards encourages future reuse</td>
</tr>
<tr>
<td>Opportunistic behavior leads to a limited reuse of existing knowledge</td>
<td>Embedding insights in organizational systems and processes enables routinization, so that lessons learned can be enacted upon by all employees</td>
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<tr>
<td>Challenging existing norms and long-established belief systems causes a loss of shared identity providing the direction for organizational learning</td>
<td><strong>Negative effects</strong></td>
<td>Employees have more flexibility to adapt to local current circumstances</td>
<td>An overly dominant focus on current procedures hampers the ability to reflect on, and change underlying mental models, norms, policies and assumptions</td>
</tr>
<tr>
<td>Employees are more actively involved with underlying governing values of their work</td>
<td>Fixed rules and routines reduce the likelihood that new problems are perceived as opportunities for second-order learning</td>
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**Table 1.** The effects of empowerment and knowledge conversion on first- and second-order learning
knowledge is made explicit. This may be done through formal audits, newsletters, reports and seminars to retain knowledge. The authors state that “the codification of knowledge can lead to specific routines that have predictable outcomes”.

Hislop (2005) relates knowledge conversion, which he calls the utilization and institutionalization of existing knowledge, to first-order learning. Through embedding insights in organizational systems and processes, activities become routinized, so that they can be enacted upon by all employees, creating organizational learning. Similarly, Antonacopolou (2001) acknowledges that the effect of knowledge conversion through formal training may be especially strong for first-order learning, as individuals learn what is in line with organizational policy. The effect of training on second-order learning is found to be only weak, and it is suggested that the total effect of training may therefore only be superficial and mechanistic.

Although most authors seem to agree on the positive effects of knowledge conversion on organizational learning, others have pointed at negative effects. For example, Levitt and March (1988) argue that knowledge conversion may develop into a competency trap. The continuous, incremental improvement and implementation of existing knowledge, which is the effect of knowledge conversion, may cause such a dominant focus on specific procedures that their effectiveness becomes taken for granted and other, possibly superior, procedures are ignored.

This effect of knowledge conversion is confirmed by Crossan et al. (1999, p. 534), who argue that, even though embedding insights and knowledge in organizational systems and processes is necessary to enable routinized action, “learning that has become institutionalized at the organizational level is often difficult to change”. Thus, embedding knowledge through processes of knowledge conversion can introduce an inability to reflect on and change underlying mental models, norms, policies and assumptions.

Similarly, Boal (2007) observes that the transfer of know-how and tacit knowledge in organizations is promoted through strong network ties, in which employees are highly connected. However, in such strong network ties the same knowledge may be continuously reinforced, leading to an emphasis on first-order learning at the detriment of second-order learning. She concludes that, even though knowledge conversion promotes the organization’s capability to exploit its competencies, it may in unstable environments inhibit second-order learning and exploration.

Finally, March et al. (2000) state that the rules and routines resulting from knowledge conversion may lead to a feeling of familiarity with dealing with problems. This may reduce the likelihood that problems are perceived as opportunities for second-order learning.

It may be concluded that knowledge conversion is an important antecedent to organizational learning, but that its effects on learning are not uniformly positive. However, in comparison to empowerment, these effects are reversed. It seems that knowledge conversion improves the reuse of existing knowledge and promotes its dissemination throughout the organization. Lessons learned from past experiences are remembered and used whenever necessary or useful. Therefore, it seems that knowledge conversion positively affects the first-order dimension of organizational learning.

On the other hand, knowledge conversion may at the same time limit organizational members in being flexible and open-minded and being able to adapt to changing
circumstances on the spot, because of an ever-present emphasis on the use of organizational routines. Therefore, it also seems that knowledge conversion negatively affects the second-order dimension of organizational learning (Table I).

Conclusions and implications

This paper argues that, although the literature predominantly regards organizational learning as at least a two-dimensional construct with conflicting dimensions, research on antecedents of organizational learning does not specifically address this notion. This research appears to treat organizational learning as a one-dimensional measure, or, if the concept's two-dimensionality is acknowledged, ignores the fact that these dimensions might be conflicting. To address this gap in the literature, this paper has discussed two antecedents of organizational learning often mentioned in the literature: empowerment and knowledge conversion. A review of the literature shows that the effects of these antecedents are not confined to a single dimension. Rather, it seems that empowerment affects second-order learning in a positive sense, but affects first-order learning in a negative sense. Also, it appears that knowledge conversion positively affects first-order learning, but negatively affects second-order learning.

These findings have several implications for managerial practice and empirical research. For practicing managers it may be useful to recognize that efforts to improve organizational learning on one dimension may have other (unintended) effects on the other, unmeasured dimension. For example, empowering lower-level employees to take on more decision-making responsibilities is likely to lead to more creativity, reflection on governing values, and development of new solutions, but also to fragmentation of learning, individualistic and opportunistic behavior, and a weakening of routines. Improving knowledge conversion among employees is likely to lead to an improvement of work standards and routines through dissemination of lessons learned, but also to decreasing reflection on governing values and less novel applications of existing knowledge to new problems. Managers should be aware of the possible side effects of their efforts, and these should be taken into account when considering learning goals and strategies.

Implications for empirical research are twofold. First, given the potential gains and losses associated with different antecedents of organizational learning, further research seems warranted to sort out the precise impact of antecedents, since the current investigation is limited to two antecedents only. Future research might engage in empirically investigating the effect of multiple antecedents and should focus on their combined effects. Examples of such antecedents include learning climate, managerial leadership and commitment, and clarity of vision, mission and purpose. While research on ambidexterity (e.g. Raisch and Birkinshaw, 2008; Jansen et al., 2005, 2006) appears to head in that direction, research on organizational learning capability (e.g. Galer and Van Der Heijden, 1992; Gómez et al., 2005; Nevis et al., 1995) generally does not. Second, it seems desirable to assess additional dimensions of organizational learning. In this paper, the relevant dimensions of organizational learning are restricted to first-order and second-order learning. In the literature other types, levels and modes of learning have been assessed as well. All these could be further theoretically integrated and empirically researched to arrive at a more holistic view of organizational learning and its antecedents.
Note

1. In addition, some authors have distinguished a third dimension of organizational learning, variously labeled deutero-learning (e.g. Argyris and Schön, 1978; 1996; Rowe and Boyce, 2009; Visser, 2007) or triple-loop learning (e.g. Romme and Van Witteloostuyn, 1999; Snell and Chak, 1998; Yuthas et al., 2004). Unlike the two other dimensions, however, in the literature there appears to be little conceptual consensus on what this dimension exactly signifies (Visser, 2007).

References


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