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Learning Organizations: panacea or irrelevance?

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X. Learning Organizations: panacea or irrelevance?

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WHAT IS A LEARNING ORGANIZATION?

Advocates of the "*Learning Organization*" (*LO*) offer a set of prescriptions for improving an organization's performance by means of transforming it into a "learning" organization, not just an "understanding", "knowing" or "thinking" one (Giesecke & McNeil, 2004). The *LO* is thus regarded as a specific, ideal form of organization (Örtenblad, 2001). This chapter considers how the *LO* ideal would have to be interpreted or altered to maximise its relevance to health-care organizations.

There is some evidence that, at least in commercial settings mostly outwith healthcare, certain characteristics of the *LO* are associated with faster organizational change, product or service introduction, better "organizational performance" (Kontoghiorghes et al., 2005) (sometimes equated with financial performance, see Davis & Daley, 2008; Ellinger et al., 2002) and "competitive advantage" (Barringer & Harrison, 1991; Kontoghiorghes et al., 2005; Mowery et al., 1996). Accordingly, the *LO* has joined the list of managerial innovations. Mostly the literature on *LOs* is not scientific but normative, indeed often uncritical of the *LO* (Tsang, 1997). The wide range of applications, organizations and contexts to which the *LO* has been applied justify calling the *LO* a "panacea". A plethora of consultancies and others offer it for sale to managers.

Various definitions of the *LO* exist (Crites et al., 2009, categorize them) but certain common characteristics recur. Örtenblad and Koris (2014) define a *LO* as one that contains (or ought to contain) all four of the following:

1. Learning at work;
2. Organizational learning;
3. Learning structures;
4. A climate for learning.

Of course an organization might not adopt all of these but only some, or just one. Below, the term '*LO* approach' is used for a more partial, selective adoption of one, two or three of the above four components.. Phrases such as "the *LO* requires..." are a shorthand for saying "managers and others who wish to establish a learning organisation will have too..." Having elaborated the four main characteristics in terms of who learns, how, what they learn and why, this chapter uses mainly secondary empirical evidence about the *LO* approach in healthcare to assess which of these characteristics are relevant or applicable to health care organizations, which not, and therefore how the *LO* has to be adjusted for application to healthcare.

Learning at work

LO advocates assert that every member of a *LO* should learn continuously through their daily work. This learning, however, occurs simultaneously at three main levels: individual, work-team and whole organization (Ferlie & Shortell, 2001). What is learnt varies accordingly.

Individual learning

All its individual members of a *LO* should, Senge (1992) argued, acquire "personal mastery" of work-related knowledge, with this education being continuously refreshed ("lifelong learning", see Nevis et al., 1997). Its production workers (in health-care, clinicians, see Mohr, 2005) are key learners and *LO* implementers for any organization because they perform the core productive processes which literally produce whatever outcomes the organization achieves. The *LO* approach requires that workers work in a conscious, reflective way that is constructively critical of existing work practices (Bess et al., 2011) This is practical learning at work and through work (Dymock & McCarthy, 2006), often in an experimental, trail-and-error way. Indeed early models of organizational learning (Dixon, 1999) were homologous with certain accounts of individual learning, especially Kolb's (2014). Kolb posited that when someone learns a new skill she does so through a cycle of concrete experience, reflective observation, abstract conceptualization and active experimentation. The cycle combines cognitive and practical moments, and implicitly the affective and relational, even moral, aspects of learning (Tsasis, 2009). A concomitant of learning new working practices is "unlearning" obsolete or counter-productive mental models (de Holan, 2004).

The individuals who so learn do so "on behalf of teams/organizations" (Crites et al., 2009, p. 7). If everyone is to be a learner, learning activity and its management must also, advocates of the *LO* say, be dispersed throughout an organization so that at need its individual members can be (co-)learners, coaches, mentors or teachers. That requires managers to be open to such experience and opportunities for learning and that this expertise is distributed across many members of the organization (Collins et al., 1989).

Team level

One sign of a *LO* is that it re-engineers whole work processes in response to problems rather than change them in more superficial ways (Fiol & Lyles, 1985; Klunk, 1997). Many organizations' core productive work is undertaken by a complex of work-teams (Ferlie & Shortell, 2001). At the level of production processes, an *LO* is recommended (Nevis et al., 1997) to focus on what its products are used for and "design and make" activities, adapting production to accommodate changes in scientific knowledge, resources and external constraints (legislation, competitors etc.). That requires both the internal invention of new working practices and the ability to copy best practice from other organizations, and "ambidexterity" (See ch. YY) i.e. both be innovative and make efficient use of knowledge already existing.

Team learning is therefore required; a *LO* formalizes the tacit knowledge which production teams apply (Giunipero, 1996), in particular how to coordinate and standardize work both within teams – which often means across professions – and across multiple teams. That requires each person understanding the mental models they hold themselves, whilst understanding and appreciating those which others hold (Bess et al., 2011; Senge, 1992). Team-based learning may also be expected to promote divergent and plural modes of thinking. The systematic review by (Crites et al., 2009) suggests that teams who make decisions collaboratively use research findings and adapt to innovations more quickly. It has therefore been argued that organizations should create "communities of practice" to stimulate innovation and learning (Li et al., 2009; Wenger et al., 2002) and to promote goodwill, solidarity and collaboration, hence the sharing of learning, across all ranks and professions (Dovey, 1997).

Whole-organizational level

In practice all the above activities require top management support, or at least permission, to implement (Garvin et al., 2008). *LO* managers initiate the above kinds of learning deliberately (Giesecke & McNeil, 2004), not just updating working practices in response to external stimuli or internal problems after they occur. In particular these managers need, say the advocates of *LOs*, learning from "beyond the walls" (Cepetelli, 1995) to understand how their work fit into the wider organization and its environment (the presence of any competitors, new production technologies etc.). Given that simple coercion is not an option, managers in any organization also need to learn how to persuade others to undertake, or at least assist, its work. In managerial idiom, they have to formulate a "cohesive vision" expressing the organization's unifying purpose (Senge, 1992) and "guiding ideas" for strategies to attain it (Hassouneh, 2001).

Organizational learning

An essential feature of an *LO* is that individuals' and team learning is appropriated, synthesized, distributed and applied in a collective, organization-wide way: the whole organization learns (Örtenblad, 2005). The predominant explanation (Dixon, 1999) of how a *LO* learns regards organizational learning as similar but larger-scale process to that of individual learning (Carroll & Edmondson, 2002; Senge, 1990; Tsang, 1997); that is, as a four-stage cycle of:

1. Reflection upon the causes of problems which have been observed in the organization's work;
2. "Connecting" i.e. devising a range of possible practical solutions;
3. Deciding which practical solution to adopt, and formulating the reason(s) for that choice;
4. "Doing" i.e. implementing the chosen solution, in an experimental frame of mind.

By reflecting upon what then occurred as a result of the "Doing" stage, the learners launch a second cycle. (TQM – see chapter MMM – can be regarded as a special case of this cycle.)

A *LO* then elaborates this cycle with additional "loops". First, repetitions of the cycle result in a gradual accumulation of knowledge, in which learning is not only a present activity but the long-term accretion of a body of knowledge (Mowery et al., 1996). It is path-dependent because subsequent learning builds upon earlier learning. Second, besides learning the solution to whatever immediate problem an *LO* approach is used to address, wider lessons are drawn about how successfully organization's performance is pursuing its objectives, resulting in larger adjustments at the level of organizational structures, of routine working practices and even of strategy, as (Argyris, 1976) double-loop model of learning describes. This mode of learning is supposedly well-adapted to dealing with non-programmable, complex issues (Contu et al., 2003). Then the cycle of learning itself becomes something that the participants can reflect upon, creating triple (third-order) learning (Davies & Nutley, 2000).

Learning structure

Once acquired, the above learning has then to be "shared" among the rest of the

organization and utilized (Nevis et al., 1997). Multiple structures can be used simultaneously to implement and sustain the organizational learning cycles, and so develop a *LO's* learning capability (DiBella, 1995): collaborative enquiry, formal training, management information systems, coaching, audits, investigations and others (Carroll & Edmondson, 2002; Garvin et al., 2008). Different writers prioritize them differently, but learning structures typically include:

1. Knowledge management (Koeck, 1998) (see chapter NN) i.e. systematically managing knowledge diffusion within organizations;
2. Knowledge transfer into the organization from outside sources and building absorptive capacity, trust, alliances and "relational capital" (Kale et al., 2000);
3. Formalization (documentation) of and dissemination of workers' knowledge (Nevis et al., 1997) across the organization;
4. Routine analysis of errors or accidents so as to reveal any systemic causes arising from the organization's structure or working practices;
5. Creating flatter managerial hierarchies with decentralized control (van Wijk et al., 2008), which supposedly encourage the spread of knowledge, especially a "whole-picture" understanding, of an organization (Morgan, 2007);
6. A focus on measuring key activities and outputs, with discussions of these metrics serving in themselves as a learning activity (Nevis et al., 1997);
7. Using a specialized quality or R&D department to enable work-teams to improve their work raises a firm's performance better than relying on audit (Koeck, 1998).

Nevis et al. (1997) argue that *LOs* have a preference for generating knowledge internally, but also do much environmental scanning. Then the focus of the learning cycle shifts to include activities aimed at reducing environmental uncertainty, for instance by learning what other organizations are doing, how they work (including their capabilities as *LOs*) (Garvin et al., 2008), and what their discourses and interests are (van Bueren et al., 2003).By establishing relationships with other organizations, an organization can create wider opportunities for learning i.e. generating and sharing knowledge (van Raak et al., 2005). It has even been argued that internal learning is becoming complementary or ancillary to inter-organizational learning, even obsolete (Li et al., 2009).

A climate for learning

Repeatedly the foregoing is summed up as creating a "culture" of learning and development. An *LO* would place a premium on the validity of information and knowledge (Lipshitz et al., 1996). But what knowledge? At the level of the production process, the knowledge will largely be technical. As for how to undertake the social organization of work, it is often assumed that an organization is a collection of individuals jointly acting as one collective actor pursuing a set of objectives (Argyris, 1992; Dixon, 1999). Hence the requisite knowledge would appear to be: how to achieve the organization's objectives more fully (Argyris & Schon, 1978; Fiol & Lyles, 1985; Lipshitz et al., 1996). The learning that a *LO* undertakes is performative. Individuals learn how to pursue their organization's objectives, and the organization learns how to pursue its owners' objectives; in for-profit corporations, typically "bottom-line performance" or "added value".

The trial-and-error character of the aforementioned learning cycles is usually assumed to require an organizational culture that tolerates open dialogue about multiple perspectives, uncertainty, contested viewpoints, the expression of doubts or criticism, the exposure of mistakes, and openness to acquiring in knowledge from outside the organization (Snell & Chak, 1998; Vassalou, 2001). For that, the workplace environment

must provide the "psychological safety" to do such things (Garvin et al., 2008), hence adopt a "no-blame" culture that tolerates bona fide errors (i.e. those arising from bad luck, unforeseen circumstances, human error) provided that practical lessons are drawn from them. As with technical "ambidexterity", an organization's culture also requires updating when its existing rhetoric becomes "debunked" or contested. Managerial managerial innovations, including that of the *LO* itself, can partly be understood as rhetorical rejuvenation of that kind (Driver, 2002).

HOW RELEVANT IS THE LEARNING ORGANIZATION TO HEALTHCARE?

Healthcare applications (often under other names)

Since they are complex adaptive systems (Anderson & McDaniel, 2000; Tsasis, 2009), the idea of becoming a *LO* appears attractive to health organizations. Elements of the *LO* ('*LO* approaches') can and have been applied in practice in healthcare organizations, sometimes but not always under the "*LO*" label. Like healthcare improvement activities generally (Ferlie & Shortell, 2001), *LO* has to be applied simultaneously at individual, team, organization and inter-organization levels.

Individual level

Much clinical work applies both of theoretical knowledge and practical, often manual and tacit, skills (Anderson & McDaniel, 2000). The maintenance and development of clinicians' personal competences makes a huge contribution to healthcare, something which becomes most obvious when these competences are lacking. The recently abolished UK National Patient Safety Agency estimated that medical errors harm around 300,000 people a year in the UK, ultimately killing 30,000 of them: to put this in perspective, a greater annual mortality than breast, prostate and colorectal cancers combined. Classen et al. (2011) suggest that up to a third of in-patients experience an adverse event, which for 6% of them means a prolonged hospital stay and being discharged home with a permanent or temporary disability.

What might establishing an *LO* contribute to reducing these numbers? At the level of individual learning, the "learning at work" and learning cycle elements of the *LO* are (under other names) already applied in healthcare, not least as a means of clinicians' professional self-development (Davies et al., 2007). The widely-used Plan-Do-Study-Act cycle (Berwick, 1996) which implicitly what structures medical audit and clinical audit generally, are instances of the learning cycles outlined above. *Total Quality Management* (*TQM*) (see chapter XX) is another instance of such double-loop learning. Clinical work often requires considerable discretion, even with simple technologies, for example because of the unforeseen complexity of patients' care needs or circumstances (Abrahamson Löfström, 2013). (Crites et al., 2009; Wenger, 2000) argue that the application of *LO* methods can be used to bring even tacit knowledge into the organizational learning of healthcare providers. So, paradoxically, *LO* models for individual learning can be used to standardize clinical care processes so as to improve reliability (Resar, 2006) and safety. However *LO* activities at the individual level require protected time and reflective practice (Rushmer et al., 2004).

Secondly, healthcare depends heavily on the application of scientific knowledge, whose development continues to accelerate. Healthcare innovations are time-limited

(knowledge changes), for which cyclical *LO*-like review methods are required (Rushmer et al., 2004). The assumption that clinicians' learning therefore needs to be lifelong is an obvious way to assist the timely unlearning of ineffective or wasteful working practices and assist their replacement with evidence-based alternatives (e.g. by requiring doctors to justify their decisions to over-ride prescribing protocols). *LO* emphasizes the translation of external knowledge into working practice and the *LO* learning cycle readily accommodates, legitimates, structures and guides ways in which practitioners adapt and apply external knowledge and guidance in their own practice. Consequently the *LO* can also be represented (Crites et al., 2009) as a way of reducing the translation gap between evidence-based medicine and clinical practice.

Thus a *LO* is one way to focus and harness clinicians' tendency to value education, learning, science and personal development, and thereby also increase their work satisfaction and organizational commitment (Jeong et al., 2007). The anti-bureaucratic tone of *LO* rhetoric may also appeal to independent-minded professionals (Giesecke & McNeil, 2004). However, the *LO* also suggests the value and feasibility also suggests the value of using less formal learning activities, such as study circles and coaching for the less skilled staff involved in care of the elderly (Abrahamson Löfström, 2013).

Team level

In healthcare, an *LO* would at team level focus on learning "design and make" activities. The individual learning methods described above have been extended across whole professions. Thus clinical audit originated in the UK, and parts of the US in the 1990s as medical audit, with analogous uni-professional audit (nursing audit, physiotherapy audit etc.) developing in parallel. Communities of practice were originally conceived as networks, often uni-professional (Lave & Wenger, 1991; Li et al., 2009), through which practitioners validate, combine, revise and apply in their own practice guidance or knowledge generated by other organizations (Crites et al., 2009). These communities of practice thus combine two elements of the *LO*: cyclical learning "in work", and seeking knowledge form external sources to apply locally.

Of growing relevance, given the growing proportion of patients with multiple chronic conditions (now around half the number of hospital bed-days used in many health systems), are multi-professional care teams. An important application for the *LO* in healthcare is therefore learning how to combine separate clinical or therapeutic techniques into a coherent sequence of activities across different settings (the patient's home or workplace, the clinic, the hospital ward etc.) i.e. as a coherent "integrated" care pathways and model of care. Applying the *LO* approach to team learning, especially that of inter-organizational care teams, has therefore been represented (Tsasis et al., 2013) as a way of promoting the "integration" of disparate health services. Another important example of this approach, again not usually badged as *LO* activity, is case management, whose basic principle is that a multi-professional team is responsible for the care of a patient with on-going complex care needs. One member of the team coordinates care, but when the patient enters case management the team as a whole assesses the patient's health, other circumstances and needs, agrees what action has to be taken (care plan, treatment plan), then reviews the patient's condition either periodically or when it changes substantially (e.g. following an event such as a fall or reaching a new stage in the progression of the disease). These reviews can also be used to analyze what the team's work-processes contributed to the eventual patient outcome (Crites et al., 2009). At need, it is possible not only to review what inputs the patient receives, but who will now manage the case and how; another example of how complex, non-programmable clinical tasks can through an

LO-like approach become sources of "double loop" learning.

Organizational level

Hospitals and other health organizations already have a large repertoire of individual learning, team learning and evidence-translation methods. Their learning structures often already include active *Knowledge Management* (see ch. MMM), in particular actively gathering new scientific and epidemiological knowledge, and models of care, outside the provider for feedback into the hospital's or clinic's internal learning (Crites et al., 2009). about and service development at individual and team levels (Tsasis et al., 2013). The *LO* provides a framework through which to assemble a bricolage of such learning structures and combine then into a system for producing coherent innovative models of care (Anderson & McDaniel, 2000). Constant reiteration though several channels makes individual and team learning prominent among the large amounts of information and guidance that clinicians have to digest. It also reduces the risk that *LO* activities remain dependent on one or a few individuals (Abrahamson Löfström, 2013), hence fragile.

At both individual, team and whole-organization levels the use of outcome measurement as a basis and stimulus for learning already comes naturally to health organizations. Management information systems to harvest routine data for this purpose from medical records and payment systems is in some healthcare organizations well-established (Tsasis et al., 2013). In particular, many health organizations have routinized the analysis of accidents, errors, near-misses, reliability failures and "untoward incidents". (Resar, 2006) argues that the secret of success in doing so is to focus on just a few key clinical processes at once. Many hospitals have a specialized quality management or R&D department for these purposes, although often internally-focused on audit, quality and safety monitoring rather than gathering knowledge externally.

Insofar as an organization's culture is the product of management activity (Marshall et al., 2003; Scott et al., 2003)) rather than a reflection of existing working practices, an important part organizational-level activity for sustaining the hospital or clinic as a *LO* model is to promote a culture or climate for learning which above all supports learning at team level (Ferlie & Shortell, 2001). Part of this culture is a culture of openness (Rushmer et al., 2004). That healthcare staff will share information, especially between professions, – which cannot be taken for granted (Ferlie et al., 2005) and therefore requires managerial and senior clinician intervention to sustain it. It also requires a culture of psychological safety (Carmeli & Gittell, 2009) i.e. confidence that exposing the need to learn how to improve existing working practices will not bring punishment down upon the informant or "whistleblower". An managers' style of work, above all inclusiveness, appears to help create such a climate (Nembhard & Edmondson, 2006) .The importance of this part of the *LO* has unfortunately, been confirmed by its absence in some NHS hospitals where highly centralized management, and a bullying culture of "targets and terror" severely compromised patient care (The Mid Staffordshire NHS Foundation Trust Inquiry, 2010).

Inter-organizational level

It has even been suggested that whole health systems can become like *LOs* in many respects. Health organizations' learning-about-learning is often accomplished by informal communications, exchange work-placements across other organizations (Davies & Nutley, 2000) and participating in inter-organizational networks. Care networks undertake the cross-organizational management of patients who need services from many organizations at once (e.g. stroke patients, see Tsasis et al., 2013). Program networks promote and help

implement a particular model of care e.g. the health-promoting hospital (Pelikan et al., 2001). In the NHS, for example, such networks were established after 1995 with a heavy practical emphasis on hospitals, Primary Care Trusts and other organizations collaboratively using *LO*-style methods to help implement updated standards of care (Sheaff et al., 2011).

Learning Organization: limitations for healthcare

Against all this, simply copying some of the assumptions and applications of the *LO* model from other sectors (e.g. manufacturing, finance) into healthcare is problematic, either because of the obstacles to implementation, or because some of these assumptions, aims and methods are irrelevant, misconceived, or beyond a single healthcare organization's power to influence.

One obstacle concerns clinical "learning at work". The links between a healthcare process (including a newly-learned one) and its outcomes are often tenuous (Resar, 2006). Hence, the connections can only be learnt through large-scale formal research rather than informal learning-at-work.

In healthcare, vested professional interests can often inhibit innovation and (Anderson & McDaniel, 2000; Ferlie et al., 2005) and make knowledge transfer "sticky" (professionals are at times reluctant to share their specialized knowledge with other occupations) (Ferlie et al., 2000). Vested professional interests are also a source of resistance to management initiatives generally (Ferlie & Shortell, 2001). These vested interests include trade secrets: for example, by not training ophthalmology technicians to do simple cataract extractions under supervision, this relatively simple, and in private practice well-paid, procedure could be reserved for senior ophthalmologists. The same factors tend to protect variation in clinical practice (Resar, 2006). It may also be counter-cultural for professionals – especially doctors – trained and viewing themselves as experts to view themselves as learners (Anderson & McDaniel, 2000). Clinicians often find difficulty in accommodating and tolerating mistakes, as the price of learning, in activities where (as noted above) the consequences of mistakes can be fatal. Managers' power paradoxically increases as organizations become more informally structured (Örtenblad & Koris, 2014), and insofar as doctors perceive that, it may lessen the attraction of partly informal managerial methods such as the *LO*.

The path dependency of the organizational learning on which the *LO* relies can be a mixed blessing insofar as it involves persistence of professional silos, jurisdictional disputes, and petty wars of professional status. Health organizations are "multicultural" (Ferlie & Shortell, 2001); professional cultures persist alongside managerial promoted ones, as do multiple professional cultures whose education, learning methods, and jurisdictional assumptions are often misaligned (Wilkinson et al., 2004). In healthcare (Davies & Nutley, 2000) as elsewhere, trust among its internal "stakeholders" is a requirement for an *LO*, but when managers have to persuade diverse, rival constituencies to implement the same policy it becomes useful, indeed rational, for them to keep policy or managerial objectives ambiguous or obscure (Sheaff et al., 2009). This is an obstacle to learning, evidence-basing and knowledge transfer (Coff et al., 2006). Since the construction of a *LO* is only a means to the organization's wider ends, the prioritization of other targets or the pursuit of narrow, over-stable aims, centralized control may practically "crowd out" concerns about becoming a *Learning Organization* (hence, of course, not all changes in working practices result from "*Learning Organization*" activities, see Gherardi, 2001).

Primary care, especially in USA but also in Britain and Germany, is largely a

"cottage industry" of fragmented, scattered small-scale partnerships (Davies et al., 2007) and (still) many still single-handed doctors. This small scale limits the scope for learning within a single practices, and maybe also from nearby ones if they are seen as competitors. The same problem of small scale applies to the fragmented, casualised workforce in residential care homes, especially in care for elderly, in many health systems, although there is evidence (Abrahamson Löfström, 2013) that *LO* approaches are feasible even there. Independent GPs' role as the proprietors of small businesses may also inhibit an egalitarian learning culture (Rushmer et al., 2004).

Similar obstacles confront most management initiatives in healthcare organizations, and these practical obstacles to not amount to objections in principle to the *LO*. More radical objections arise from *LO* assumptions which are either irrelevant to healthcare, incoherent or just wrong.

One such assumption is that *LOs*, for instance in primary care (Rushmer et al., 2004), either require or actually develop "flatter hierarchies". The foregoing arguments suggest that this is a red herring for health organizations; flatter hierarchies are neither obviously necessary nor obviously unnecessary for an *LO* in healthcare. However, the above arguments about the increasing importance of coordinated care for people with multiple long-term morbidities implies that team learning in healthcare does require not professional "silos" but multi-professional organizational structures: not so much "flatter" as "wider" structures (which in an inter-organizational setting will not be hierarchies anyway, but networks). Similarly, the community of practice model can certainly be implemented in healthcare – one of the first to be described in those terms was a learning community of midwives (Lave & Wenger, 1991) – and often is seen as a variety of learning-organization (Li et al., 2009). The same argument that "flat" structure is less important, for implementing *LO* approaches at team level, than a "wide" structure applies to the community of practice.

Of rare or doubtful relevance to healthcare too is the original rationale for the *LO*. *LO* ideas were initially justified and gained managerial popularity partly as a putative means of restoring US, and to lesser extent western European, firms' declining market shares in the face of increasingly competitive far-eastern manufacturing in the 1980s (Contu et al., 2003). In many health systems, competitive advantage is almost irrelevant to the care providers (and also to the payers, in Beveridge systems found in Scandinavia, around the Mediterranean, in the UK, Australia and New Zealand). Many providers have either a legal or a de facto geographical monopoly, and when they do not the demand or (differently) need for their services often exceeds the supply. Few health organizations have international competitors.

LO writers often assume that learning or organizational culture or both are independent variables which affect organizational performance (Gherardi, 2001) and can therefore be managed so as to improve it. However the relationship is more complex than that. An organization's culture also, perhaps primarily, reflects its existing working practices and power-relations (Schein, 1996). If so, the main locus for interventions to produce a *LO* has to be individuals', and above all teams', the working practices, with culture change as a consequence. Furthermore, as noted above, in healthcare organizations multiple different cultures usually coexist: managerial culture, a distinct culture for each profession, perhaps also a trades culture, etc. Since these stakeholders' interests are corresponding diverse, the purpose and desired character of *LO* activities may be contested (Contu et al., 2003). Li et al. (2009) document the development of the "*Learning Community*" from a means of personal growth into a corporate management tool, and one would expect the same to apply to the *LO*.

In healthcare, some conditions which *LO* models assume lie partly or wholly beyond

a provider organization's powers to influence. Healthcare providers can actively initiate learning and internal knowledge generation about local working practices and models of care, but for the basic science underlying health, most learning occurs perforce in research centers, pharmaceutical and equipment firms and, to a lesser extent, university hospitals. Furthermore this external environment is often hostile to learning. Business imperatives have been alleged to motivate the non-publication of RCTs or other research whose findings might de-bunk pharmaceutical or other firms' (Gold & Studdert, 2005) marketing claims, and motivate the selective publication of "positive" findings. Thus business-sponsored trials of vaccines were more than four times less likely to report mixed or negative findings about the product under test than were other published trials (Manzoli et al., 2014). "Sponsor-dependent" differences in non-publication rates are reported for numerous trials of diverse types of therapeutic agents for various diseases. Other, more subtle distortions of research findings are not rare (Altman & Moher, 2013; Ioannidis et al., 2013).

As for the market environment, so for the policy environment, at least for highly politicized health systems such as the NHS. Over-centralized management appears to inhibit organizational learning and the production of new knowledge (Crites et al., 2009), both essential ingredients of the *LO*. At whole health-system level the NHS managerial regime has been described as one of "targets and terror" (senior managers are dismissed for failing to achieve centrally-defined targets such as reducing hospital waiting times) (Bevan, 2006). Strong external monitoring appears to inhibit organizational learning (Davies & Nutley, 2000). The Francis inquiry (The Mid Staffordshire NHS Foundation Trust Inquiry, 2010) revealed the lengths some NHS managers went to, to ensure that their own superiors, the government and public should not learn the reasons for what occurred in their hospital. Managers in politicized health systems also face incentives, at times, to adopt symbolic policies whose main purpose is demonstrate to policy-makers or the public that something has been done to address an ongoing problem, or to demonstrate adherence to a policy, for instance by implemented some favored managerial panacea, such as the *LO*. There is a paradox, if not a self-contradiction, in the ideas "controlled empowerment" or an "imposed *LO*" (Rushmer et al., 2004; Wilkinson et al., 2004).

Contu et al. (2003) ask: who could be against learning? Yet one might still ask whether certain things are worth learning at all. Learning how to provide safer healthcare is one thing; learning how to sell, say, unnecessary cosmetic surgery is arguably less worthwhile, for the patient if not the provider.

Adapting LO to healthcare

These difficulties pose the question of how to adapt the *LO* model for application to healthcare, and suggest the following revisions.

In healthcare organization, a particularly important application for the "learning at work" component of the *LO* is to those care pathways which extend across professions and/or organizations. One way to do so is to exploit patient transfers and hand-overs (e.g. those between nursing shifts) which probably already are occasions for informal information exchange, as occasions for informal learning at work, and to share knowledge generated by P-D-S-A cycles and other *LO* activities (Rushmer et al., 2004). Doctors' seniority and privileged position places an onus particularly upon them to lead by example (otherwise, they become an influential obstacle to the *LO*). For this purpose negotiative ("soft") approaches to problem-solving are generally more useful than directive ("hard") styles of management that rely heavily on formal organizational structures (Tsasis et al., 2013). Nevertheless it is also necessary, in healthcare, to distinguish clearly between the

areas of work where discretion and experimentation (an *LO* approach) is permissible and those where it is not, for example in regard to obtaining informed consent to treatment and maintaining patient safety (which often involves strict protocolization of care). Where discretion is not permitted, an *LO* approach is limited to methods for implementing a protocol, not revising the protocol itself or the law. Where discretion is permitted, a healthcare *LO* will still have to be so designed as to distinguish mistakes due to learning or the individual variation of patients from those due to systemic errors, criminality, professional incompetence or negligence.

For the mutual reinforcement of different elements of the *LO*, it is not only necessary synchronize *LO* activities across all four of the above levels (individual, team, organization, inter-organizational network) (Alexander et al., 2001). Health systems contain strong professional networks for learning purposes, networks which coexist with managerial structures but function largely independently of them (Noordegraaf, 2011). *Learning Organization* activities in healthcare therefore also have to contain ways of aligning these different types of learning structure too. A final adaptation is that for most health organizations, the main use of the *LO* in adjusting to the hospital's or clinic's external environment is not so much for competitive advantage as to adapt health services more successfully to to the constantly-shifting demographic, epidemiological and social factors causing – or preventing – ill-health continue to change (Pelikan et al., 2001).

PANACEA OR IRRELEVANCE?

What an organization needs to learn depends upon its objectives, even for technically similar organizations under different ownership; a warning against over-general prescriptions for constructing a *LO* (Tsang, 1997). The number and complexity of the conditions for, and constraints upon, creating a *LO* in healthcare suggests that a contingency theory is required (Örtenblad, 2013). The foregoing chapter suggests some hypotheses. First, *LO* approaches appear more straightforwardly applicable to clinical than managerial work, especially when goal alignment and compatibility of interests among a health organization's different "stakeholders" are weak. Public and third sector organizations appear to face weaker competitive incentives than corporations withhold learning from other organizations, but a highly politicized and internally professionalized health system also appears unfavorable for transparency and learning. Nevertheless, the *LO* does appear applicable in many respects to many kinds of health organization. What is so far scarce is comparative empirical research into the feasibility and consequences of trying to implement that managerial innovation for different kinds of care groups and in different kinds of organizational setting.

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