

CHANGE, GROWTH AND LEARNING

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Abstract

Companies desiring to keep and improve their competitive advantage must be flexible enough to undergo change when needed. Meaningful change requires the ability to learn from their own as well as from others' experience. But learning is not easy, and there are many factors that may prevent it from happening. This paper explores existing literature and provides a classification of the different obstacles that may appear along the way. At the same time, without pretending to be exhaustive, it suggests some solution lines.

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Companies that master new business creation build a bulwark against obsolescence, generate vital paths to growth, and offer top talent compelling opportunities to create the future

(Wolcott & Lippitz, 2010, p. 231).

The time has gone when the ideal for a company was to reach a position of equilibrium as a smooth-running money machine by following a rational, linear strategy. Experience tells us that this situation – if it ever comes – easily leads to stagnation and inability to respond to an increasingly changing environment. Companies need to develop flexibility, they need to learn how to deal with growing complexity. They need not only to adapt to the current environment but to anticipate future trends. In both cases, companies must undertake actions such as redesigning products, redesigning businesses, creating new business models in order to meet the needs of most diverse global clients, and so on. In other words, they have to *change*, but it is not change for the sake of change but a *meaningful* change that is needed. *Intrapreneurship, innovation, or new business creation*, are nowadays expressions familiar to outstanding CEOs, who know that identifying or creating profitable opportunities is one of the most important managerial responsibilities.

If this is true for all companies, it is even more so for those that, because they are starting or because they need to get out of a period of stagnation, have the goal to grow. Well-developed growth strategies allow for: new services to clients, new opportunities for people's professional development, new jobs, new sources of value creation, and so on. Thus, again, internal growth means change, and change is not easy, especially in organizations that are already well-established. It is often easier to grow things from scratch than to change processes, mentalities, or behaviors.

Change and learning are closely related. For change to be meaningful, it must be based on some knowledge and previous experience, either one's own or others'—the contrary is random change, in which success will depend entirely on chance. This is why forward-looking companies 1) connect with and learn from the outside world, making cooperation alliances with inventors, researchers and other companies, 2) foster and cultivate in-house innovation, and 3) keep record of past negative and positive experiences. At the same time, to be fruitful, change must lead – if not directly to performance improvement – to some kind of learning; thus, even failed change processes become useful.

We have highlighted here the importance of learning for leading change and growth in organizations, but learning is not easy, and there are many factors that may prevent it from happening. In this paper, we will pay attention to these factors.

Obstacles to Learning

“Learning does not always lead to veridical knowledge. (...) Entities can *incorrectly learn*, and they can correctly learn *that which is incorrect*.” (Huber, 1991, p. 89, emphasis added)

There are a series of circumstances and individual and organizational behaviors that act as learning inhibitors or are the cause of certain learning disabilities. The result is that the process of learning itself may become flawed or what has been learned is not really useful for the organization or is even counterproductive. Making use of several experts' insights, we will explore all these mechanisms, whose destructive power is often all the greater for being unnoticed.

Shortcomings in Learning Conditions

For learning to happen, organizations and their members must comply with certain conditions. These characteristics may refer to learners and also to the environment. Learners may lack the right competences or abilities, motivational aspects may have been neglected, and the environment both internal and external to the organization may be hostile to learning.

Deficiencies in Learners

First of all, *lack of attention* or heed-mostly because of ingrained routines-may lead to overlooking new opportunities, ignoring danger signals or not detecting lessons from past experience. Often this phenomenon has become structural when the whole organization has adopted a generalized single-loop learning style (Argyris, 1976). This means that root causes are never examined and basic assumptions and principles are never questioned in the face of new events. On other occasions, even if emerging new knowledge is acknowledged, the organization or individuals may *lack absorptive capacity*, i.e. the ability to assimilate and make good use of this knowledge. Other capacities that may be flawed are *organizational memory* or knowledge repositories (which may be insufficient, biased, overloaded, disorganized, or obsolete), and *social competences*. Regarding the latter, many problems in learning processes come from troubled social relationships within the organization or among key individuals. Finally, sometimes it is the *receptivity to corrective feedback* that is lacking.

A different group of conditions are *goals and expectations*. Learning aims at success, but defining success in each case is not easy, because it depends on what criteria are applied and by whom. What is considered success here and now may not be considered success in the future, or in other parts of the organization. On the other hand, a high level of expectation leads to a learning cycle; the contrary is a vicious cycle of low expectation-low investment in exploration.

Goals and expectations are closely related with *motivational issues* such as self-efficacy, empowerment, and incentives to share information. Self-efficacy is the belief in one's power to achieve certain goals. If it is insufficient (i.e., a feeling of powerlessness) or excessive (i.e. overconfidence), this distorted self-view has an effect on the amount of effort invested, the orientation of decisions (e.g., conservative or risky), and subsequent learning processes. And this mechanism works both at the individual and collective level. Support by superiors, real decision power, and the establishment of objective measures of actual capabilities are indispensable for avoiding these problems.

Table 1

Shortcomings in Learning Conditions

SHORTCOMING	ALARM SIGNALS	SOLUTION LINES
<p>In learners:</p> <ul style="list-style-type: none"> -lack of attention -lack of absorptive capacity -problems in organizational memory -lack of social competences -lack of receptivity to corrective feedback 	<ul style="list-style-type: none"> -Routinely giving the same response -Overlooking essential facts -Much input and little output (locked-out syndrome) -Not-invented-here syndrome -Re-inventing the wheel -Key employees exploit their power position -Leaving key employees take their knowledge with them -Lack of repositories -Wrong filtering of information -Data overload -Information is not organized -Information is not easy to retrieve -Information is not updated -Data destruction -Undesired leaks -Tensions among individuals, groups and individual-group -Bad communication -Blaming others -Ignoring failure (See Table 5) 	<ul style="list-style-type: none"> -Establish analysis mechanisms to review past actions -Control the amount of fronts each individual/group has to face -Capture details while keeping focused on the essential -Invest in personnel development and expertise (e.g. by rotating personnel) -Cultivate diversity and redundancy (slack) -Create 'boundary-spanning' or 'receptor' roles -Invest in organizational memory -Establish collaboration and knowledge-sharing mechanisms -Revise/implement organizational routines and standards and other organizational memory mechanisms as well as the related IT support systems -Establish levels of access to knowledge (gatekeepers) -'Collective conscience': shared language, symbols, goals -Fluid communication channels -Detect and reduce parochialism -Foster a culture of transparency -Cultivate a certain level of tolerance to mistakes. (See Table 5)
<p>Related to goals...</p> <p>...and expectations</p>	<ul style="list-style-type: none"> -Bad goal definition: either they are not clear or they are mistaken -Overoptimistic expectations -Low expectations 	<ul style="list-style-type: none"> -Clear definition of success indicators -Clear criteria for appraisal -Objective performance measurement -Objective measurement of capabilities
<p>In motivation</p>	<ul style="list-style-type: none"> -Feeling overconfident -Low self-efficacy (feeling powerless) -Lack of support by superiors 	<ul style="list-style-type: none"> -Objective measurement of capabilities -Objective performance measurement -Flatten hierarchical structures -Introduce real participation mechanisms -Support and encourage learning and its facilitators

A Difficult Environment

Environmental conditions are crucial for learning to happen. And here we are referring to the organization's external *and* internal environment.

An entrepreneurial outlook entails a proactive attitude that makes a difference in the way a firm faces the challenges posed by its **external environment**. This means, first of all, that the environment – i.e. market conditions, technology, and social and political situation – does indeed influence how firms learn and behave.

The first characteristic we could examine is the *level of turbulence* within the environment. By 'turbulence' we mean rapid changes, along with a high level of uncertainty. There is a general agreement among experts that an excessively turbulent environment or too much calm is harmful for organizational learning. In the former case, if turbulence is excessive, the organizational system becomes overloaded (a manager ironically talked about a "target-rich environment"), and it loses the ability to orientate or map the situation. Too much turbulence produces a stress that may paralyze potential learners. It takes time for organizations in this situation to start learning from it. In the latter case, outcomes become highly predictable, the organization becomes trapped in its own success (the "competence trap") and increasingly dependent on well-trodden paths, underinvests in innovation, and finally finds itself unable to respond to new challenges.

Therefore, a certain tolerable level of turbulence may be beneficial. Where the limits of this balance lie depends on the organization's tolerance threshold. The key is the firm's capacity to reflect on its own learning conditions (i.e. capacity for meta-learning). This is the reason why authors such as Nonaka (1994) distinguish between "creative chaos" and "destructive chaos". In other words, although certain levels of environmental disruption are intolerable for most organizations, internal meta-learning competences may provide an explanation that goes beyond mere luck for how some organizations manage to survive and even make a profit in very adverse circumstances.

Another important component of the environment is *market conditions*. This refers not only to competitors' competence; aggressiveness and power matter. Customers – e.g. if they are demanding, collaborative or they become competitors – and suppliers – e.g. if they are innovative and provide quality products – may also affect learning, because they influence knowledge sharing. The same can be said about industry standards and product ownership issues.

The general level of technological development of the society in which the organization operates is also very important: a high level of development is a stimulus to emulation, improvement and new product creation. Government regulations also play an important part, especially where bureaucracy is high or interventionist policies are implemented, which both have constraining effects on companies' field of action. On the other hand, one may find political contexts – such as young democracies, or countries undergoing reconstruction processes – in which, for different reasons, there is a remarkable absence of regulation in the field. This context may not be as favorable as it may seem at first sight, because it may open the door to a competition ruled by the law of the jungle, which includes a series of issues regarding monopoly, unfairness or ownership of technology and knowledge. Similarly, socio-political instability and adverse economic conditions are obstacles to learning, although in the case of the latter, there are examples of successful organizations that have been able to view economic recession as a good opportunity for learning and producing value through innovative solutions.

Table 2

A Difficult External Environment

DIFFICULTY	ALARM SIGNS	SOLUTION LINES
<p>Turbulence:</p> <ul style="list-style-type: none"> -High (frequent, unpredictable changes; high uncertainty) <p>-Moderate</p> <ul style="list-style-type: none"> -Low (everything runs smoothly according to plan) 	<ul style="list-style-type: none"> -The organization introduces random changes in an attempt to cope -Organizational system is overloaded and becomes paralyzed -High level of stress <ul style="list-style-type: none"> -Difficulty in mapping -Old principles start failing <ul style="list-style-type: none"> -Self-complacency that leads to paralysis -Underinvestment in exploration -Overinvestment in exploitation 	<ul style="list-style-type: none"> -Stop random changes: focus on what you are doing well -Assume that learning will take more time than usual -Develop internal meta-learning competencies to strengthen the organization -Screen for internal/external talent <ul style="list-style-type: none"> -Exploit creative chaos: start a phase of change -Invest in R&D -Scan for trends <ul style="list-style-type: none"> -Introduce programmed crisis into the organization (e.g. challenging basic assumptions and principles) -Invest in R&D
<p>Market conditions:</p> <ul style="list-style-type: none"> -Competitors are: -Aggressive <ul style="list-style-type: none"> -Competent <ul style="list-style-type: none"> -Customers are: -Demanding <ul style="list-style-type: none"> -Collaborative <ul style="list-style-type: none"> -Competing <ul style="list-style-type: none"> -Suppliers become competitors 	<ul style="list-style-type: none"> -The organization is always overtaken by competitors in terms of popularity <ul style="list-style-type: none"> -Competitors' products always have a quality edge <ul style="list-style-type: none"> -Focus on matching clients' requests may lead to shipping problems -Customers take the power under the threat of quitting <ul style="list-style-type: none"> -Customers start to monopolize product creation -Danger of knowledge leaks <ul style="list-style-type: none"> -As a consequence of knowledge leaks <ul style="list-style-type: none"> -Suppliers learn rapidly and start substituting the receiving organization 	<ul style="list-style-type: none"> -Choose the target: first or second-best in market? -Invest in quality development -Acquire talent -Look for/create new niches <ul style="list-style-type: none"> -Invest in marketing -Improve quality standards <ul style="list-style-type: none"> -Distinguish good service from servility -Diversify clients to avoid depending on a few, powerful ones <ul style="list-style-type: none"> -Establish clear-cut collaboration protocols -Strengthen access restrictions <ul style="list-style-type: none"> -Create alliances with customers (and go back to above) <ul style="list-style-type: none"> -Invest in R&D to stay at the edge -Create alliances with suppliers
<p>Industry standards</p> <ul style="list-style-type: none"> -Too few 	<ul style="list-style-type: none"> -Difficulty to envision the niche -Lack of confidence and hesitation in customers -Ownership issues 	<ul style="list-style-type: none"> -Work on quality to set the industry standards <ul style="list-style-type: none"> -Fight for a patenting system

-Too tight	-Creativity is constrained	-Focus on exploitation and make the best of them -Foster innovation to influence/modify industry standards
Government regulations -Lack of regulation -Excessive bureaucracy -Interventionism	-Disrespect for competition norms (monopoly and power games) -Ownership issues -Both ordinary and innovation processes are hindered. Difficulty in meeting stakeholders' demands - Both ordinary and innovation processes are hindered	-Invest in exploration -Look for legitimization abroad through patenting, alliances, listing, certification, and so on -Lobby to change regulations -Reduce and diversify exposure
Low general technological development (locally)	-Less resources available for solving problems -Less stimuli to emulation and improvement	-Scan for new technologies somewhere else
Social and political stability -Corruption -Instability	-Ethical dilemmas -Economic loss -External bad practices infect the organization -Difficulties in keeping the business running	-Maintain integrity towards all stakeholders -Establish mechanisms to prevent infection - Maintain integrity towards all stakeholders -Minimize risks -Reduce and diversify exposure
Adverse economic general conditions	-Difficulties in keeping the business running	-Cost-cutting policies -Negotiate solutions with stakeholders - Maintain quality as much as possible

The **internal organizational environment** may also cause difficulties to potential learners. Literature on the learning organization has dwelt extensively on the characteristics that an organization must have to enhance learning.

First of all, *learning resources* may be insufficient or they may not be available to all members of the organization. This results, for example, in deficient training for newcomers or in strategic areas, failing to create adequate structures for analyzing past experiences and experimenting in new areas, the impossibility of allocating time to these activities, and so on. A lack of control over resources, especially knowledge flows, may lead to imitation from competitors, with the consequent loss of competitive advantage. In this case, although the organization may learn, competitors also learn at its expense.

There are other obstacles related to the organization's *cultural, structural and political* traits. For instance, in excessively hierarchical and rigid organizations, excess control originates fear, mistrust and double-faced behavior. There are organizations that prevent learning from mistakes by penalizing them or their disclosure, with the result that their members perceive a lack of psychological safety. Tensions between organization members also lead to a failure to learn: competition for power, power abuse, misalignment between individuals and groups,

among groups or with the organization are different foci of tension. In addition, different forms of political maneuvering may lead to different forms of information distortion, such as incompleteness, bias, censorship, and so on. Although some scholars advocate them as the ideal learning ground, organizations with a fluid, flat structure are not immune either from these problems, especially when they become larger, because their potential loss of clear reference points may lead to anarchy. Having a participative structure, with little hierarchy and a leadership based on moral authority rather than power does not mean that it is fluid. In any human organization, goals, reporting systems and fields of competence must be clear.

A particularly important issue is the *misuse of IT and communication systems*. The existence of these systems has no doubt revolutionized – and continues to do so – the business world. However, some seem still influenced by the overoptimistic expectations typical of the 1970s and 1980s, and fail to understand their function as learning tools or enablers, and appear to believe that capturing and collecting information in an IT system is the same as learning.¹ Even if this is not the case, choosing the wrong tool for the organization – e.g. a data-oriented system instead of a ‘who-knows-what’ approach – may be a serious hindrance. Indeed, the practical or tacit aspects of knowledge require face-to-face interaction and will never be replaced by a virtual handbook. Finally, the emergence of new communication technologies may lead to the paradox where, although these tools reduce time and spatial distances and help cost-cutting and knowledge-sharing, they place more pressure on individuals, who now become available 24/7 and must make multiple decisions in such short periods of time that their reflection and learning become impaired.

Table 3

A Difficult Internal Environment

DIFFICULTY	SYMPTOMS	SOLUTION LINES
Availability of learning resources		(Is your organization a learning organization?)
-Poor learning resources	-Deficient training for newcomers -Re-invention of the wheel -Lack of time and/or structures to analyze outcomes -Exclusive focus on exploitation (vs. exploration) -Existence of silos	-Revise and improve training processes -Allocate time and other resources to rigorous analysis of previous outcomes -Invest in exploration -Permeate silos by launching transversal projects
-Not available for all members	-Parochialism, silos -Competition for power: power retention -Top-down management style	-Permeate silos by launching transversal projects -Establish knowledge-sharing mechanisms at all levels -Foster a culture of transparency
-Lack of control of knowledge flows	-Danger of knowledge leaks -Competitors imitate & learn at the organization's expense	-Establish levels of access to knowledge

¹ Here, the classical distinction between data (discrete items), information (organized data) and knowledge (information that has been judged according to the context and/or a theory) should be applied.

<p>Cultural, structural and political traits</p> <ul style="list-style-type: none"> -Rigid hierarchical structure -Penalization of mistakes and/or their disclosure -Tensions among individuals/groups inside the organization -Political maneuvering -Liquid structure 	<ul style="list-style-type: none"> -Power abuse -Fear and mistrust -Double-faced behaviors -Lack of transparency -Fear and mistrust. Low psychological safety -Double-faced behaviors -Re-invention of the wheel -Stick to what is strictly stipulated by contract -Parochialism, silos -Competition for power -Mistrust -Misalignment of goals and behaviors -Incomplete information -Biases -Censorship -Lack of transparency -Anarchic behavior -Silos -Competition for power -Lack of corporate goals -Knowledge leaks -Disintegration 	<p>(Most business problems are people problems)</p> <ul style="list-style-type: none"> -Reduce bureaucracy and layers -Make competences clear -Establish ways of effective participation -Establish mechanisms to control the exercise of power -Foster a culture of transparency -Allocate time and other resources to identification and rigorous analysis of mistakes, and experimentation -Cultivate a certain level of tolerance to mistakes. -Permeate silos by launching transversal projects -Individuate and straightforwardly manage rotten apples -Establish collaboration and knowledge-sharing mechanisms -Make sure that mission and values of the organization are 1) clear and 2) in line with the organization's structure and practices -Establish a clear reporting system -Establish collaboration mechanisms -Encourage organizational citizenship behavior -Foster a culture of transparency -Establish a clear leadership structure -Make competences and rules of play clear -Establish collaboration mechanisms -Encourage organizational citizenship behavior
<p>IT and communication systems</p> <ul style="list-style-type: none"> -Systems are out-of-date -Overconfidence in technology 	<ul style="list-style-type: none"> -Loss of competitive advantage -Processes are slow and inefficient -Younger employees feel frustrated -Tacit practical knowledge is not being learned, kept and/or transferred -Soft issues (e.g. trust issues, personal interaction, judgment, satisfaction, and so on) are neglected -Information and knowledge are taken as one and the same -IT department carries an excessive weight of responsibility in strategic matters 	<p>(Data, information and knowledge are different things)</p> <ul style="list-style-type: none"> -Assess talent in the IT department and improve it, if needed -Never adopt a new technology because it is <i>new</i> -Establish and measure how tacit practical knowledge is managed -Pay especial attention to issues—especially learning processes—involving personal attitudes and interpersonal relations -IT tools are enablers to learning, together with other mechanisms

-Systems are not well designed and/or used	-See "Shortcomings in Learning Conditions" (Table 1)	-See "Shortcomings in Learning Conditions" (Table 1)
-Chosen systems do not fit the organization's requirements	-Waste of time and resources -Low motivation to explore further new technologies	-Systems must fit the kind of product you are selling (e.g., standardized vs. tailor-made)
-Traits of new communication tools	-More pressure for 24/7 availability and quick response and less time to reflect, therefore: -Stress -Harsh decisions -Little learning occurs	-Fix a clear policy of use of these tools -Measure and moderate level of stress at work

Difficulties Specific to the Learning Process Itself

James G. March explored the different obstacles to learning along with Barbara Levitt (1988) and Daniel A. Levinthal (1993). Their works have been considered classical pieces in the organizational learning literature, specifically in the area of learning by experience. While we do not pretend to be exhaustive, we consider that their reflections, combined with those of many other experts, may be illuminating for actual practice. We group all these problems in two main clusters: first, the source of learning, experience, may itself be flawed or imperfect; second, learning, as a cognitive process, is limited – or *myopic* – by nature.

Flaws in Experience

Experience is considered to be the most important source of learning. However, experience may be a poor teacher: the context is continuously changing; experiential learning involves sampling problems and issues related with memory and history interpretation.

We could start by talking about the *sampling and data problems*. First of all, we encounter the problem that experience very often leans on a small sample of previous occurrences from which it is difficult to generalize. In these cases, organizations usually introduce experimentation as the main way of compensating for the lack of experience. To be successful, experiments must comply with certain characteristics, such as control over variables, rigorous documentation, clear measurement criteria, clear learning objectives, a proper timing and low risk, among others. High-hazard organizations, which need to learn from very rare occurrences, cannot use experimentation because of safety reasons. Therefore, they use simulation and other related learning strategies (see Table 4). Sample scarcity is not the only challenge: sometimes, it is difficult to extract the essential from the background noise, and this difficulty is increased if, instead of a few events, we have a very large collection of data. This is not an original problem: for example, it is affecting modern Internet users. We are immersed in an information civilization whose main problem is not even the reliability of the sources but, first of all, capturing the essential amidst the incidental. These issues are related with *organizational memory*, of which we have talked before.

In the case of learning from others' experience, there may be a *distance with respect to the source* of experience. Although this problem may be solved with new communication systems, there are some important elements that may not be transferred in this manner, especially when

tacit knowledge is involved. Note that here, when speaking of *distance*, it is not only geographical distance, but also cultural distance, or type of knowledge base.

In the third place, experience primarily remits to *time*. We use history as a basis for experience development, but history is always subject to interpretation and, hence, to interpretation frameworks. These frameworks may bias our own interpretation of facts: prevailing mindsets may blind sight to the point of denial of evidence. Interpretation frameworks are vulnerable to politics, which in turn originate processes of self-advocacy against evidence, and sticking to harmful practices. The situation may be worse if the frameworks used for interpretation are themselves hindering learning (e.g. a culture of control, lack of transparency, face-saving, mistrust, and so on). On the other hand, predicting the future simply by referring to the past is problematic in itself: assertions such as “it has never happened before so there is no reason that it will happen in the future”, “we have always been successful in this, so we will have no problem in the future”, or “we have never been able to overcome this problem, so there is no point in trying again” hide a form of delusion which Senge (1990) calls “delusion of learning from experience” and qualifies as a “learning disability”. Note that these forms of delusion may appear even when past issues are subjected to statistical analysis. The key here is that successive events may be similar, but they are never a re-edition of the same event – the devil is in the details –, even if no unforeseen contingencies occur.

Moreover, learning from experience requires a clarification of what is considered *a success*. We have already mentioned the ambiguity of success: indicators of success and levels of aspiration may change over time, and are also dependent on the various internal subcultures. Finally, as we will see soon, what is considered a success in the short run may be a failure in the long run. What is *success*, then? How do we measure it?

Last but not least, there is the danger of *superstitious learning*. This consists of an erroneous causal attribution of certain outcomes to certain behaviors. Routines (mistakenly) associated with success will be consistently followed, and the ones associated with failure consistently changed. Once again, in the face of both success and failure, a rigorous analysis of causes is necessary.

All the above-mentioned problems may appear both when learning comes from one’s own experience and when it comes from others’ experience (known as vicarious learning). The only difference is that, in the latter case, imitation must not be mistaken for mere mimicry: what has been successful in other organizations may not be successful in one’s own. Whether it is the adoption of new technologies, new practices or a new structure that have proven to be successful elsewhere, this process needs a very careful comparison and analysis of the similarities and differences between the source organization and the recipient.

Table 4
Flaws in Experience

FLAW	SYMPTOMS	SOLUTION LINES
<p>Sampling and data issues</p> <p>-Sample too small</p> <p>-Too many data and little clarity</p>	<p>-The organization is unable to learn from just a few events</p> <p>-Impossibility of distinguishing the essential from the incidental</p>	<p>(Can I learn from samples of one?)</p> <p>-Richer analysis of actual history in order to detect root cause of failure/success</p> <p>-If possible, broaden experience with experimentation/simulation</p> <p>-Foster “counterfactual thinking”, i.e., construct hypothetical “what-might-have happened” scenarios NB: These three procedures also allow for learning from close calls (i.e. quasi-errors)</p> <p>-Review history to individuate main facts and look for main variables and root causes</p> <p>-Establish recording methods that allow for rating data in terms of relevance, frequency, and so on</p>
<p>Distance from knowledge source</p> <p>-Geographical distance</p> <p>-Distance of culture and time</p> <p>-Different knowledge base</p>	<p>-Travel is costly, stressful and time-consuming</p> <p>-Directly applying past or others’ experience—even within the same organization—may end in failure</p> <p>- Directly applying past or others’ experience—even within the same organization—may end in failure</p>	<p>(Learning is not mere mimicry)</p> <p>-Use new communication technologies</p> <p>-Be aware that some knowledge requires face-to-face interaction to be acquired</p> <p>-Assess similarities and differences of current time or culture with respect to diverse historical and/or cultural contexts</p> <p>-Assess differences here to make sure of their relevance in the learning process</p>
<p>History interpretation</p> <p>-Biased interpretation frameworks</p> <p>-Flawed interpretation frameworks</p> <p>-“Delusion of learning from experience”</p>	<p>-Prevailing mindsets may be blind to essential facts</p> <p>-Politics may originate self-advocacy practices</p> <p>-Cultural traits, such as control, lack of transparency, face-saving, mistrust, and so on.</p> <p>-Projecting past into the future is risky: “It never happened before, so it will not happen in the future”</p> <p>-Routines coming from experience have a blinding effect onto new occurrences</p>	<p>(History never repeats itself exactly)</p> <p>-Challenge basic assumptions by fostering lateral thinking and creating hypothetical scenarios</p> <p>-Detect and address political maneuvering (see Table 3)</p> <p>-Address cultural issues (see Table 3)</p> <p>-Allocate time and other resources to rigorous analysis of previous outcomes</p> <p>-Challenge basic assumptions by fostering lateral thinking and creating hypothetical scenarios</p>

<p>Definition of success</p> <ul style="list-style-type: none"> -Indicators of success may change over time -Indicators of success depend on who sets them 	<ul style="list-style-type: none"> -What was a success in the past may not be so now -What is a success in the short run may not be so in the long run -Different subcultures may have diverse measures for success 	<ul style="list-style-type: none"> -Establish rigorous and objective ways of measuring success -Include trends in establishing criteria for success -Assess and improve internal alignment of all levels of the organization in terms of goals and expectations (see Table 3)
<p>Superstitious learning</p>	<ul style="list-style-type: none"> -Routines mistakenly associated with success are consistently followed -Routines mistakenly associated with failure are consistently avoided 	<ul style="list-style-type: none"> -Establish rigorous and objective ways of measuring success -Challenge basic assumptions by fostering lateral thinking and creating hypothetical scenarios -Richer analysis of actual history in order to detect root cause of failure/success

Shortcomings Inherent to Learning Itself

Myopia is described by Levinthal and March (1993) as a congenital trait of learning by experience. According to them, mechanisms of simplification and specialization lead to three limiting tendencies. These are: the tendency to ignore the long run, the tendency to ignore the larger picture, and the tendency to overlook failures.

Given that survival in the short run is a sine qua non for survival in the long run, organizations often focus on the former and ignore the latter. This behavior is at the basis of diverse problems which compromise the organization's survival in the long run: excessive specialization (at the expense of competitive advantage in the long run), power traps (typical of very powerful organizations that have shaped the environment), competency (or success) traps, and failure traps, all of them leading to the organization's inability to face new challenges or set new goals. The "not-invented-here" syndrome appears as a consequence of an excessive path dependency, and runs parallel to a self-reinforcing low aspiration-low investment in exploration cycle. When organizations concentrate on achieving excellence by developing certain specific competences, it is important that they avoid becoming trapped by their own search for success. With this aim in mind, Hurst (1995) proposes a series of steps to 'pre-emptively' create periodical crises in the organization.

The second myopia is that which leads to *overlooking distant places*. Specialization leads to focusing attention on certain components of the system at the expense of others. When learning only occurs in certain subunits of the organization and the rest of the organization piggybacks on the effort of a few – thus under-investing in exploration –, there is a decline in the overall level of knowledge developed by the organization and a downward spiral is generated. Decline is faster if there is no cross-learning between the different subunits. In conclusion, survival of certain components of the system does not guarantee survival of the whole system, just as survival of the organization does not guarantee survival of the economy and society or of the people in the organization. Excessively bureaucratic, control-focused, hierarchical regimes in organizations create the ideal milieu for parochialism, lack of information flow and self-defensive attitudes which in turn accelerate these learning dysfunctions.

The third myopia is *the overlooking of failures*. There are many mechanisms in organizations that may lead to this phenomenon. On one hand, acquiring competence not only may lead to competence traps, it also results in a self-assurance effect that makes learners increasingly rely on their expertise to the risk of exaggerating the likelihood of success. Social psychology studies coincide in that self-efficacy (the belief that agents have in the efficacy of their actions) is beneficial, but the dose of self-efficacy must be moderated by reality. Note that the process also works the other way: when success is very rare, there is the risk of becoming under-confident. On the other hand, policies that penalize failure (or failure disclosure) may force this myopia into the organization. This problem also includes the tendency to attribute success to one's own ability and failure to bad luck or others' incompetence.

In both cases, a very important part of learning from experience is blocked, namely, *learning from failures*. Given that both common sense and a large body of empirical data support this idea, it is surprising that most managerial and business literature directly addressed to practitioners focuses almost exclusively on personal and organizational success. Indeed, many scholars consider previous errors to be the spur of learning. The roots of this third myopia are to be found in different traits that have already been mentioned: a culture that punishes disclosure of negative issues, lack of trust, unwillingness to face complex problems, resistance to change, and so on. Cannon and Edmondson (2005) provide an interesting analysis of these technical and social barriers to the activities – identifying failure, analyzing failure and deliberate experimentation – that lead to learning from failure.

We should not conclude this subject without mentioning another interesting area that is often ignored, which is *learning from quasi-errors*, i.e. close calls. It is an interesting extension of the classical learning-from-experience that requires entering the territory of “what-might-have-been” by using both reasoning and imagination. Thus, the same imagination that is crucial for product innovation is a sine qua non for framing hypothetical situations – in both better and worse scenarios – as richly as possible in order to improve performance. According to March et al. (1991), this is one of the ways of compensating for the lack of samples, e.g. in high-hazard industries, in addition to a rich analysis of the extant – though scarce – historical records of catastrophes and the construction of entirely hypothetical cases.

Table 5

Shortcomings Inherent To Learning

SHORTCOMING	SYMPTOMS	SOLUTION LINES
Ignoring the long run		
-Excessive specialization	-Loss of versatility and competitive advantage	-Always keep an eye on the broader context -Diversify products to avoid becoming excessively dependent on one
-Power traps	-Powerful organizations that have shaped the market find themselves unable to face environmental change	-Diversify products to avoid becoming excessively dependent on one -Scan for trends
-Path dependency	-Competency traps: organizations stick to what they have been doing well at the expense of exploration	-Foster double-loop learning -Challenge basic assumptions by fostering lateral thinking and creating hypothetical scenarios

	<ul style="list-style-type: none"> -Failure traps, which lead to a self-reinforcing low aspiration-low investment in exploration cycle -Not-invented-here syndrome -Inability to change 	<ul style="list-style-type: none"> -Richer analysis of actual history in order to detect root cause of failure/success -Allocate time and other resources to identification and rigorous analysis of mistakes, and experimentation -Cultivate a learning culture
Ignoring the whole picture	<ul style="list-style-type: none"> -Certain parts of the organization learn at the expense of others -Parochialism, silos -Not-invented-here syndrome 	<ul style="list-style-type: none"> -Cultivate a learning culture -Incentivize innovation in all units of the organization -Establish knowledge-sharing mechanisms at all levels
Ignoring failures	<ul style="list-style-type: none"> -Competency traps: organizations stick to what they have been doing well at the expense of exploration -Overconfidence -Penalization of mistakes and/or their disclosure (see Table 3) -Failure is blamed on bad luck or others' incompetence or bad faith -Unwillingness to face complex problems and/or change 	<ul style="list-style-type: none"> -Challenge basic assumptions by fostering lateral thinking and creating hypothetical scenarios -Richer analysis of actual history in order to detect root cause of failure/success -Allocate time and other resources to identification and rigorous analysis of mistakes, and experimentation -Cultivate a learning culture
Ignoring close calls	<ul style="list-style-type: none"> -Overconfidence -Penalization of mistakes and/or their disclosure -Unwillingness to face complex problems and/or change 	<ul style="list-style-type: none"> -See above box -See Table 3*

This paper would be incomplete if we overlooked a very important phase that must accompany most learning processes: *unlearning*. That is, in order to learn effectively, organizations must often eliminate previously acquired knowledge – including practices, basic assumptions, technical skills, and so on – that is not useful anymore, and that, if kept, could even become a hindrance.

Unlearning

Discerning which knowledge should be discarded and which kept is a crucial task for managers. Unlearning is a sort of intentional forgetting² that consists of “discarding obsolete and misleading knowledge” (Hedberg, 1981, p. 3). This means that, in order to adopt new knowledge, practices or mindsets, it may be necessary to get rid of old routines, assumptions or cause-effect connections.

In order to fix certain imperfections or acquire new skills, i.e. for *single-loop learning*, a certain degree of unlearning is needed. Failing to unlearn at this level may lead to a deceleration of the learning process due to the emergence of discrepancies or misalignments of varying importance within the organization. However, the most difficult task is to discard basic assumptions when this is needed to undertake more radical changes (*double-loop learning*), because this requires unmasking and substituting those unnoticed root principles that are driving the organization. Failing to unlearn here will most probably result in a deeper failure: the old mindset will

² Unintentional forgetting has been addressed in the discussion of organizational memory problems. The three myopias just described are three different ways of forgetting, overlooking or ignoring essential aspects.

emerge, the problems addressed will appear again, and, therefore, the intended reformation will not take place, with a resulting waste of resources – economic, human, technical, and so on – that may be fatal for the organization.

If unlearning is needed for learning, conversely, experts highlight that it is important to find or, better, already have, a new substitute for unlearned knowledge in order to prevent the organization falling into a period of chaos-induced paralysis. In other words, no unlearning process should be undertaken without an ongoing process of new knowledge acquisition. This is because the longer this substitution process takes, the greater the risk of consuming all the slack resources available or becoming disoriented, especially when a complete upgrade is involved. On the other hand, the process needs to be complete; otherwise, new learning may remain partially ineffective due to the existence of competing forces.

What are the obstacles that must be removed in order to be successful in unlearning? In fact, they are the same as those existing for learning: resistance to change, power struggles, misjudgments of experience, and so forth. All of these issues have been addressed in part I.

Important as it is, not all unlearning is beneficial for the organization. For instance, although radical turnover of key personnel may sometimes be the fastest way of unlearning and introducing new knowledge, the general feeling of insecurity this situation originates within the organization may cause the process's failure. On the other hand, this unlearning-learning interplay takes place every time that new individuals enter the organization: they are socialized, i.e. they learn the ways of their new organization and unlearn others they brought with them, with the resulting danger of losing the distinctive knowledge for which they were hired. Another example: some new managers are so eager to distinguish themselves from their predecessors that they force the organization or part of it to unlearn and thus lose knowledge that was useful and effective. These forms of unwelcome unlearning must be carefully avoided.

Table 6

Problems Related to Unlearning

PROBLEM	SYMPTOMS	SOLUTION LINES
Failing to unlearn skills	-Discrepancies and misalignments that hinder single-loop learning -New skills may remain partially ineffective due to competing forces	-Make new procedures and their advantages clear for all agents -Invest in training for the new procedures -Establish incentives for implementation -Assess implementation of new procedures and level of survival of the old ones
Failing to unlearn basic assumptions	-Inability to find root causes -Inability to undertake needed radical changes -The same problems appear recurrently -Waste of resources in band-aids	-Challenge basic assumptions by fostering lateral thinking and creating hypothetical scenarios -Introduce programmed crisis into the organization
Unlearning without learning	-Loss of essential knowledge (typical of periods of stagnation and/or self-complacency) -Chaos due to the lack of reference points in radical change processes (e.g. major turnover)	-Incentivize innovation in all units of the organization -Avoid competency and other related traps (see Table 5) -Check for the organization's absorptive capacity (see Table 1) -Never enter an unlearning process without a clear learning goal

Partial unlearning	-New knowledge may remain partially ineffective due to competing forces	See above 'failing to unlearn skills'
Unwelcome or untimely unlearning	<ul style="list-style-type: none"> -Key individuals leave the organization taking their knowledge with them -Incoming leaders succumb to their own reformist zeal, forcing the organization to unlearn -Newcomers lose their most valuable knowledge during the socialization process 	<ul style="list-style-type: none"> -Embed knowledge in the organization by means of knowledge repositories, routines, products and technologies -Make sure you understand the particularities of the culture of the organization you are entering -Rely on existing expertise in the organization -Do not undertake any major change without having a complete picture of the situation (even if you have been hired for this purpose) -Assess the match between newcomers' skills and current organizational routines and ensure win-win situations

Conclusion

As can be readily inferred, at the root of the obstacles to learning from previous conditions and to the learning process itself, there is not only or mostly a lack of technical knowledge base, but a series of counterproductive social relations, politics, organizational mechanisms and individual behaviors. The first difficulty that arises in removing these obstacles is an unawareness of their existence. Experts point out managers' impatience to meet targets, lack of time for reflection and adequate discussion, and lack of heed or attention due to this unawareness. If more attention is paid to these issues, it will be easier to uncover underlying politics, organizational automatisms and individual behaviors that may hinder learning.

In this paper, we have attempted to shed light on all of these issues in a structured way and provide solution lines for managers who wish to introduce or improve learning processes in their organization.

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