Learning to Unlearn: The Innovation Connection

BY E. TED PRINCE
An organization’s learning function can actually block innovation, but CLOs can use that insight to catalyze innovation and reignite the company’s profit engine.

Does learning spur innovation? The common perception is that it does. Yet, learning can actually depress innovation. If we do not understand this, we can miss vital insights that reduce learning effectiveness and actually reduce innovation.

The general presumption is innovation is just an advanced form of learning. We perceive universities as hotbeds of innovation because of their learning function and widespread feeling the learning function is set up to advance the identification and integration of new knowledge. Under this model, the chief learning officer facilitates and catalyzes progress of the learning organization, which continuously integrates new knowledge and innovation into its ways of doing things.

But what if it’s really the opposite? What if learning can actually retard or even smother innovation? What would that tell us about our role and impact in a learning function? How would it impact our objectives and work processes?

**Learning Mechanisms Often Suppress Innovation**

What are the mechanisms by which learning can suppress innovation? Some of them include:

- **Prescribed definitions bake in approved views:** An approved definition is necessary, but for many people, definitions go beyond setting a standard to becoming a roadblock. Learning that is too formalistic and focuses on mastery of definitions and forms to the detriment of substance can obstruct mental efforts to go beyond them, thus preventing innovation.

  Take, as an example, companies like Digital Equipment Corp. and Data General that pioneered the minicomputer trend in the 1960s. These companies defined minis as multiuser machines for computing, just like mainframes, but smaller. This definition caused universities to focus on minis and produce expert graduates in minicomputing who went on to be employed by the minicomputer companies. Their fixation on the minicomputer approach, coupled with the company founders’ tunnel vision, prevented these innovators from recognizing the importance of personal computers, leading to their eventual demise.

- **Disciplinary boundaries can become impermeable:** Boundary setting is necessary in order to gain the focus that enables incremental knowledge to be added. But the boundaries that allow this to happen can restrict people from moving beyond them and hold back innovation in the process.

  Microsoft built its base and reputation on personal computer software, and its most learned employees, from Bill Gates down, have been gifted programmers. But Web 2.0 is far more than a programming paradigm, and the learning and experience of Microsoft founders and programmers has constituted a powerful cultural force preventing it from getting into Web 2.0 early and taking a lead, despite the company’s vast resources. Microsoft’s continued financial success is largely due to continuing cash flows from legacy products such as its operating systems and office software, but it is increasingly clear the company has missed the boat and may never catch up.

- **Academic credentials and professional standards cull out troublemakers:** Academic credentials are vital for imparting knowledge in a field, but such credentials represent a major investment not only in resources but also in time and mental effort. The knowledge imparted in credentials becomes the basis for professional standards.

  The mere possession of credentials can deceive people into thinking they know enough, and they may believe there is nothing of relevance outside of it. This mindset tends to restrict those affected from thinking about alternative approaches to their discipline, not least because their professional standards may actually forbid it.

  As an example, think of the Australian doctor who proved in the 1990s that stomach ulcers are caused by a bacterium and not by excessive gastric acid, a stance
totally at odds with experts in the gastrointestinal field who had stuck with this belief and its associated ineffective treatments for several decades. This doctor was not a researcher, and his observations were generally rejected until field results on the efficacy of the new antibiotic treatment became impossible to overlook.

**Network effects buoy existing beneficiaries:** Once knowledge is gained, it attracts constituencies that use that knowledge to gain resources, including money. That is good in the early stages of the process. But eventually the people profiting from that knowledge may stick with it despite information suggesting it is no longer valid.

Consider new medical research that shows that statins, which lower cholesterol, do not lower heart attacks in all but the highest-risk patients. Yet statins are the most widely prescribed drugs we have. The early incomplete research on statins that showed a link between lowering cholesterol and the reduction of heart attacks has now been shown to be limited to just a small segment of the population. But this work has not yet been enshrined in medical practice, in drug recommendations or by pharmaceutical companies.

This is not to say there is a conspiracy by which the medical profession is not acting on the new research due to base pecuniary motives. Rather, people can be slow to respond to changes in knowledge, and resource and monetary structures tend to be sticky once established and act to further reduce learning effectiveness. These structures can be a powerful force slowing down innovation among groups that are tied into them.

**Focus on depth squeezes out people with breadth:** Early success breeds a demand for people with the skills to work out the kinks rather than to invent the next theory of relativity. These types of people tend to have behaviors that are careful, analytical, transactional and incremental. They, in turn, hire and promote people like themselves. The result tends to be a behavioral monoculture that prefers instrumentalists over innovators. This squeezes out innovation and leaves early innovators in trouble.

Motorola and Nokia, two of the early innovators in cell phones, are good examples. Motorola has lost significant market share, and even Nokia is getting killed by the iPhone and other later entrants, such as Samsung. We are seeing a historic transition from a switched-line to an Internet-protocol mindset, even in cell phones. In this case, the cell phone experts have been eclipsed by those with broadband and 3G perspectives, and neither company, with all of its resources, has been able to unlearn the previous skills and switch effectively to the new paradigm.

**Learning Models Suppress Innovation**

Current innovation research has identified two critical issues in innovation and learning.

**Most innovation comes from outsiders:** We cannot assume that a high degree of learning will do the innovation trick if it comes from insiders, no matter how learned and professional. In fact, there is mounting evidence to show that high levels of learning and credentials that are not leavened by a copious mixture of outsiders and competition from outside ideas means that this closed learning system in fact suppresses innovation.

The job of organizational learning practitioners is to open up the organization to outside influences. In other words, they must change the learning model from closed learning to open learning. Only open learning models can catalyze enough innovation to keep a company healthy and vibrant.

Cisco Systems and IBM both had famously closed models of learning and innovation, which almost led to the demise of IBM and a slowdown at Cisco. However, both have changed to an open learning model, IBM under CEO Samuel J. Palmisano and Cisco under long-standing CEO John Chambers (who is, interestingly, also an ex-IBMer). This shift has led to a re-flowering of innovation in both companies, both of which at one stage, IBM in particular, had been written off as finished by outside observers.

In closed learning models, companies use insiders to do the research. Open learning systems recognize that many innovations are made by outsiders who do not come from the company or even from within the discipline. They are regarded as outsiders or amateurs, but very gifted.

Think of Einstein, who was neither an academic...
nor a physicist, and who was regarded as an indifferent mathematician by the experts in the field. By professional standards, he had a relatively low level of learning, which prevented him from getting into a professional physics or math department. Instead, he was a lowly patent clerk. Yet, he invented a new physics. He is the dream of an open innovation proponent.

**Learning by grazing does not produce innovation:** Much of modern corporate learning practice is based on a grazing model. Think of grazing as being a nonintensive and casual style of learning. Participants learn just enough during short sessions to get to know the vocabulary, but not much else. Even modern Ph.D.s can get their degrees through a grazing process, and much of modern corporate training is based on a grazing model, too. Even the model of short-term rotations, much beloved by corporate and academic learning theorists, is based on a grazing model.

The 10,000-hour rule says grazing is not learning. Famously set out in Malcolm Gladwell’s book *Outliers*, this principle states that no innovation in any field occurs with less than 10,000 hours of intense work in the precise area of the innovation. The implication is that innovation is less a matter of raw intelligence or creativity and much more one of patience, drive and persistence. By implication, the 10,000-hour rule means that innovation is not a matter of learning per se, but one of application and time. And grazing as a model has no place in this approach to innovation because it is essentially casual.

Companies love grazing models because they promise low costs and quick return. This they may provide.

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But there may be a huge unintended consequence of grazing models: They do not lead to the conditions in which innovation will occur and unintentionally lead to atrophy. This may be one of the reasons that automobile companies, based on old models of innovation from MIT’s Sloan School of Management, are ending up as corporate zombies.

There Is No Learning Without Unlearning
There is a deep lesson here. Facts and knowledge by themselves can do just as much to kill an organization as their absence. Learning more if the model is wrong will kill innovation just as surely as learning less. Sticking to and finding out more about facts and approaches that are no longer relevant is just as toxic as never getting them in the first place.

The first job of a learning practitioner must be to foster an unlearning process to clear the decks for the next advance. Before an organization can make progress, it must unlearn what made it successful in its prior period of glory. Nothing kills like success, and most companies fail because they never unlearn the lessons that made them successful and move on to the next phase, whose lessons might be just the reverse or totally different.

First and foremost, the job of a learning practitioner such as a CLO is to help shake out the complacency from an organization so that it unlearns sufficiently to be open enough to make it to the next phase. If the learning practitioner helps the organization keep learning things that support the current paradigm of
closed learning, then the learning will turn out eventually to suppress the innovation that was necessary for the organization to survive in the next phase of competitive transition.

The second job of the learning practitioner is to open up the organization to external, and sometimes uncomfortable, influences that will cause the pain without which no organization can progress. This means not just opening up the company to outside influences and people, but to people whose behaviors and beliefs may challenge the existing culture. The culture of companies generally acts as an immune system to reject foreign influences, so this will not be easy. But without it, innovation will either never occur at all or quickly be squelched.

It's Not Learning That Matters, It's the Type of Learning

A closed learning culture, however rich in its learning content, will suppress innovation. A culture that cannot unlearn and psychically disinvest can never be ready for the challenges of the future. Learning practitioners need to critically examine what type of learning model they are really fostering to see if it will become part of the solution or if it is already a part of the problem.

The lessons for CLOs are obvious: Fight learning complacency and a focus on credentials; foster an open learning approach; avoid the temptations of the grazing model of learning; and look past learning per se to its cultural and competitive impact.