

Earning Follows Learning

By Lanny Vincent

Just recently I heard several conversations suggesting a potentially troubling misperception about innovating and learning. One senior executive at a major manufacturer said to a subordinate about an innovation effort underway, "We pay you for what you know, not for what you can learn." Another executive said, "We don't train people anymore. We hire those with the know-how and expect them to bring it to work everyday." A third executive, a veteran software architect, was bemoaning several incidences of places on product development roadmaps where it says "acquire" the sub-system, ignoring the fact that acquisition does not eliminate integration, something for which learning is required.

In these three snapshots, each from a different context, the intent of the company's senior leadership may have been to emphasize urgency and speed of execution. However,

the way the messages were expressed reveals a troubling perception: that productive work derives more from what is already known than from the ability to learn. Just the opposite is closer to the truth.

In the late 1990s, Ikujiro Nonaka and Hirotaka Takeuchi's observed that it's not what a company knows that creates wealth, but its ability to create new knowledge, which was introduced in their book *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*. Shortly after, Al Ward—one of the more insightful commentators on Toyota's Development System—defined innovation itself as "learning applied to creating value." Then Arie de Geus, completing his 38-year career in Royal Dutch/Shell's celebrated scenario planning group, coined the phrase "the learning organization," where he said learning

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Why and Where are Your Innovation System?

By Lanny Vincent

The purpose of a company's innovation system is conceived in different ways. Some think growth is the purpose, others view development as the purpose, while still others make no distinction between growth and development.

Some companies use their innovation system to renew existing core products and services. Others see its purpose as limited to developing new products and services. Some companies include merger and acquisitions efforts in their innovation system, others don't. Some see innovating as marketing's job, while others see it as a shared responsibility between R&D and market development.

While differences among companies regarding the purpose and scope of their innovation system can make comparisons and generalizations between them difficult, one perspective is to view the purpose of an innovation system as a means through which a company adapts itself to its surrounding environment. Without some type of adaptive capability, changes occurring in the business ecology in which customers, technologies and competitors interact go undetected until it is too late; mistakes are more probable, and sooner or later the company will find itself "behind the curve."

Viewed as the ability of a company to sense, respond and adapt, a company's innovation system must simultaneously enable responsiveness to external changes while furthering the host company's interests.

Think of an innovation system like a porch on a house. When you are on the porch you are neither completely inside nor completely outside. Similarly, as an

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capability is the primary differentiating factor in a company's longevity in his book, *The Living Company: Habits for Survival in a Turbulent Business Environment* (1997). One of the more serious "learning disabilities" companies suffer from is learning what learning itself is and how basic it is for effective innovating.

Having facilitated a variety of brainstorming sessions for more than 30 years, I am convinced of the direct correlation between the quality of the ideas flowing and the presence of learning going on, at the same time. When there is learning going on among the people generating the ideas, the ideas are more original, fresh and interesting to those generating them. When there is scant learning going on among those generating ideas, the ideas are more conventional. While the quantity and quality of ideas typically receive the most attention in brainstorming exercises, the flow of learning going on among and between the diverse and relevant experts may be as, if not more, important. This tends to be one of the dissatisfying aspects of internet-mediated idea generation exchanges: the ideas are flowing, but interactive learning is missing.

Not all learning is of the same type.

Learning by searching (enabled by Google, Wikipedia and networking) is likely a necessary first step not only to determine what has been thought of or tried already, but also to discover who the experts are and what they are saying. Nonaka and Takeuchi refer to this as knowledge-creation that happens by connecting.

Another type is called **learning by expressing**. When one expresses what has impressed, the learning that occurs is similar to what is learned when we are put in a position to teach. Writing as a form

"Development and growth are not the same thing. They do not even have to interact. Growth is an increase in size or number; development is an increase in competence, and competence increases as a result of learning."

—Russell Ackoff
Differences That Make a Difference

of expression is a healthy and rigorous discipline that forces learning. Nonaka and Takeuchi refer to this as knowledge-creation that happens by articulating.

There is also **learning by doing**—gaining first hand knowledge through direct experience, as in lab or field experiments. Learning by doing requires both time and a safe, insulated space to gain this kind of experience, given that learning is greater from mistakes made and corrected than successes enjoyed. Nonaka and Takeuchi refer to this as knowledge-creation that happens by embodying or reducing something to practice.

Then there is **learning by collaborative problem solving**. Learning in this manner with diverse and relevant experts is an effective and efficient way of reflecting on experience and exploring possibilities that would not otherwise be imagined. Thinking things through—in what Einstein referred to as thought experiments—is an especially productive form of learning by problem solving. Nonaka and Takeuchi refer to this as knowledge-creation that happens by empathizing.

Innovating requires the presence and mix of all four types of learning. The first lends itself to exchanges of information and knowledge and is enabled by a network social architecture for connecting to others. The other three types of learning happen where face-to-face dialogue occurs. Thinking out loud together breeds understanding. The Institute for Research on Learning taught us that learning occurs in community (not to be confused with networks). In these kinds of "learning spaces"—what Nonaka calls "ba" or a trusted, safe space between diverse experts—trust and collaboration can build sufficiently to carry the creative tension required for original and inventive thinking.

Learning to learn may be the secret so often missed by those who are quick to pursue a clever idea or too easily seduced by a seemingly bright idea—something that Peter Drucker referred to as the least reliable source of innovation. When the four types of learning are present and balanced, the quality of ideas flowing in and through our innovating efforts can improve significantly. □

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adaptive capability, a company's innovation system must necessarily be located in between. The system must stretch into the surrounding ecology if it is to have an accurate sense of what is going on, but also attach to the "proprietary" boundaries of the company's house, real or imagined. *Staying inside* the boundaries of a company ignores the new realities enumerated by Henry Chesbrough in his book *Open Innovation*. Viewing a company's innovation system as *entirely outside* a company's boundaries will create overwhelming not-invented-here antibodies, killing most innovating efforts before they are carried to term.

Anyone interested in building and improving such an adaptive capability—or innovation system—must align the system with two fundamental coordinates. One is the nature, character and relative flexibility of the host company's business. David Teece, Chesbrough and others have described this and the importance of a company's willingness to reconfigure its way of producing profitable value for customers. The other coordinate is the relative position the company chooses to take in its surrounding ecology.

In his thesis *Motors of Sustainable Innovation: Towards a theory of the dynamics of technological innovation systems* (2009), Roald A. A. Suurs, suggests that within their own external ecology, companies are either enactors or selectors of technologies, the former being more willing to develop whereas the latter are more ready to "buy" technology developed by another. A company willing to play an enactor role will have an innovation system with a very different profile than a company that sees itself as a selector. The enactor will place bets on certain technologies to invest in and develop themselves, whereas the selector will remain more agnostic to technology, looking rather to their own ability to quickly choose and commercialize what others have developed.

One approach is not necessarily better or worse than the other. Some companies choose to do both. Being clear about what position the company chooses to take will make a significant difference in how its innovation system is designed, organized and resourced. □