

Knowledge Complexity Framework[®]

This excerpt is from Verna Allee's book, *The Knowledge Evolution: Expanding Organizational Intelligence*, published by Butterworth-Heinemann, 1997.



We can think of our own personal knowledge as a "web" of knowing where many thoughts, feelings, concepts, ideas, and beliefs weave together. We organize our knowledge by arranging it according to our mental models of how the world works. If this sorting mechanism does not operate efficiently, then we suffer "information overload." We feel the pressure of having too much to absorb and understand in too little time. Or perhaps information feels "hard to find" and somehow difficult to retrieve.

As we build knowledge or develop expertise, we undertake a variety of learning tasks. When we "learn" something, we draw on our deepest and most comprehensive understanding of how everything works to help us find the appropriate response to a piece of information. When we receive a new piece of information, we find the place it fits in our worldview by processing it through our sorting and linking-up processes. Then we stow it away until it is useful to us.

Some information fits nicely into our larger understanding of things and some does not. Many things we know we simply file away in a mental DATA "cabinet" as stuff we know, but don't really need right now. We may even have some rather interesting strings of data that have grown too big for the Data cabinet. We mentally link these up with other pieces of data until those strings and groupings become INFORMATION. This natural linking and organizing process makes it easier to find things in memory when we need them.

When we have quite a lot of information about something and can discuss it intelligently, then we have KNOWLEDGE of that particular subject. If we really understand something we can also discuss its MEANING, the way it fits into the larger scheme of things and ways that it might be useful in other contexts. If we are self-reflective and have deeply explored the Meaning of something, then we may even contemplate the underlying PHILOSOPHY of the subject. If we are fortunate enough to have WISDOM, then we also understand the values and underlying intentions or purposes that are operating.

There is also an additional realm of knowing described in esoteric and spiritual traditions, the level of UNION or Direct experience. In the perennial philosophy of Aldous Huxley, this is an ineffable experience of the ultimate that defies description. (Thus, the experience lies beyond the realm of ordinary knowledge since it cannot be communicated.) This direct experience of union or oneness might be accompanied by a particularly blissful and peaceful feeling state. The feeling state might also be a profound sense of synergy or communion.

Union experiences often are more a gift of grace rather than the result of a deliberate learning process. However, the Union level is the ultimate integrative and inclusive space that allows us to shift our worldview by moving to a different value set. The feeling state of synergy and communion results in a value system that includes the health and vitality of the larger society, the environment, and the planet.

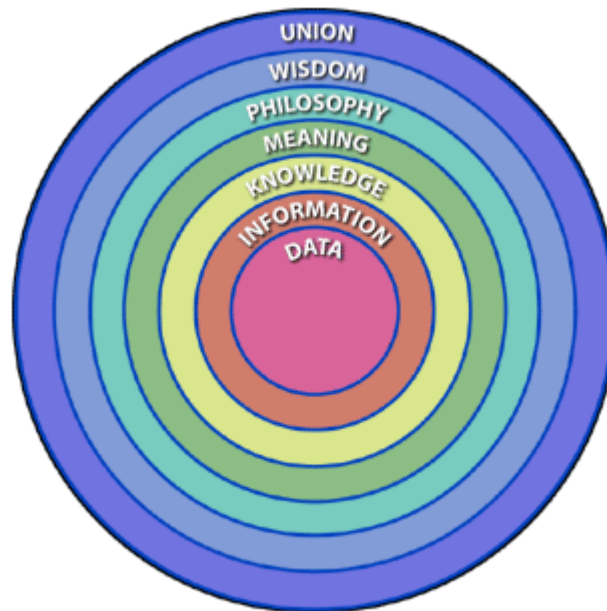
In this framework, every aspect of knowledge is interdependent on the others. It is important to understand this quality of embeddedness. For example, the Wisdom level of values and purpose interpenetrates and influences each of the other levels, including the level of Data. When we accumulate data, it is not readily apparent that values are influencing how we collect data. Yet, our values and assumptions act as "gatekeepers," determining what information we allow in or what we reject and dismiss as not relevant. Our philosophy, meaning our mental models or constructs about how the world works, influences what we observe and how we organize our experience.

At the same time, Data serves as a reality check, acting as feedback to validate or challenge the assumptions we hold dear. While our value gatekeepers can indeed hold feedback at arm's length, over time a critical mass of conflicting data can challenge prevailing beliefs. So, our values and Philosophy are also influenced by and dependent on data. Each level is interdependent with the others.

This pattern also surfaces in both Western psychology and Eastern philosophies of mind, proving that it is a multi-cultural pattern of our understanding.

Such patterns are archetypes, foundational structures of thought that surface over and over again through human history and across cultures.

Here is one depiction of the archetype using common knowledge related terms. We will soon take a closer look at each of these concepts.



Linking KNOWLEDGE to Performance

Each aspect of knowledge supports particular tasks and operations. Certain knowledge structures are universal building blocks for achieving high performance, regardless of what specific business function is at hand. Neglecting any aspect of knowledge means lower productivity, rework, miscommunication, frustration, or delays.

We all have individual and organizational "comfort zones" where we excel. Our comfort zone is our preference for particular cognitive processes that help us master certain skills. Organizations too, have different knowledge comfort zones, just as they have different cultures. The challenge for individuals, teams, and organizations is to expand their comfort zone and become effective in all the learning and performance modes.

Learning processes advance knowledge competencies that make up the collective intelligence of an organization. Understanding how learning and performance link to the Knowledge Archetype helps people be more responsive to the evolving environment.

Advancing learning and knowledge requires conscious effort at every level. Since the modes are on a continuum of increasing complexity and integration, there are different learning or information processing dynamics for each one. Organizations that are serious about knowledge can attempt to understand these dynamics and consciously map strategies in their everyday tasks and projects to master the necessary learning.

Each aspect of knowledge or knowing has a corresponding learning activity that supports it. Learning leads to changes in behavior and performance. Since learning is demonstrated by improved performance, each learning mode supports a different performance focus. So, we can now carry the knowledge archetype a step farther. We can link different types of learning to the performance challenges a manager or team might face in the course of their work. For a diagram of these relationships see the **Knowledge Complexity Framework**© Diagram.

Each mode of knowledge and action is also connected with a different time focus. In the **Easy Reference Chart**© you will notice that each learning and performance mode has a different time perspective.

Each mode has its own language and uses different tools for problem solving. As an example, let's look at the *Procedural* mode of learning and its related performance. In an organization, superb Procedural performance is demonstrated by consistency and efficiency in handling step-by-step processes and procedures. The ultimate goal of those procedures is not of concern, just their efficiency.

Processes for converting tacit Procedural knowledge to explicit shared knowledge are straightforward. Procedural knowledge can easily be codified into written sequences, linear schematics, and quantitative measures. Guidelines such as user guides and technical manuals communicate written sequences. Linear schematics and flow charts capture each step of a procedure, such as filling out a form or machining a part. Simple conformance measures such as quantity, length, speed, and temperature can easily be established and checked for conformance. Learning processes focus around tactile skills, practice, and transfer of information in very tangible forms. Short time horizons mean a narrow and very specific performance focus.

At the other end of the spectrum we find *Renewing* performance is demonstrated by the integrity of the organization in fulfilling its purpose. Processes of knowledge creation involve identifying organizational purpose, developing a vision for the future, articulating the mission of a team or organization, and defining organizing principles. Renewing performance measures involve longer time frames and value judgments. They are difficult to quantify with numbers so they are qualitative.

The process of converting Renewing knowledge from tacit to explicit and back again requires extensive socialization. This is quite different from Procedural knowledge, which one or two people can develop, codify, and put into communicable form. Renewing learning processes require group dialogue and social learning events such as planning retreats or scenario building.

In order to be a high-performing learning organization, work processes must incorporate conscious and deliberate attention to every aspect of knowledge. Unlike linear models that impose a particular order of activity, this framework helps illuminate the natural learning patterns that underlie work processes and organizational systems.