STRUCTURE SHAPES BEHAVIOR IN SCHOOLS

Like most education leaders, you are most likely frustrated quite often with the results you are getting as you attempt to lead, guide, mentor, and coach your teachers to move forward with the districts goals and objectives. It seems as though your projects are failing or getting stuck before they've even started.

That's because they have.

They are already in trouble and set to go off course because the underlying structures you have in place already are shaping behaviors and the corresponding results before you even start.

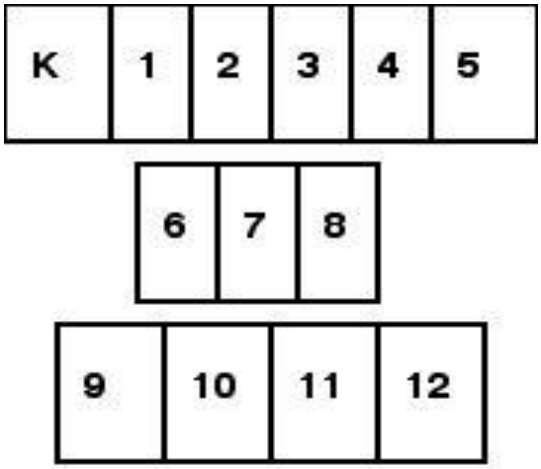
These structures include school board policies, contracts, curriculum organization, schedules, technological infrastructure, and instructional strategies employed in classrooms throughout the district to name a few. All of these contribute to how educators, students, parents, and the community routinely act within and outside the school. These structures make visible our assumptions about learning and how we interact with people and information. They also show us the reasons why it is difficult to change at the systemic level.

UNDERSTANDING CHANGE

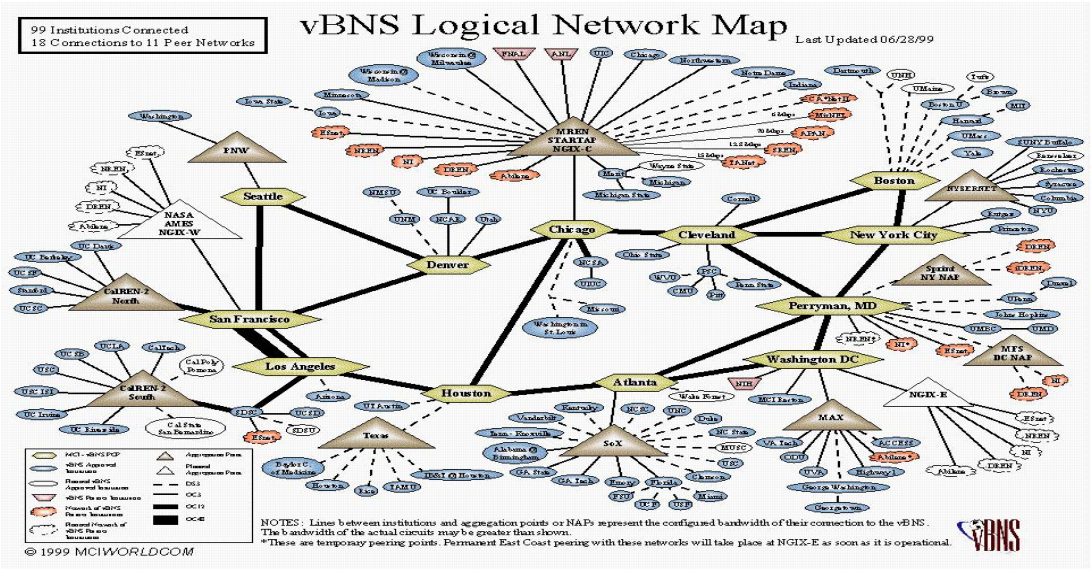
Do you ever ask yourself why things in your school seem to seldom change after all the infusion of technology and staff training? Have the daily routines of your teaching and human interactions change because of these events? Study after study still shows the organization of our schools are basically the same as they were fifty years ago even in this "digital-age." The reasons lie in one of the basic concepts of systems thinking that **structure shapes the behavior of people over time**.

Structures include school board policies, contracts, curriculum organization, schedules, technological infrastructure, and instructional strategies employed in classrooms throughout the district. These structures make visible our assumptions about learning and how we interact with people and information. For example, looking at the structures below, what are the underlying assumptions about learning and the relationships among

teachers, students, and information? Now think about the structure of the World Wide Web and ask the same.



K - 12 STRUCTURE



This question should drive our thinking in developing both curricular and classroom structures for utilizing informational technologies to their fullest potential. Visualizing the curricular structure in schools today, one sees boxes that define a domain of knowledge (discipline) and grouping patterns of people. Underlying these boxes are mental models that contain the assumptions, values, and beliefs about learning and teaching. These mental models shape how we act. For example, Larry Cuban has identified three mental models that affect the use of technology:

1) Knowledge is transmitted by teachers to students.

2) Knowledge consists largely of concrete subject matter that can be broken down into discrete segments and conveyed piecemeal as students move through grade levels.
3) Schools should be organized into self-contained, age-graded classrooms where students and teachers interact for a short period of time.

Given the evolving structure of the Internet, how congruent are these assumptions with your reality? Mental models are usually tacit; therefore they are often untested and unexamined. The consequence is that we lose sight of why the school was designed in the first place and therefore try to make the "new" fit the "old."

RETHINKING THE STRUCTURE

Advances in technology, the evolution of neurosciences, and changes in the structure of work are impacting the schooling process. In light of these activities the basic structures of curriculum and our workday have stayed the same. Until we think about our present curricular structure and its relationship to the needs of a "digital world" and a world that is highly interconnected, our children will not be well prepared to live and function productively because of mismatched structures.

To begin thinking about a new structure, let's group children by three-year age bands starting with age 5 and continuing through adulthood.

The first band is called **Tools of Expression and Inquiry (5-7).** Children learn to communicate through the use of different forms of expression, and ask questions as they construct knowledge related to standard-based information that is structured thematically. The underlying assumptions of this band are: develop literacy through notational systems adding color and sounds to letters and numbers, creating knowledge and understanding from asking questions, and developing the habits for creative thinking.

In the second band, called **Enhancement of Thinking Through Core Knowledge (8-10)**, children learn how knowledge becomes organized into disciplines. Each discipline is viewed as a specific way of interacting with their world. Information is structured intra-disciplinary.

Band three is called **Problem Solving/interdisciplinary Relations (11-13)**. Students begin to manipulate the disciplines to find relationships and differences to problem solve or construct new knowledge bases. Students expanding their understanding of disciplines,

pursuing solutions to nontrivial problems, and learning to value and integrate knowledge from multiple points of views are the driving assumptions of this band.

The fourth band, **Project Oriented Learning/Life Long Learning (14-adults)**, students expand their knowledge in any given field(s) of inquiry. They specialize their studies by directing their own learning and career development. The learning environment is structured to allow students to interact with mentors/partnerships with businesses, higher education, and community organizations. The underlying assumptions of this band are: applying knowledge to "real" world situations, responsibility for continuous learning, and learning is a collaborative process.

CHANGING OUR HABITS OF WORK

This curricular structure will cause adaptation to our roles as teachers and administrators. **Adaptive work** is required when: 1) deeply held beliefs are challenged; 2) values that made us successful become less relevant; 3) legitimate yet competing perspectives emerge (charter schools, virtual schools, etc.).

Think about what has happened to you since computers and networks have been introduced into your school or classroom. What impact has there been to your "system of work?" Your answers often create systemic problems with no ready answers. Solutions to these issues are not found in the administrative offices. They are found in the collective intelligence of teachers and employees at all levels, using one another as resources, often across disciplines, and "learning" their way to solutions. The outcomes to adaptive work through continuous staff training, are new roles, relationships, values, behaviors, and approaches to work. Depending on the structures of your system, the key strategy in developing these outcomes might be **"learning how to unlearn"** the systems present mental models.

Structure shapes the behavior of people over time. This concept is critical to understanding how and why information technologies can change our curriculum and system of work.

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The people of Top Practices Education are a diverse group of educators, community leaders, business leaders and experts from the US and around the world who are committed to one central idea:

It is possible to achieve sustainable change in our schools regardless of the political or organizational realities at the national, state, or local levels. We believe that like-minded individuals, working together for a common goal can overcome the long-standing obstacles that have kept us from moving forward. Find out how you can get connected.