

Leading Change in High Schools

Schools that create an environment in which everyone understands the *why*, agrees with the *what*, and focuses on the *where* have an advantage and are well on their way to implementing successful change. However, implementing the *how* for many educators is still a challenge. Dealing with this challenge begins with better understanding the nature of schools as unique systems.

Much of today's K-12 curriculum is still set up to support what is now an obsolete industrial era, with a rigid school year in which

Schools as Living Systems

Chapter 3 Why Change and How to Do It

every student must learn the same knowledge in the same way over the same period of time. Even school buildings generally look much as they did 50 years ago.



“A child’s mind is not a vessel to be filled, but a fire to be kindled.”
– Plutarch, Greek historian and essayist

But we know from observation that schools that closely follow this industrial model are not the most successful. While we can hold learning of basic skills as a universal minimum requirement, learning must be personalized to allow for students who learn at different speeds and through different experiences. Learning is more organic and unpredictable. Greek historian and essayist Plutarch reminded us that a child’s mind is not a vessel to be filled, but a fire to be kindled. Another way to explain the learning process of our youth is comparing it to a growing plant, which gradually adds new stems and leaves as it constantly absorbs fresh nutrients and strives to maintain an equilibrium to survive. And, just as learning can be seen as a biological process, schools should be thought of as biological systems that create environments for good teaching and learning.

The business world is full of best practices for improving the quality of manufacturing systems. Manufacturers begin with selecting high-quality resources, monitoring processes constantly for quality, and automating to improve efficiency. Some of these quality processes, such as cause-and-effect diagrams or scatter diagrams can work in education, but schools have many more variables than manufacturing. Most important, they must take every student regardless of disability, language barriers, or home situation. Also, the behaviors of people are much less predictable than the routine operation of machinery and robots in manufacturing.

Biological organisms are complex phenomena that are heavily influenced by their ever-changing environments. In the natural world, each organism is part of an intricate ecosystem and any event that influences one organism has an impact on another. This analogy certainly can be applied to schools, where one intervention

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can have significant unintended outcomes. In essence, to continue to provide students with a rigorous and relevant education, schools must adapt and change in relation to today's world. In this way, biological systems seem to describe more clearly the complex interrelationships and learning processes that make up school organizations.

Living systems differ in significant ways from traditional closed industrial systems. In living systems, the function drives the organization. While schools often perpetuate existing organization structure, the most effective schools have created organizational changes to reflect the function they want to accomplish. Many industrial systems try to eliminate outside environmental influence. This is impossible in schools. Every student every day brings in the outside community. Successful schools must adapt to those outside influences. In most systems, there is a defined start and conclusion. Schools, definitive of living biological systems, are constantly growing and have flexible beginnings.

Schools as Living Systems

In Most Systems:

- Organization drives function
- The goal is to isolate from external influences
- There is a well-defined beginning and end
- Control is through clear processes and procedures
- Innovation uses design prototypes and research

In School Systems:

- Function drives organization
- The goal is to adapt to external influences
- Beginning/end are flexible, focus on constant growth
- Influence through leadership and social networks
- Innovation uses experiments and risk-taking

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In most traditional systems, procedures are well defined and can be maximized for efficiency. The people in a school system are less confined to procedures. Change comes not so much from changing a procedure, but from the social networks and people skills. Finally, living systems innovate more from experimentation than from the careful design and testing typical of an industrial system.

Traditional Systems Leaders	Living Systems Leaders
Avoid mistakes	Innovate
Deliver results now	Think long term
Cut costs	Increase morale
Reduce staff	Improve teamwork
Respect the rules	Be flexible
Compete	Collaborate
Retain control	Decentralize

Applying Common Characteristics of Living Organisms

What are the common characteristics of living organisms, and do they give us any insight into how schools need to operate to be successful? High school biology students can list the five common characteristics that define living organisms, which are:

- made up of cells with unique DNA
- obtain and use energy
- grow and develop
- adapt to their environment
- reproduce

These five characteristics provide a vision of what successful schools need to be to serve students well. Rather than focus

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on the quality of manufacturing, standards of construction, and efficiency of marketing and distribution, schools should strive for the characteristics of living things, which are as follows.

Identity. A school defines its identity through a clear vision and mission. Identity also refers to the school's unique student body. Each student brings unique interests, background, and abilities to the learning community.

Vitality. Vitality is the energy and passion that students and staff exhibit toward teaching and learning. Schools that are well designed, attractive, adequately maintained, and have sufficient resources contribute to a vitality that supports learning.

Maturity. This is a measure of how a school moves from pockets of innovation to a common culture of practice. Mature schools recognize and deal with changes in an insightful, timely, and effective manner. This is one of the most difficult of characteristics to achieve. When schools reach maturity, there are well-established procedures and staff are comfortable and confident in handling challenges that arise.

Adaptability. Just as living organisms adapt to the environment, schools adapt to their communities and deal with external changes. As community demographics change or new students arrive in the school, the school must adapt to handle these new students. When schools are imposed with new requirements or changes in funding, they must adapt.

Sustainability. This refers to schools preparing adequately for the future and make decisions that reach for long-term goals. Whether it is "staying the course" in an innovative program to finally achieve results or preparing the next generation of teachers, sustainable schools have the competence and confidence to retain their successful status.

Characteristics	
Living things	Living schools have
are made of cells	identity
obtain and use energy	vitality
grow and develop	maturity
adapt to their environment	adaptability
reproduce	sustainability

How Do Schools Attain Characteristics of Biological Communities?

So, how do schools change to achieve these characteristics? Again, nature provides an answer. Many organisms mature and adapt to their environment through (1) sensory feedback, (2) modeling others, (3) building relationships, (4) managing resources, and (5) taking risks. The following list of five processes, based on these five characteristics, encompasses some of the best practices in school improvement.

Data reflection. Schools today are using data more extensively to make decisions. This is equivalent to the way living organisms sense where they are, where food is, and when danger is near. Data leads to timely decisions and better actions. Just as organisms sense their physical environment, schools sense their learning environment through data.

Adopting best practices. Many animals learn through copying the behaviors of older generations. Young children learn language from listening and modeling adults. Schools can grow and change from modeling the practices of other schools.

Building relationships. Living organisms build social and symbiotic structures to survive. Schools change through relationship building as well.



“Change is not a one time event, but a process which must be constantly managed.”
 – Daryl Conner, change management expert and author of *Managing at the Speed of Change*.

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Resource allocation. Living organisms make efficient use of resources, which is key to schools as well. School leaders make decisions on where to assign staff resources and determine facilities and supplies needed for learning.

Innovation. Just as organisms adapt to a changing environment, schools must break free of complacency as the world around them changes. Their long-term adaptability and sustainability depend on taking risks through innovative practices and planning.