

Operationalizing Systems Thinking

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Increasingly, educators and policymakers are focusing on systems thinking and the leadership needed to effect it at school, district, and state levels. Peter Senge, Jim Collins, Michael Fullan, and others have detailed in various ways the theory and concepts behind a systems approach to organizational effectiveness, and their work has informed our own approaches to school improvement. Still, there is very little specific information available for the practitioner. Few have painted a picture of what systems thinking means in practice for the principal or superintendent. Indeed, training leaders to operationalize systems thinking is the reform element most needed today. If schools and districts cannot picture what it means to operate systemically and then take specific steps to expand its use, reform, if it happens at all, will not be systemic. Nor will it result in large-scale improvement in student achievement.

A quick look at some widespread educational practices suggests the need: This year's budget is simply last year's budget with changes based on pupil count; recruitment interview questions are not aligned with evaluations or what the organization values most; administrators work to develop a viable, aligned curriculum and then provide little to no feedback on whether lessons are aligned; staff development focuses on programs rather than practices; actions plans are not integral to the budget process.

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While developing the capacity of a school or district to think and operate systemically is no easy feat, building- and district-level leaders can begin to operationalize systems thinking in three ways: (1) identify system connections, (2) focus on leverage points, and (3) use system archetypes.

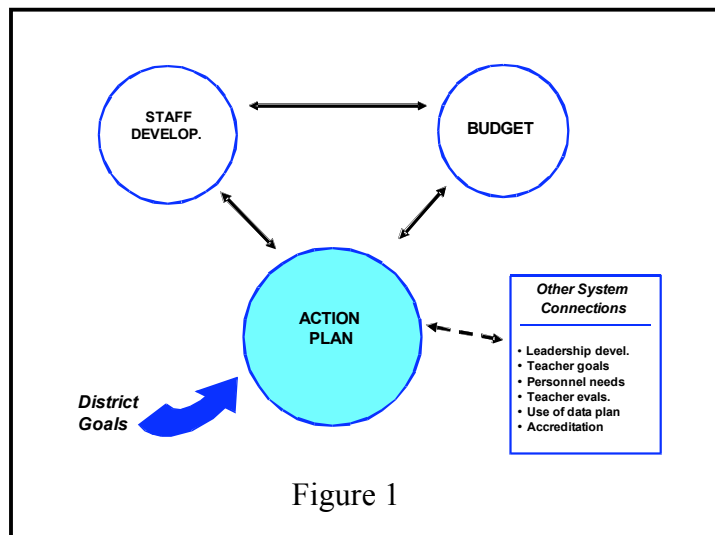
Identify system connections

Simply put, a system is a group of elements with interrelated parts. A school district or building is a system with a common purpose or function. A school system enrolls students, educates them, and then graduates the students or sends them to the next educational institution. Most educational systems function at least at an adequate level, so there is not as much attention placed on *system* dysfunction. Instead, administrators attempt to address deficiencies in the *parts* or elements of the organization.

The adoption of another program to solve problem “x” characterizes many educational responses to observed deficiencies. In some dysfunctional schools, program after program is adopted to address an identified need, and before long the organization loses focus and teachers are pulled in many different directions. Often, the lowest achieving schools have the most programs. Programs, of course, are not the problem. Many of them have great utility and can improve instruction or help a school reach its goals. The problem arises from a lack of coordination with the other parts of the system.

Organizations that work systemically begin by looking for the connections between the various parts of the system and taking steps to ensure better coordination of organizational functions. Systems thinking integrates the various parts of the system in a way that maximizes organizational effectiveness.

In Fountain-Ft. Carson, School District Eight, we teach our principals and central office administrators to see the connections and to take steps to maximize effectiveness as a result. For example, principals learn to use an *action plan, budget, and staff development diagram* (see figure 1). District-level processes are in place to ensure alignment among these parts of the system at both the building and district level.



Prior to the use of systems thinking in our district, staff development plans, building action plans, and building budgets were created independently. It was not uncommon to see staff development plans that merely reflected the workshops being offered by educational consultants. Budgets, created in the spring, often bore little connection to identified and prioritized needs. Building-level and district-level action plans were not coordinated.

Using a systems approach, our principals now use similar templates to map connections among (1) aligned curriculum, assessments, and resources; (2) spot observations, teacher evaluations, staff development, and school achievement goals; and (3) teacher recruitment interviews, the building action plan, and leadership development.

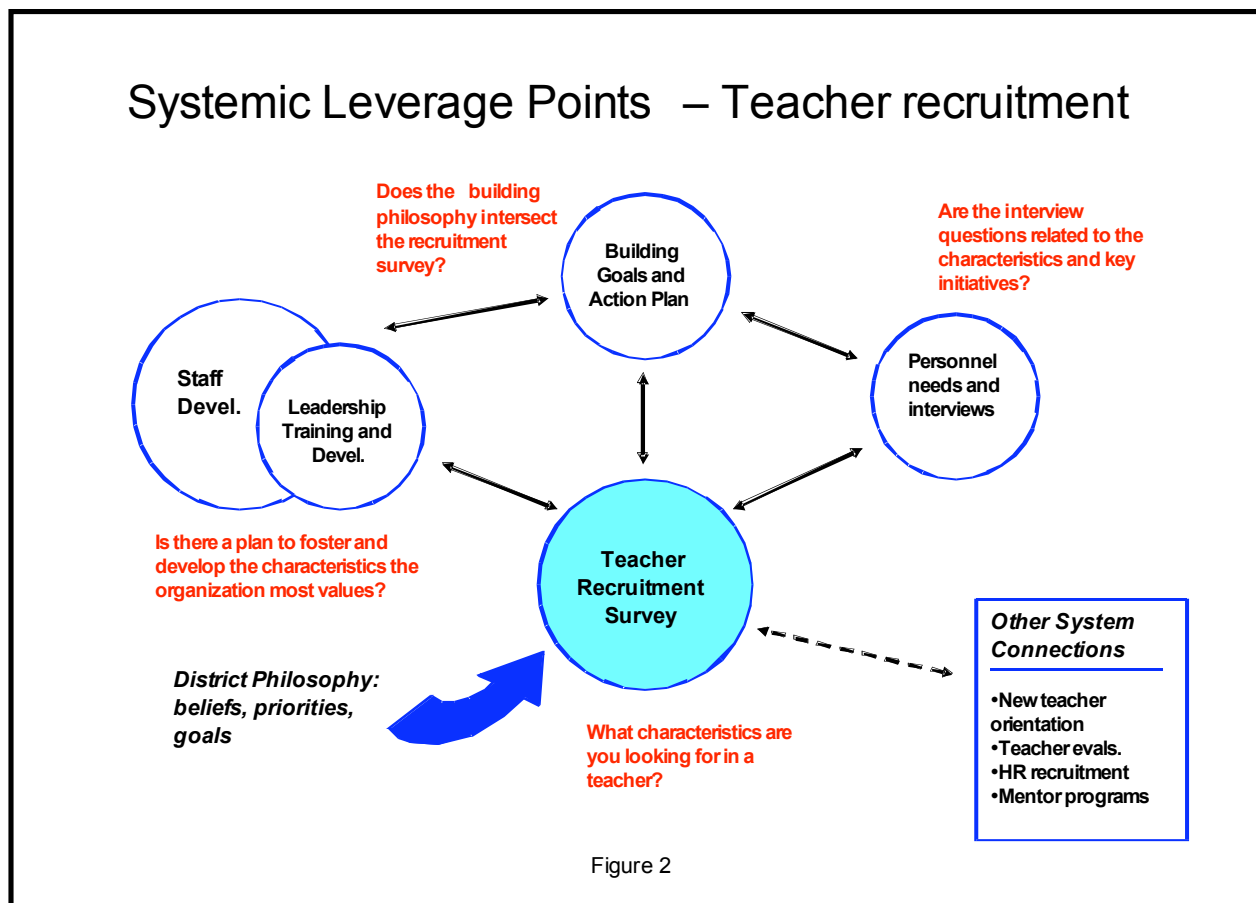
At the district level, system integration can be even harder to achieve. The larger the district, the more purposeful administrators need to be with regard to systems thinking. That’s because the various parts of the system are often more distinct at the district level and may operate as separate entities with disparate goals.

Focus on leverage points

Even if leaders see the connections among the parts of the system, they must know where to focus their efforts to get the largest return with regard to the organization's goals. They must focus on leverage points. Leverage points are points in the system where one can apply energy or resources to greatest effect, or points in the system upon which several other steps or processes are dependent.



Every system has some unique leverage points that are based on such factors as the availability of resources, the experience level of the staff, and the maturity of the processes within the system. Nonetheless, one can identify leverage points that are common to most school districts. Take teacher recruitment for instance. System thinkers will identify connections among the interview questions, teacher evaluation instrument, staff development plan, and criteria for selecting mentors. One possible leverage point is a teacher recruitment survey that screens the pool of applicants and places a premium on those characteristics most aligned with the district's goals and vision (see figure 2). If



leadership density is central to the district's vision for example, then the recruitment survey should yield a preliminary assessment of the applicant's leadership ability or experience. At a minimum, the recruitment interview (if the district doesn't have a screening tool) should be tied to key aspects of the district's or building's vision.

In School District Eight, we have identified several leverage points and spend a lot of time and energy on those points. The building action plan, spot observation instrument, teacher recruitment screening tool, systemic curriculum alignment, the progress monitoring assessment, a systemic coaching cycle, and the facilitation of professional dialogue are all leverage points that have helped focus our efforts and raise student achievement.

Use system archetypes

An understanding of leverage points alone is insufficient to effect systemic reform. Instead, we must consider the fundamental components of every system and how they interact with each other. There are four fundamental components of any system: philosophy, processes, implementation, and leadership.

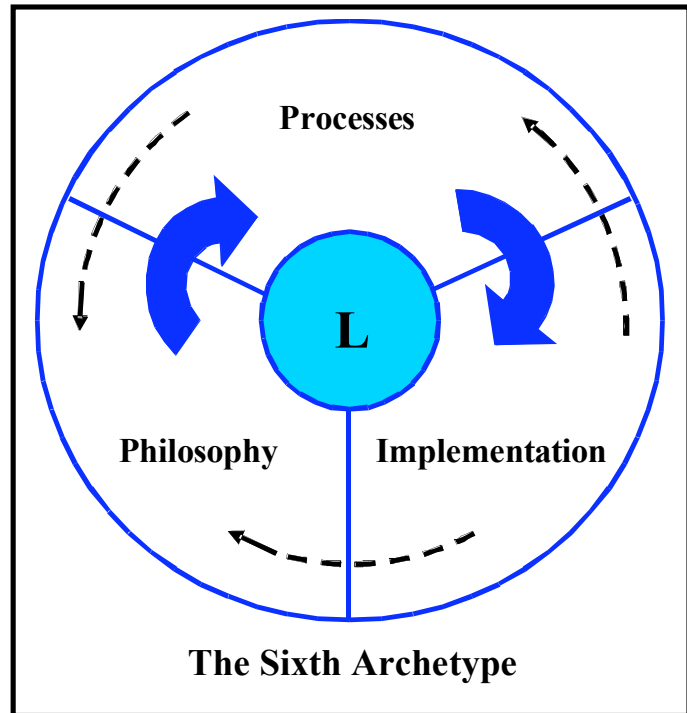
Intentional steps by leaders to strengthen the fundamental components (philosophy, processes, implementation, and leadership) will facilitate overall system integration. This understanding is the central tenet of systems thinking and system archetypes.

Philosophy means the beliefs, goals, and priorities of the organization. It represents the understanding that members of the organization have concerning the mission or the rationale for a specific event or initiative. Philosophy encompasses all the actions an organization takes to reinforce its beliefs, to build a positive culture, and garner support for policies and initiatives. *Processes* are the methods, policies, or practices developed to facilitate goal accomplishment. If philosophy is the overall concept or picture for a house, processes are the blueprint and construction schedule. *Implementation* describes the way in which members of the organization act upon the philosophy and effectively carry out the processes. It includes how the organization monitors the system for continuous improvement. How well an organization implements planned actions is an indication of how successful it will be. Implementation is about getting results.

Philosophy, processes, and implementation are fundamental components of every system. The stronger the link among these parts, the greater will be the potential for the system to reach maximum effectiveness.

The fourth component strengthens the bonds among the other three components. It is the gravity holding the various pieces of the system together and influencing their movements. *Leadership* sits at the core. Leaders in an effective system work to expand leadership ability at all levels. They work to expand leadership density throughout all parts of the system. Leadership density is more important than strong leaders.

System components work in reinforcing ways to improve effectiveness and ensure goal accomplishment. Intentional steps by leaders to strengthen each component will facilitate overall system integration. This understanding is the central tenet of systems thinking and system archetypes.



An archetype is a model or template after which other forms are patterned. The systems construct used by School District Eight and developed by the author comprises six different archetypes that describe the overarching pattern for every school or district based on their development of the four components. In this systems construct every

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policy or initiative begun by school or district administrators should be accompanied by specific steps to ensure staff members understand and accept the rationale for the initiative (philosophy), a specific mechanism or plan to accomplish the indicators of success (processes), and concrete actions to monitor progress, provide feedback, and follow through (implementation).

The corollary to the central tenet of the systems model is that an absence or weakness of one or more of the components leads to a particular system dysfunction. For example, an organization that fails to strengthen its *philosophy*

component will meet *resistance* or, worse, behavior that undermines the organization's goals. Recognizing the particular dysfunction and addressing the respective needs can help an organization improve its performance and the overall operation of the system.

Based on the strength of these components, every organization can be described by one of six archetypes: discord or confusion, resistance, diffusion of effort, going through the motions, novice, or effective school. Only one of the archetypes (the sixth archetype) describes an effective school; the others describe organizations that are experiencing some system dysfunction as a result of problems in philosophy, processes, implementation, or leadership. In Fountain-Ft. Carson, we teach our principals to recognize the system archetypes and to continue to strengthen the indicators that stand at the foundation of the effective schools archetype. A *systemic coaching cycle* helps assess school effectiveness and guides development of an integrated school system. An organization that is characterized by the sixth archetype has strong leadership and has taken concrete steps to build and sustain a strong system. Such an organization will be able to maximize its effectiveness and ultimately help students reach their potential.

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