

Systems Thinking: Critical to Quality Improvement in Higher Education

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Dramatically shifting demographics, coupled with increased student expectations, continuous technological advances, and state and federal demands for increased completion rates are driving the need for significant improvement in higher education. It is extremely difficult to meet these challenges given the current environment of declining financial resources, and it is clear that institutions must reconsider traditional methods of operation and implement systematic methods for improving quality, efficiency, and effectiveness to remain viable in the global economy. Change must occur in all aspects of higher education, including academic programs, student support services, as well as administrative areas. Leaders must recognize that making changes in one aspect of an institution will have impacts on many other areas of the institution. For example, a decision to increase the international student population will impact several areas of the campus including English language programs, student housing, food service, as well as faculty and staff training and development programs. The University of Wisconsin-Stout (UW-Stout) has been involved in quality improvement for more than a decade, and senior leaders have realized that systems thinking is a major key to managing change and improving performance.

Systems thinking is a cohesive approach to management that views all key processes as parts of an overall system, rather than in isolation or as segments. Systems thinking is based on the idea that all key processes in an organization are interrelated. Understanding these relationships is critical to obtaining desired results, making targeted improvements, and achieving organizational effectiveness. When an organization is governed by systems thinking, work progresses at a faster, more efficient pace. Leaders with a systems-management approach guide synchronous actions across the entire organization, assuring alignment and integration of all units to maximize resources and productivity.

In a college or university setting, a systems perspective is essential for engaging the campus in setting goals, establishing priorities, allocating resources, identifying key performance indicators, and driving

improvements. For example, if an institution sets a goal of increasing enrollment, all key processes and units, including marketing, recruitment, admissions, and financial aid must be aligned to achieve that goal. Resources must be deployed in these areas, as well as to the academic and student services units, to ensure adequate capacity to serve the increased number of students, both in and out of the classroom.

Potential Challenges

Implementing a systems perspective at a college or university, however, can be challenged by organizational structures, shared governance, faculty autonomy, and continued budget issues. Most higher education institutions continue to be organized in a traditional hierarchy, with several layers of management and numerous divisions and departments. The persistence of these functional silos, each with its own policies and processes, often leads to narrow vision, poor communication, and a lack of integration and alignment on campus-wide initiatives.

Although governance structures vary widely among higher education institutions, shared governance models that give faculty, staff, and students a voice in campus decision making are commonplace. Often, these internal stakeholder groups have very different motivations and priorities, making it difficult for institutions to move forward systematically with new initiatives or improvements to existing processes. In the United States, higher education is based on a tradition of academic freedom that allows faculty considerable autonomy in their teaching, research, and scholarly activities. This autonomy, however, can lead to pockets of faculty resistance and a lack of consistency when an institution is attempting to implement systematic methods for assessing student learning, using technology, or standardizing course evaluations across academic departments.

On a larger scale, budget limitations or funding formulas are often barriers to systems thinking and can dramatically affect how an institution establishes its priorities and allocates its resources. Frequently, budget cuts at public institutions include across-the-board reductions, employee furloughs,

or hiring freezes on vacant positions. Although these are some of the more manageable ways to deal with budget reductions, they are clearly not the most strategic and reflect a lack of systems thinking.

When across-the-board reductions are implemented, as opposed to strategic reallocations, institutions are unable to move forward with new initiatives. Overstaffed and understaffed departments and programs are treated equally, as are high-performing and low-performing employees. Priorities and resource alignment are compromised for the sake of convenience or fairness. These across-the-board actions conflict directly with systems thinking, which is based on strategic alignment, process management, and resource prioritization to drive continuous improvement.

Baldrige and Systems Improvement

Given all of these barriers, it is possible to develop and sustain a systems perspective and a culture of continuous and breakthrough improvement in higher education institutions. There are several models and frameworks that can assist campus leaders in developing this perspective and using systems thinking to benefit their institutions. The *Baldrige Education Criteria for Performance Excellence* provides a management model with a systems perspective for managing higher education institutions and their key processes to achieve results. The criteria also serve as the basis for the Malcolm Baldrige National Quality Award. First published in 1999, the education criteria have been used by postsecondary institutions across the United States for more than a decade. Most states and numerous other countries have established similar criteria and award programs based on the Baldrige criteria.

The education criteria are built on a set of inter-related core values and concepts, including visionary leadership, learning-centered education, and systems perspective. Within the Baldrige framework, a systems perspective is defined as the senior leadership focus on strategic directions and students. It means the senior leadership team monitors, responds to, and manages performance based on results, both short term and strategic. A systems perspective also includes using information and organizational knowledge to develop core strategies while linking these strategies with key processes and resources to improve both student and institutional performance.

Baldrige Criteria in Use at UW-Stout

UW-Stout began using the Baldrige criteria in 1999. In 2001, the school became the first higher education

institution to receive the Malcolm Baldrige National Quality Award. One of 13 campuses that make up the University of Wisconsin System, UW-Stout enrolls approximately 8,800 in career focused undergraduate and graduate programs. The university continues to use the Baldrige criteria and was cited by the Academic Quality Improvement Program as a “national and international role model for quality in higher education.” Over the past decade, UW-Stout has demonstrated a systems perspective to performance excellence and has developed a culture of continuous improvement that has been tested by changing student demographics, declining state appropriations, and continuing turnover in key leadership positions. UW-Stout’s management approach has sustained its key performance results through changes in economic and market conditions. These performance goals are calibrated by best-practice benchmarks and competitive comparisons.

Although there are numerous components to UW-Stout’s quality management system, four components have been critical to the system and have been in place and refined continuously for more than a decade:

- An inclusive leadership system.
- A clearly defined set of student and stakeholder groups and understanding of their key requirements.
- A participatory planning process.
- An end-to-end system for measuring institutional performance.

UW-Stout’s inclusive leadership system was put into place in the mid-1990s, with goals of improving communication, trust, and decision making across the campus. The senior leadership team and its responsibilities were greatly expanded; the current senior leadership team has approximately 20 individuals, including administrators and representatives from faculty, staff, and student governance groups. This group meets every two weeks to review performance data, discuss issues, establish priorities, and serve as the key decision-making body for the campus. Members are responsible for communicating issues and actions with their representative groups. Members of the senior leadership team also serve on the strategic planning group for the campus. UW-Stout has implemented a comprehensive and robust strategic planning process beginning with a summer retreat attended by the senior leadership team and internal and external stakeholders, including alumni, community leaders, legislators, and employers. At this retreat, UW-Stout’s

mission, vision, and values are reviewed, performance is analyzed, emerging issues are discussed, and strategic priorities for the campus are drafted. Early in the fall, these draft priorities are shared with faculty, staff, and students at a series of listening sessions and through electronic communication.

Once the priorities have been finalized, action plans are created for each priority. Each action plan includes the responsible individuals or units, high-level steps, resources needed, a timeline and key performance indicators. Progress on action plans is monitored closely by the senior leadership team and there is a high level of accountability. Since this process was implemented, more than 60 action plans have been completed in areas such as globalization, e-scholar (laptop) deployment, applied research, and online program development. Action plans for university priorities are complemented by other university plans, including the academic plan, the integrated marketing plan, the affirmative action plan, and the IT plan.

Key Performance Indicators

Over the past decade, UW-Stout has refined its key performance indicators by focusing primarily on those that measure student engagement, progress, and success from the time students enter the university to after they have graduated and are employed in professional positions. Key student performance indicators include rates of applications, enrollments, retention, transfers, experiential learning participation, graduation, job placement, alumni satisfaction, and employer satisfaction with UW-Stout graduates.

These indicators were established through a comprehensive analysis of student and stakeholder requirements. They provide UW-Stout with a systematic view of the institution as students can be tracked at each stage of their college careers and beyond. Data from a number of sources, including surveys, are used to provide information for each performance indicator. These sources include the National Survey of Student Engagement or the ACT Alumni Outcomes Survey, and behavioral data, such as the amount of time students spend in campus laboratories or the percentage of students who participate in off-campus experiential learning programs. To assist in analysis, data are segmented according to student cohort, gender, race, or major program whenever appropriate. These types of analyses often help pinpoint specific problems in a program, process, or system.

Over time, UW-Stout has refined its use of comparative data and compares its performance to other UW system institutions regularly, as well as with

U.S. and international institutions that have similar missions and programs. This is done to provide context for setting goals and analyzing institutional performance. When reviewing comparative data and stretch goals, the systems thinking perspective is critical to ensure that comprehensive strategies are formulated that consider all relevant factors involved in improving a specific performance indicator, such as student retention or graduation rates.

By using the Baldrige criteria and a systems-thinking perspective, UW-Stout has been able to demonstrate long-term progress in priority areas, such as increasing student enrollment, closing the achievement gap between majority and minority students, and increasing the number of students who participate in experiential learning programs. The campus has been able to achieve and maintain best-in-class status in areas that are key to its mission, including laboratory experiences, job placement rates, and employer satisfaction with graduates.

Systems thinking is based on the concept that all key processes in an organization are interrelated, and understanding these relationships is critical to obtaining desired results. The Baldrige criteria also require that senior leaders embrace systems thinking and promote that focus throughout the organization at all levels. The ultimate value in systems thinking in higher education is that it transcends institutional silos and provides campuses, such as UW-Stout, the ability to achieve institutional goals and sustain consistent performance improvement over time.

Editor's note: This article is an update of Furst-Bowe's June 2009 ASQ *Higher Education Brief* article, "Sustaining Performance Excellence in Higher Education."



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