



Leveraging What We Create

By Maury Cotter, office of quality improvement director, University of Wisconsin-Madison.

Higher education rewards creation and discovery. People who are attracted to and thrive in the higher education environment are compelled to create and discover. Our reward system demands we be good at it.

So we create new programs, solutions to problems and innovative approaches to complex issues. Then we move on to create something new—and many of the things we create are pretty amazing. What we don't do well is leverage what we create.

Although this phenomenon is especially prevalent in research, it permeates the university culture. We have pockets of innovation and excellence everywhere. We develop solutions that are demonstrated to work in small pilots, but we have a harder time scaling those things to an appropriate level so they reach their full potential value and impact.

In research, we get grant funding and rewards for discovery, not for scaling up or disseminating those ideas. We also create models and solutions for teaching and learning, outreach and service, and administrative functions—over and over—which rarely leverages their impact.

The culture and reward system, as well as our decentralized decision-making structures, contribute to this phenomenon. But some people have gone against this norm and leveraged their efforts to achieve maximum impact. Their accomplishments are being recognized by the National Consortium for Continuous Improvement in Higher Education (NCCI) through an award program called “Leveraging Excellence.”

Through the Leveraging Excellence Award Program, NCCI honors institutions and organizations that have created innovative planning and decision-making processes and leveraged their best practices to help other colleges and universities become more efficient and achieve operational excellence. The Follett Higher Education Group provided funding for the award program.

Lee Todd, president of the University of Kentucky, chairs the final judging panel. He notes, “Most important, this award recognizes a new trend in higher education. It acknowledges higher education efforts that resonate with business leaders, legislators and donors. It highlights efforts that can be taken from our campus communities and duplicated elsewhere to leverage the impact.”



Examples of efforts recognized by NCCI's Leveraging Excellence in 2008 and 2009 include:

Committee on Institutional Cooperation (CIC) and the World Universities Network:

The CIC, a consortium of Big Ten conference universities and the University of Chicago, has been forging energetic collaborations for 50 years—the fruits of which are evident in the classroom and on the bottom line. CIC institutions have joined forces in language instruction, study-abroad programs, academic leadership development and cooperative purchasing programs that have yielded nearly \$20 million in savings.

John Wiley, former chancellor at the University of Wisconsin-Madison (UW-Madison), was an active leader and participant in CIC. He says, "CIC provides avenues enabling us to broker broad-based institutional change and adapt to the economic, educational and political realities we face on a daily basis. It gives us the tools to become more effective educators and promote innovation across our campuses by allowing us to share our strengths." For example, the typical member institution offers 35 to 60 different languages, and the demand for language instruction often fluctuates depending on world affairs.

Brigham Young University (BYU): The university was selected for its capital needs analysis project, a program that first began at BYU's Provo, UT, campus. They used the project to consolidate the various capital needs functions in an integrated and innovative way. After working out a few of the kinks on the main campus, the project was expanded to include BYU's Hawaii and Idaho campuses. It also expanded into the Latter-day Saints Church Education System and Business College. Within five years, the capital needs analysis project was adopted by the entire Church of Jesus Christ of Latter-day Saints, where it manages more than 10,000 of the church's buildings.

Retail Alliance (RA): Organized in 1999 to serve independent college stores through the development and deployment of best practices, the RA is recognized for developing RATEX college store operating software. The RA purchased the RATEX software company in December 2000 as an outdated system with a prestigious user list and began a systematic reengineering of the product. Today, it has become one of the industry's best business systems, the only one owned by universities and dedicated to the mission of deploying best practices for its member-users.

The project began with 10 stores and now has 58 stores in the United States and Canada. The judges noted that the project is truly a collaborative reengineering of processes, with significant and measurable impact in areas of need, such as textbook and course material



costs. It addresses an area of increasing expense for universities with an innovative way to reduce costs.

The Center for the Integration of Research, Teaching and Learning: With its administrative home at UW-Madison, the center won for its Delta Program in research, teaching and learning. The mission of the center is to develop a national faculty in the natural and social sciences, technology, engineering and mathematics with the knowledge and experience to forge successful professional careers. These careers include implementing and advancing effective teaching and learning practices.

The Delta Program comprises a curriculum of graduate courses, intergenerational small-group programs and internships embedded within an interdisciplinary learning community. The success of the Delta Program demonstrates that a great research university can prepare graduate students to be forefront researchers and excellent teachers. The center now leverages the demonstrated success of the Delta Program across six research universities: the University of Colorado at Boulder, Howard University, Michigan State University, Texas A&M University, Vanderbilt University and UW-Madison.

Judges noted that the winners have employed three core principles—teaching-as-research, learning-through-diversity and learning communities—to enhance future faculty preparation in teaching. One of the hypotheses of the Delta Program is that if participants apply the core principles to improving their teaching, they will then succeed in enhancing the learning of their students.¹

Delta programming was designed to address a need for professional development opportunities in teaching for future faculty at UW-Madison. As a result, these individuals are not only better prepared for the future, but that preparation positively affects undergraduate student learning now at UW-Madison. The Delta Program measurably enhances participants' attitudes and understandings about teaching and learning, and their plans for teaching practice.²

Innovative learning

Through project-based coursework, participants in the Delta Program learn more effective approaches to improving learning and practice applying that knowledge. Many participants create new learning activities that are used to improve undergraduate education in various classes at UW-Madison, as well as local colleges and universities.³ More importantly, the leveraged impact of any single teaching-as-research project on undergraduate student learning is amplified by its continued use from semester to semester.



The Delta Program also has an impact at the departmental, institutional and national levels. For instance, the graduate students who participate in professional development training in teaching can influence the teaching practices of their own faculty mentors. At the institutional level, the Delta Program enhances both the research mission and the teaching mission by providing faculty with the capacity to effectively address the broader impact funding criteria of granting agencies such as the National Science Foundation and the National Institutes of Health.⁴

Finally, the Delta Program has put extensive effort into dissemination of its ideas, programs, materials and evaluation findings, with the goal of enhancing the preparation in teaching and learning of future faculty in the natural and social sciences, technology, engineering and mathematics across the nation.

Ideas from the Delta Program have been adopted by institutions that are varied and in many cases quite different from UW-Madison (see examples at www.cirtlcafe.net). These are examples of innovative ways in which universities are leveraging the impact of the excellent programs they have created.

For more information on the programs and organizations listed here, visit:

- The Committee on Institutional Cooperation: www.cic.net.
- Brigham Young University's Capital Needs Analysis Center: <http://plantwo.byu.edu/cnapub>.
- The Retail Alliance: www.retailalliance.org.
- The Delta Program at the University of Wisconsin-Madison: www.delta.wisc.edu.
- National Consortium for Continuous Improvement: www.ncci-cu.org.
- UW-Madison's quality program: www.quality.wisc.edu.

References

1. Robert D. Mathieu, "Teaching-as-Research: A Concept for Change at Research Universities," Marwell Colloquium, March 17-19, 2004, Winchester, U. K., http://portal-live.solent.ac.uk/university/rtconference/2004/resources/mathieu_paper.pdf
2. A.E. Austin, H. Campa, III, C. Pfund, D.L. Gillian-Daniel, R. Mathieu, R. and J. Stoddart, "Preparing STEM Doctoral Students for Future Faculty Careers," *New Directions in Teaching and Learning Monograph Series*, issue 117, 2009, pp. 83-95.
3. R.D. Mathieu, C. Pfund, and D. L. Gillian-Daniel, "Leveraging the NSF Broader Impact Criteria to Influence Institutional Change in STEM Higher Education," *Change Magazine*, May/June 2009, pp. 50-55.
4. D. L. Gillian-Daniel, "The Impact of Future Faculty Professional Development in Teaching on STEM Undergraduate Education: A Case Study about the Delta Program in Research, Teaching and Learning at the University of Wisconsin-Madison," National Academy of Sciences Board of Science Education Workshop, Oct. 13-14, 2008, Washington, D.C.



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