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Thriving in the 21st Century by Tackling Wicked Problems

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PRESIDENTIAL PERSPECTIVES



A HIGHER EDUCATION
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2013-2014 Series:

Elevating Sustainability Through Academic Leadership

CHAPTER

2

Thriving in the
21st Century by
Tackling Wicked
Problems

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Thriving in the 21st Century by Tackling Wicked Problems




Dr. Judith Ramaley, President Emerita, Portland State University and President Emerita, Winona State University

The Value of Connections.

More than 20 years ago, I was a member of a leadership roundtable in Portland, Oregon, that was working on achieving the ambitious goal of 100 percent graduation rate from high school. In the course of our deliberations, we finally asked ourselves why young people were dropping out of school. After listening to a number of experts talk about retention, we thought to ask ourselves, “What would the young people themselves say?” To find out, we invited a group of young high school dropouts and high school student leaders to an afternoon conversation. The experts had talked about various strategies and structures to promote retention. They discussed incentives for faculty and teachers and changes in the definition of roles and responsibilities; they talked about infrastructure; they talked about curricula. The kids told us that what really mattered was that every one of them wanted at least one adult who cared about them, who kept track of them, and who listened to them and expected a lot of them. The truth dawned on us—all those infrastructure and policy suggestions were really about creating conditions for kids and adults to connect in a meaningful way—for young people and adults to share something vital and very real—something they could work on together. The lesson applies as much to higher education as it did to K–12.

Today, we have a natural way to create those connections. Working on “real world problems” that affect our lives today can support persistence, build confidence, pave the way to a meaningful degree, and prepare our graduates to meet the demands of a new era while helping our institutions develop the capacity to thrive in a demanding age.

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Practical Liberal Learning

In 2002, the Association of American Colleges and Universities issued a report entitled *Great Expectations: A New Vision for Learning as a Nation Goes to College*. That document laid out a model of education for a new century in which our nation was approaching nearly universal participation in postsecondary education. The Report called “for a dramatic reorganization of undergraduate education to ensure that all college aspirants receive not just access to college, but an education of lasting value (p. vii).” It offered a picture of the kind of learning that students would need for a complex and interconnected world—“an invigorated and practical liberal education as the most empowering form of learning for the twenty first century (p. xi).”

We envisioned students who are intentional learners who can adapt to new environments, integrate knowledge from different sources, and continue learning throughout their lives, thriving because they are empowered through the mastery of intellectual and practical skills; informed by knowledge of the natural and social worlds and about the forms of inquiry basic to an understanding of ourselves and the world we inhabit; and responsible for their personal actions and willing to work toward the public good.

What we did not attempt to do was to offer a full framework and toolkit for creating this kind of education. That role is now being played by Liberal Education and America’s Promise (LEAP), subtitled “Preparing Students for an Era of Greater Expectations.” LEAP is a package of related projects and tools that can be used to guide an exploration of education at any postsecondary institution (AAC&U 2007). In 2011, the Lumina Foundation issued a framework called The Degree Qualifications Profile that can be used to guide conversations about what to expect of a college graduate at associate, baccalaureate and masters levels and how to guide and assess learning. Considering all three elements together (Greater Expectations, LEAP, DQP), a 21st century education is envisioned as an exploration of Big Questions at progressively more challenging levels throughout the curriculum from the first postsecondary experience until completion of a degree, with special attention to access and success for students from underserved communities. A number of effective (high-impact) practices (Kuh 2008) have been identified that support this progressively more complex and demanding intellectual work through active, hands-on, collaborative and inquiry-based pedagogies as well as experiences such as undergraduate research and internships; framed by milestone and capstone assessments that help students deepen, integrate, and demonstrate their learning and document their progress, always accompanied by well-designed academic and social support for all students.

Working on Big, Wicked Questions

We are still seeking ways to prepare all of our students to live in a changing world, an era in which our ideas about what it means to be educated and what we should expect from our graduates and from the institutions that educate them have escalated remarkably. We still talk about curricula and criteria for success but we can easily lose sight of the larger goal—to prepare our graduates to be productive and creative people who can work on problems they have not seen before, problems that keep changing and do not lend themselves to easy and well-practiced answers. We call that class of problems “wicked” (Riddell and Webber 1973). We and our students must think and act more deeply and more adaptively and build up experience over time in an integrated way if we are to make sense of the world around us (AAC&U 2007; Budwig 2013.)



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To address wicked problems and use those problems as vehicles to provide a meaningful education, we must learn new habits as we experience a major generational change in both our professoriate and our student body. We must work together in ways that span disciplines, generations, and institutional boundaries, just as wicked problems do. What better way is there to learn to do this and thrive in the 21st century than to tackle local versions of the global “wicked” problems that are shaping our lives today? The United Nations has set eight Millennium Development Goals, all to be reached by the target date of 2015 (United Nations 2013). The eight goals are halving extreme poverty rates, halting the spread of HIV/AIDS, providing universal primary education, promoting gender equity and empowering women, reducing child mortality, improving maternal health, forming a global partnership for development, and ensuring environmental sustainability. The Millennium Project (2013) has 15 global challenges, including clean water, population and resources, sustainable development and climate change, and global ethics. Each goal has ambitious targets and each goal can direct our attention to local problems in the communities that we serve.

Sustainability as an Ideal Wicked Problem

One of the most powerful ways to create the capacity for intentionality and meaningful experiences is to engage campus resources—people, ideas, and relationships—to open up both the university and its partners to the learning opportunities created by working on an important problem of immediate and mutual interest. If we want to address global challenges in our own local settings, environmental sustainability offers an especially powerful and attractive choice.

There are many reasons for choosing environmental sustainability as an integrative theme.

- This agenda touches people’s lives in ways that are intense and personal.
- It is equally attractive to faculty, staff, students, and community members from across the entire spectrum of fields and professions.
- It provides a Big Question, the sort that makes sense to everyone and that can be broken down into smaller projects and questions of varying degrees of complexity that allow everyone to contribute, whatever their ages, their expertise or their experience. Sustainability attracts seasoned professionals and elementary school children with equal authenticity.
- It crosses every aspect of institutional organization, passing across boundaries that often are difficult to traverse, creating an atmosphere of cooperation and shared purpose that is a key requirement for transformational change with the goal of fostering common understanding and a common spirit of responsibility so clearly needed in a divided world.
- **The sustainability movement itself has a suitably complex structure so that it can be both an end in itself—to become carbon neutral for example—and to be a means to a larger end—to prepare a university or a college to be successful in the 21st century and to create a learning environment that supports a more intentional and integrative approach to undergraduate and graduate study.**



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A focus on sustainability can foster deeper student interest in learning and thus bring together two very different expectations about what to expect from an investment in higher education. In the past five years, a challenging division has opened up between policymakers and academics. The policymakers are primarily focusing on degree completion in order to make our nation more competitive by improving the educational attainment of our population as quickly and cheaply as possible. Members of the academic community have been reflecting on the quality of an education and what to expect of college graduates. “Quality” and “degree completion” need not be at odds. In fact, there is clear evidence that deeper student engagement in learning leads to higher rates of persistence and completion (Ramaley 2013). If these two sets of goals are not brought together, they will pull us in different directions at a time when we need more than ever from our college graduates.

Positioning a campus as a working model of sustainable practice and fostering collaborations that address environmental sustainability in our local regions can offer a powerful strategy for both educating our students and responding to the expectations of policymakers and the public (Ramaley 2011). A commitment to sustainability can accomplish a number of goals: (1) Prepare students to be **good citizens** by providing them ways to help the institution itself be a good citizen; (2) Foster and renew bonds of trust in the community, such as “**social capital**” and use the neutrality of the campus to provide a common ground where differences of opinion and advocacy for particular points of view can be addressed in an open and constructive way and where people with similar goals can work creatively together; (3) Create **leadership development opportunities** for students and foster a commitment to social and civic responsibility; (4) Enhance the **employability** of graduates by providing opportunities to build a strong resume and to explore career goals; (5) **Educate our students** and enhance their investment in learning and thus engage them more deeply in learning while preparing them to play roles in promoting sustainability through their own professional work and through their lives as citizens of a community; (6) Play a role in creating capacity in the community to work on a range of **complex societal problems**; (7) Design a more effective way for the campus to contribute to **economic and community development**; and (8) Create **institutional capacity for change and collective action** that will enhance our own resilience while building our capacity to work on other wicked millennial problems.

To accomplish this demanding vision of what it means to teach and what it means to learn, we can help students assess and deepen their own learning and confidence and enhance their ability to apply learning to complex and often unscripted and unpredictable problems through their experience in a culture of shared purpose focused on pressing societal problems. As we model the qualities of an educated person ourselves by learning differently with our students and by working together differently on our campuses and in our partnerships with other organizations and community groups, we will gradually build additional capacity on campus and in the broader community to respond to changes in the world around us. If we can do this, we will thrive in the 21st century.

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Prior to returning to Portland State University, Dr. Ramaley served as President of Winona State University (WSU) in Minnesota from July 2005 to May 2012. She served as a Visiting Senior Scientist at the National Academy of Sciences in the spring of 2005. From 2001–04, she was Assistant Director, Education and Human Resources Directorate (EHR) at The National Science Foundation (NSF). While serving at NSF, Dr. Ramaley also held a presidential professorship in biomedical sciences at the University of Maine and was a Fellow of the Margaret Chase Smith Center for Public Policy. Dr. Ramaley was President of the University of Vermont (UVM) and Professor of Biology from 1997 to 2001. She was President and Professor of Biology at Portland State University in Portland, Oregon for seven years from 1990–97.