



Solutions

For a sustainable and desirable future

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Sustainability Is More Than Green: A Framework for University Leadership

By [Lewis Gilbert](#)

There has been growing awareness of the strong correlation between education, especially of women, and improvements in a range of indicators often associated with better quality of life and sustainability. Developing the will and the skill to deliver quality primary and secondary education to young people can be highly effective in moving toward more sustainable societies.

But higher education also has an important role to play. David Orr, citing Paul Kennedy, notes that higher education needs significant attention if we are to meet the challenges of the twenty-first century: "Ultimately, the ecological crisis is a crisis of education that purports to shape and refine the capacity of minds to think clearly, to imagine what could be and is not, and to act faithfully. Resolution of the great challenges of the next century, then, will require us to reconsider the substance, process, and purposes of education at all levels."

Orr's central points—that we need to consider the role and effects of academic institutions in their societal contexts, that we should evolve toward more integrated curricula, and that the whole of our institutions is part of our pedagogy—go far beyond the operational elements that make up the majority of our current greening efforts. They are a call for academic leadership that spans the full breadth of interactions between humans and our environments.

Academic Institutions in the Earth System

The complexity of the interconnections in Earth systems makes it difficult, sometimes impossible, to predict the outcomes of human activities. As vital parts of the human knowledge system, universities and colleges must respond to the changes in the relationship between humans and our environments.

While there are many definitions of sustainability, at its heart is the desire to tailor human activity such that future aspirations are not limited by today's actions. Central to achieving sustainability is learning to make individual choices consistent with desirable planetwide outcomes.

If there is a core flaw in our approach to knowledge production and dissemination to date, it is the absence of a holistic or systems view of humanity's role on Earth. No longer can we focus only on the activities within our academic institutions; we must also think about the interactions of these institutions with society, particularly in terms of the direct and indirect knowledge exchanged. The activities of our academic institutions should model our best understanding of the behavior that will advance both societal objectives and goals and sustainability.

A Conceptual Framework for University Sustainability

From the perspective of sustainability, academic institutions do three things: (1) disseminate knowledge; (2) discover and create new knowledge; and (3) operate (often large) institutions. In working to advance sustainability, we need to think not only about these elements on their own but also about their relationships with each other.

Pedagogy and Curriculum

"Pedagogy and curriculum" includes everything that we do to disseminate knowledge. The choice of "pedagogy and curriculum" over "teaching" highlights the importance not only of what we teach but also of how we teach it. In this respect, classroom teaching, laboratory exercises, seminars and community forums, and stakeholder engagement are all instances of knowledge dissemination to different audiences, in different formats, and in multiple directions.

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It is vital that we recognize that our behavior as an institution is an immutable part of our pedagogy. Just as children are strongly influenced by inconsistencies between parental lectures and parental behavior, our stakeholders, whether they are students or members of our communities, will be more likely to take our lectures seriously if our institutional actions follow our words.

Discovery

Where "pedagogy and curriculum" is the set of activities we undertake around knowledge dissemination, "discovery" is the set of activities associated with knowledge production. Though this is mainly the research that we do, there are other elements. To the extent that we recognize and draw on the knowledge of other groups, such as NGOs, governmental labs, private sector firms, and cultures beyond our own, we are engaged in discovery. The same is true when we think about the impact of our research beyond the university or when we engage with policy and decision makers in a dialogue and adaptive framework.

Campus Operations

While they may not come to mind when thinking about the role of academic institutions in society, campus operations (e.g., recycling, energy conservation, building, and food and purchasing decisions) are critical to any conversation about sustainability in academia.

Putting It All Together

In embracing sustainability, we should consider our activities in light of the three components described above. Our institutional behavior is perhaps our strongest pedagogical element. How we conduct ourselves, *as institutions*, should reflect our ideals and understanding of sustainability. At the heart of that understanding is the interconnection of systems; hence we should consider the interconnection of our pedagogy and curriculum, our discovery, and our campus operations.

The associated diagram presents a model to help us think about our activities in the broad context of sustainability. Each vertex represents one of the elements just described.

The activities of our universities have historically considered each element in its own right, but, as we address the challenges of sustainability, we must begin to build new kinds of behavior based on a systems view. The dots in the diagram illustrate this idea. Those dots represent a very small selection of our current sustainability-related activities at the University of Wisconsin–Madison. The location of each dot is determined by the proportion of the activity that is related to each of the vertices.

For instance, the Environmental Studies Certificate is essentially pedagogy and curriculum; students are not required to do research and the program has no interaction with campus operations. Similarly, research centers do teach graduate students, but their primary activity is research; hence they plot along the bottom boundary closest to the discovery vertex.

Along the bottom axis is a practicum-based master's degree program in which students do research for an external client as part of their degree requirements. Recently that project focused on campus storm-water management; in that year, the point would have been plotted closer to the center of the framework. Choices within existing activities can influence the sustainability of our overall institutions.

Along the pedagogy/operations axis is a student study of Nelson Institute greenhouse gas emissions that fulfilled a certificate requirement. In addition to working with facilities managers, this project required some knowledge production related to analytic techniques, processes, and options.

The third axis, between operations and discovery, is largely unpopulated. What if our institutions themselves became the subjects of research?

The dashed line through the diagram roughly encloses our current activities and emphasizes the absence of activities incorporating comparable proportions of all three elements. Such activities would use examples of campus operations to facilitate both knowledge production and dissemination. While not all of our actions need to be firmly in the central region, we should consciously work to populate that region through the evolution of current activities and the creation of new ones.

Steps Forward

Ultimately, sustainability comes down to how we move toward desired futures through the decisions we make today. Academic institutions have a responsibility to move beyond the simple greening of our operations to recognizing that everything we do is part of our pedagogy. We need to be sure that what students see as they gaze out the classroom window, and what external stakeholders see when they look in from beyond the institution, matches what we teach.

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