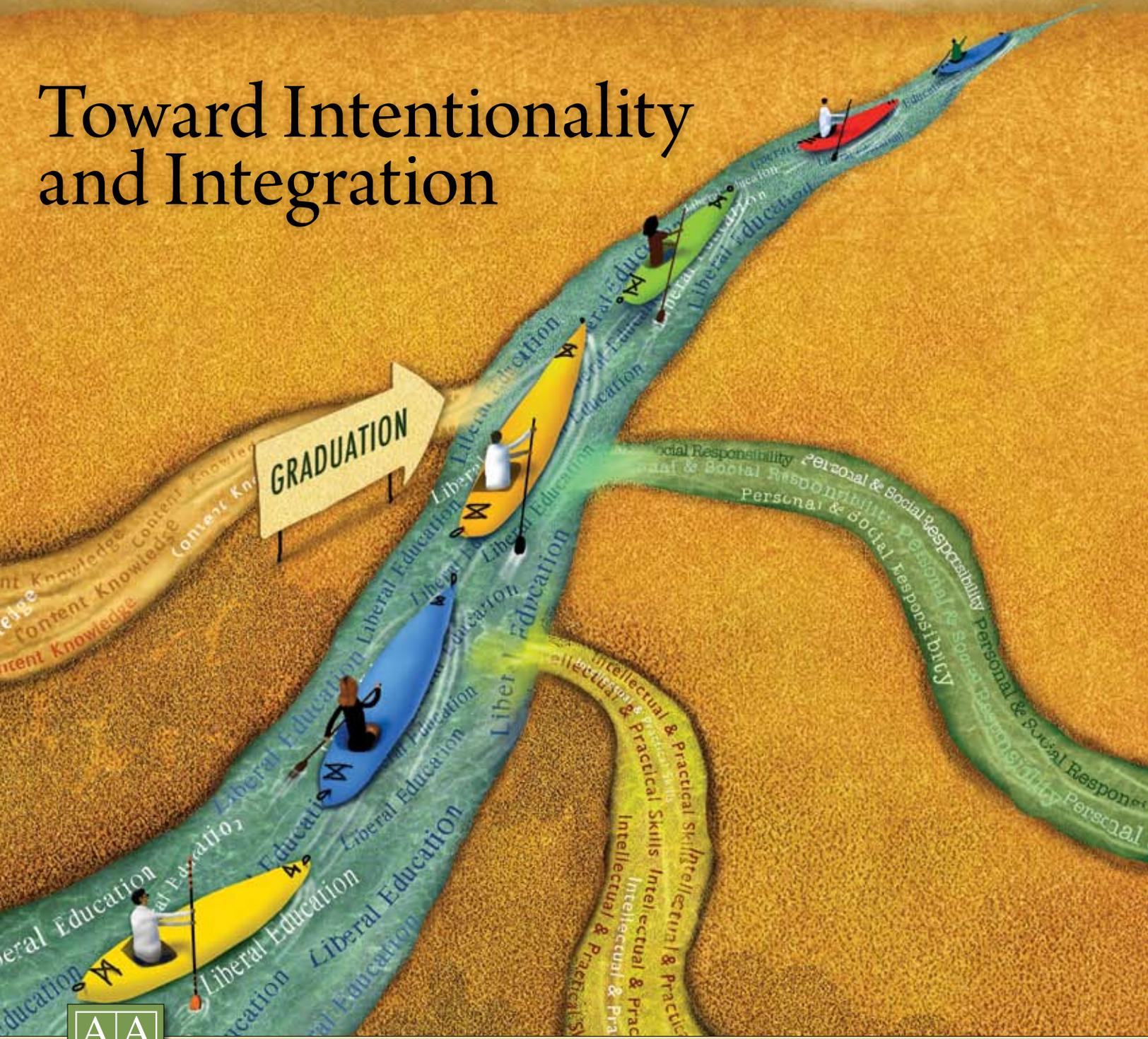


# peerReview

EMERGING TRENDS AND KEY DEBATES IN UNDERGRADUATE EDUCATION

## Toward Intentionality and Integration





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IN UNDERGRADUATE EDUCATION

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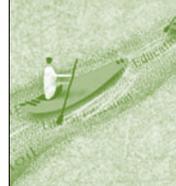
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Intentional and integrative learning have been themes in our work at AAC&U for decades. But in recent years, the urgency with which college leaders and faculty have embraced these concepts has increased significantly. Our members know that these issues stand at the heart of the task of preparing students for a much more challenging environment. Thus, colleges and universities are working to become more intentional both about the purposes of education and about the practices that help today's students succeed in college.

The emerging interest in integration and applied learning is captured in the LEAP vision of essential learning outcomes, or liberal education outcomes. In fact, I think it's fair to say that this theme adds an important twenty-first century dimension to both the philosophy and the practice of liberal education.

One of the indicators of real student progress will surely need to be how well they can integrate and apply their learning from different sources to new problems—unscripted problems and real-world questions. This notion of integrative learning resonates in different ways for different stakeholders in higher education.

Faculty members want students to use their learning to take responsibility for the big challenges that we face as a global community and the problems we encounter in our communities. No significant problem can be solved through the lens of a single discipline. Real-world questions do not come nicely sorted out as “I belong to economics” or “I belong to psychology.” In response, we're seeing examples of new curricula both in departments and in advanced general education that are organized around big themes and big questions and that deliberately link different courses and disciplines in exploration of the question.

There is much more interest in the academy now in engaging students in the implications of knowledge, not just acquiring knowledge but looking at how it can be used to both understand and solve significant problems, such as environmental sustainability or religious conflict. That pulls you toward more integrative designs for learning and the equal interest in getting students out in the field to test their skills against real problems.

Employers also want to know that students can actually apply their learning to the new questions and problems experienced in the workplace. Employers want to know not just that students can apply and integrate different disciplines, but that they can integrate their academic learning in field-based settings. Above and beyond the lenses of a particular discipline, employers need workers who

can, in a systematic way, reflect on what they are encountering in the field and use insights gained in the field to question, to modify, to connect, and perhaps to integrate things they learned in academic settings. When we surveyed recent graduates, another important constituency, they, too, believed higher education should place more emphasis on applied learning in real-world settings. For graduates five to ten years out, more emphasis on how to use knowledge and how to apply it was their top goal for strengthening undergraduate education.

So how does this emphasis on integrative learning change our approach to liberal education? When you look at the four categories of the essential learning outcomes in the LEAP vision, the first three—broad knowledge, intellectual and practical skills, and personal and social responsibility—are updated versions of the most classical goals of the liberal arts tradition. In every era, from ancient Greece, throughout the middle ages, to the nineteenth century, a liberal education has emphasized three elements—(1) the knowledge that leaders need to function effectively in their society; (2) the development of the powers of the mind and cultivation of the capacity for reasoned analysis and judgment; and (3) the notion that we are forming people for society and that it is important that they possess civic virtues and examined commitments that serve the particular society in which they are citizens and leaders. As such, the first three categories are just reframings for our time of enduring liberal arts goals. But the fourth category, integrative and applied learning, is a truly twenty-first century liberal art. Integrative learning marks a notable shift in the practice of the liberal arts from language we used to use—*understanding, appreciating, comprehending, remembering* to actually being able to *do*. Students must now know how to apply knowledge and to use it in new contexts.

And that's where we see the most the energy on campus—new designs that get students out in the field connecting academic and field-based learning, especially in the context of their major fields. This emphasis on integrative and applied learning is helping to build capabilities that we need as a society facing some of the most difficult challenges that we have faced in recent history—fundamentally issues about survival. These critical times will define the future that we will create together and our students' capacity to integrate will be the key to our success.

— CAROL GEARY SCHNEIDER

# Toward Intentionality and Transparency: Analysis and Reflection on the Process of General Education Reform

- **Rita C. Kean, dean of undergraduate studies, University of Nebraska–Lincoln**  
**Nancy D. Mitchell, interim director of general education, University of Nebraska–Lincoln**  
**David E. Wilson, associate vice chancellor of academic affairs, University of Nebraska–Lincoln**

In 2000, the Association of American Colleges and Universities (AAC&U) launched its multiyear initiative, Greater Expectations: The Commitment to Quality as a Nation Goes to College. The University of Nebraska-Lincoln (UNL) was one of sixteen colleges and universities from across the nation selected to participate in the Greater Expectations Consortium on Quality Education. This initiative intersected with structural and cultural changes at our university. Involvement with the Greater Expectations initiative and subsequent AAC&U programs provided a number of us at UNL multiple opportunities to interact with colleagues from a variety of institutions through consortium meetings and symposia. We were exposed to new ways of thinking and approaches to undergraduate education, which in turn contributed to our ability as an institution to articulate and develop a coherent strategy toward continuous improvement of the campus learning environment.

The University of Nebraska-Lincoln is a different institution than it was in 2000. We have benefitted from strong, focused administrative leadership whose priorities are continuous improvement of our research, graduate, and undergraduate programs. Reports from three key faculty task forces (available online at [www.unl.edu/svcaa/reports/](http://www.unl.edu/svcaa/reports/)) provided the campus community with vision and guidance for raising both the intellectual engagement and achievement of the entire campus community. In addition, there have been purposeful structural changes and reallocation of resources within the institution to provide greater visibility and support to the success of our undergraduate students. For example, the office of undergraduate studies, led by an academic dean, was established in 2003 with responsibilities for all academic programs and initiatives outside

the eight undergraduate colleges. This includes a diverse set of responsibilities and yet provides a coherent structure, leadership, and oversight for institutional programs.

The campus is committed to a strategic planning process, first introduced in 2004. At UNL, strategic planning is a ‘grassroots’ process, beginning with academic priorities established at the unit level and then advancing through the college level. Deans present their college’s academic priorities and benchmarks for success, which in turn are incorporated into the campus-wide strategic plan. The strategic planning process established the blueprint for prioritizing efforts on campus. As a result of the planning, the chancellor in 2005 recommended reform of our general education program, partly because the curriculum was viewed as complicated and unattractive to students transferring to our university and to current students transferring from one college to another within the institution. The major work by those in the university community to accomplish this task provides evidence that one of the major changes in the university is a shift to become more intentional about what students should learn.

## LET THE PROCESS BEGIN

The formal process for reform of our general education reorganization began in 2005, when the chancellor and senior vice chancellor for academic affairs (SVCAA) appointed the associate vice chancellor of academic affairs and the dean of undergraduate studies to lead the reform process. In addition, four faculty members representing key campus constituencies were chosen to comprise the initial planning group, known as the General Education Planning Team (GEPT).



The GEPT attended the 2005 AAC&U Institute on General Education at Salve Regina University in Rhode Island and interacted with institute faculty and colleagues from across the country whose institutions were also involved in transforming their general education programs. GEPT returned with a plan and timeline for organizing the campus-wide initiative. The plan called for a new approach to designing general education; that is, one based upon student learning outcomes rather than a menu of particular courses. GEPT also recommended that the SVCAA, in consultation with the academic deans, form a working advisory group to GEPT including faculty representation from each undergraduate college, representatives from student government, office of admissions, professional academic advising and the director of institutional assessment. This group, known as the General Education Advisory Council (GEAC), was chaired by a university distinguished professor known for his excellence in teaching and commitment to undergraduate students.

GEAC was charged to design a general education program that was coherent, transparent, flexible, student-centered, transferable among the eight undergraduate colleges and consistent with national contemporary thinking about what students should know upon graduation. This was no small task. The first year in consultation with the undergraduate colleges in the university, various faculty groups, and students, the GEAC developed institutional objectives and related student learning outcomes. The GEAC began that work by posing a basic question to our faculty and students: What should all students—regardless of their major—know or be able to do by graduation? A small group of faculty participated in the 2006 AAC&U General Education institute with the goal of developing a plan for assessing such a

program based upon student learning outcomes.

The end product of the GEAC committee, Achievement-Centered Education (ACE) ([ace.unl.edu](http://ace.unl.edu)), is a program based on four institutional objectives and ten corresponding, assessable student learning outcomes (SLOs) along with documents guiding the development and governance of the program. Objectives are developmental and designed to be achieved over the course of students' college experience and reinforced by accompanying SLOs and work in the majors. GEAC tried to address faculty and student suggestions by constructing a program that helps achieve outcomes that will be visible and relevant.

In January 2008, the faculty of the University of Nebraska-Lincoln voted to approve the ACE program for implementation in the fall 2009. It is a work in progress and always will be, as its foundation is based upon continuous improvement of the undergraduate learning experience. It requires active participation

*We hoped to be able to produce a general education program that would prepare students for challenges they will face in the twenty-first century*

by faculty and students. To state that all our faculty are thrilled with this new approach to general education would be inaccurate; however, the process for the development and implementation of this new program paved the way for our campus to view general education differently and, we believe, more in line with what our students need to thrive in a rapidly changing and, at times, unstable world.

#### **MAKING GENERAL EDUCATION VISIBLE AND VALUABLE**

Prompted by the national and local

conversations about general education, we realized that any new efforts to reform UNL's program must communicate the intentionality of our efforts on many levels. Integrating lessons learned by the smaller teams, who attended the AAC&U Summer Institute on General Education in 2005 and 2006, and other national and local conversations about quality education taught us that intentional learning requires transparency, strategic choices, inclusive decisions, and revolutionary thinking. Guided by these values, we hoped to be able to produce a general education program that would prepare students for challenges they will face in the twenty-first century.

#### **BEING TRANSPARENT**

GEAC spent two years developing and fine-tuning UNL's plan. It was critical that we made the reform effort, not simply the end result, visible to all stakeholders including students, faculty, administrators, staff, and those from external institutions who were interested in particular aspects of

the new general education program, such as transfer-related issues. With the belief that contributions from all areas could help construct a strong program, GEAC members listened to many voices, heard their concerns and ideas, and ensured that all materials and meetings were available to the university community through our Web site.

To create transparency, much emphasis has been placed on online and face-to-face communication. An interim director for general education was appointed to guide the implementation and facilitate



the process. As the program builds, the ACE Web site continues to be a central location for ACE-related resources, such as information about the course certification process, transfer policy, FAQs, updates, and lists of groups consulted. Equally important in our efforts to provide an ACE online library and archive are our efforts to reach to various constituencies on and off campus to communicate in person about concerns. Communication remains a critical component and efforts are wide-ranging and ongoing. Some constituencies include curriculum committees, student government, advisers and faculty senate, and leaders at other institutions.

In addition to talking with the stakeholders mentioned above about general education, efforts are being made to ensure that students understand the intentionality of the ACE program. Before developing ACE, GEAC listened to students and heard that they did not always understand why they had to take a science or a modern language class. We heard some say they took their “generals” so they could get them over with and move on to the courses they were interested in, and some told us they had the

impression that research took priority over undergraduate education. It was, frankly, shocking to hear how some students described their academic experience under our old general education program. By developing outcomes that align with the Liberal Education and America’s Promise (LEAP) initiative (see table 1), the new general education program’s institutional objectives and learning outcomes now emphasize ethical and civic responsibility, global awareness and diversity as well as other skills and abilities. With the goal of helping students understand how general education relates to their majors, the program asks students to integrate the knowledge and abilities developed in the student learning outcomes with other aspects of their education.

Intentionality goes beyond simply asking providers of education to teach to outcomes rather than the old subject-driven method. A critical component of intentionality involves making sure students know why they are being asked to learn certain outcomes and reminding faculty who teach to have that discussion with students. It requires making intentions visible not just to faculty, but to

students as well. It is important to remind faculty and students what learning is to occur. To make learning intentional at the course level, every course certified for inclusion in the ACE program must clearly identify in the syllabus:

- The learning outcome(s) that would be satisfied by the course
- A brief description of the opportunities this course would provide for students to acquire the knowledge or skills necessary to achieve the learning outcome(s)
- A brief description of the graded assignments that the instructor(s) will use to assess students’ achievement of the outcome(s)

### TYING TO ACADEMIC STRATEGIC PLANNING

The University of Nebraska-Lincoln embarked on an iterative strategic planning process to clarify the shared vision and best assess how to achieve that vision. Aligned with the university’s mission of learning, discovery, and engagement, the institution’s two overarching priorities are undergraduate education and research. Clearly, transforming general education supports the academic mission.

Gano-Phillips and Barnett observed that process is a key to success as university administrators and intellectual leadership forge new pathways for assessable general education programs (2008). We would extend their argument by asserting that the new general education program based on achieving learning outcomes also provides a valuable strategic focus to help leaders build a cohesive, coherent education.

ACE’s new outcomes model offered a focal point for both the planning stages and the ongoing implementation phase. The thematic approach has helped make our efforts strategic and efficient. Preserving the goal of achieving an outcomes-based education throughout the implementation

TABLE 1: LEAP/ACE REFLECTION FROM UNL WEB SITE

AAC&U Essential Learning Outcomes	UNL’s Institutional Learning Objectives
Knowledge of Human Cultures and the Physical and Natural World	Build knowledge of diverse peoples and cultures and of the natural and physical world through the study of mathematics, sciences and technologies, histories, humanities, arts, social sciences, and human diversity
Intellectual and Practical Skills	Develop intellectual and practical skills, including proficiency in written, oral, and visual communication; inquiry techniques; critical and creative thinking; quantitative applications; information assessment; teamwork; and problem solving
Personal and Social Responsibility	Exercise individual and social responsibilities through the study of ethical principles and reasoning, application of civic knowledge, interaction with diverse cultures, and engagement with global issues.
Integrative Learning	Integrate these abilities and capacities, adapting them to new settings, questions, and responsibilities.



phase has added focus to the process as decisions have been made. Specific activities stimulating changes that are occurring within the university and beyond are offered as evidence of initial success of the approach:

- Specially designed course certification and recertification processes focused on helping students achieve outcomes and assessing their progress guided the general education committee as it considered courses that populate the program
- Course facilitators, selected by the dean of each undergraduate college, helped faculty understand the goals of ACE and engage in the course submission process
- The focused approach prompted the university's assessment team to modify the infrastructure of its online assessment tool
- University administrators seized the opportunity to sponsor outside speakers and a competitive grant opportunity for faculty that would contribute to building the program and changing the university climate
- A faculty team won outside grant funding to help pilot a general education writing assessment system
- The focus on outcomes spurred our decision to have the dean of undergraduate studies, the general education director, and the university's academic transfer coordinator visit all community colleges in the state and a number of other higher learning institutions to talk about our brand of general education to see if there are opportunities for collaboration

The strategic process has been both successful and challenging. It is far from complete in transforming the culture on campus, and faculty members have approached the efforts with varying levels of acceptance and enthusiasm. At its core, the ACE initiative has given faculty

opportunities to refocus their thinking and do their jobs in new ways.

### BEING INCLUSIVE

Being intentional means that we need to include many voices in our decisions about general education reform. It does not take much imagination to begin to realize the complexity and enormity of the project that needs to be undertaken if the transformation to a new general education program is to be successful in achieving its goals of an outcomes-based focus, especially in an institution with 24,000 students. Establishing and nurturing mutually beneficial relationships among an array of constituents—both internal and external to an institution—is essential to the process.

*It is far from complete in transforming the culture on campus, and faculty members have approached the efforts with varying levels of acceptance and enthusiasm*

Those involved with the process at UNL recognized the importance of communicating with the many stakeholders involved *within* the university, such as students, faculty, admissions officers, advisers, registration and records personnel, administrators, and campus leaders of all sorts. From the beginning of the process it was clear that creating the culture in which the new program could thrive requires including *external* constituencies such as community and state colleges in conversations about the new program as well.

In visiting the chief academic officers and admissions staff at nearly all institutions of higher learning in the state—community colleges, a state college system, private institutions, and a land-grant state university—a team

from UNL learned that many other institutions were in the process of revising their general education programs as well and exchanged concerns about many aspects of the process, including transfer students. Sharing information proved mutually beneficial, as change often occurs simultaneously at different institutions, and we all want to improve transfer students' experience.

### BEING REVOLUTIONARY

Through LEAP, AAC&U invites institutions to break out of academic silos and align teaching and learning practices with the realities of the new global century. This request asks colleges and universities to rethink their organization and outdated “modular curriculum, organized a century

ago and still largely intact, which has become increasingly dysfunctional” (AAC&U 2007, 19). As new general education programs attempt to meet AAC&U's challenge, a new question has emerged: Who owns the truth about how courses and curriculum should be categorized?

Shedding traditional menu models replete with courses attached to disciplinary labels, the new general education program designers at UNL deliberately avoided using departmental tags to avoid falling into the silo trap. As the general education committee considers courses to populate the program, it is faced with new questions about whether the course fits the outcome. What appears to be emerging as the answer to these questions is that each discipline thinks it owns the truth about its worth



# ANALYSIS

and place in the academy. Focusing on programmatic outcomes can help settle territorial disputes.

In the old model, arts and sciences colleges traditionally defined what was a science course or a writing course or a humanities course or a social science course, and consequently, what was included in general education programs. This paradigm is shifting. Who says writing is the sole domain of the English department? Can't journalism or business writing courses also fulfill writing outcomes? What about science? Will an entomology course in an agriculture college in the institution meet acceptable standards for science-related outcomes and be accepted by the broader campus community? Does an anthropology course achieve an outcome that relates to using scientific methods if it examines human behavior that is the focus of a different outcome? Does a course in music fulfill an arts outcome simply by definition of its title and home department? Redefining general education by outcome rather than by subject can be challenging. And so can altering the perspectives of faculty who have long resided in an old system.

At the heart of transforming UNL's culture to an outcomes-based general education program is a stimulating and sometimes difficult discussion that forces

faculty to face deeply rooted fundamental assumptions about education. In the face of critics who claim that the new system of general education does not substantially differ from the old one, we argue otherwise. The focus on achieving outcomes rather than completing a prescribed list of courses demands transformational thinking. It requires reexamining how disciplines are defined and whether the traditional structure of classifying courses of studies as humanities, sciences, social sciences, and the arts needs to be expanded to accommodate today's realities. It challenges the academic community to consider alternative ways of thinking about common theories, methods, techniques and problems. It may not be an easy path, but it will ultimately be worth the journey as we engage in discussions about intentional learning, which will improve higher learning institutions to better serve our students in the twenty-first century. ■

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## AAC&U MEETINGS

### ANNUAL MEETING

**READY OR NOT:  
Global Challenges, College Learning, and America's Promise**  
January 21-24, 2009  
Seattle, Washington

### NETWORK MEETINGS

**GENERAL EDUCATION,  
ASSESSMENT, AND THE  
LEARNING STUDENTS NEED**  
February 26-28, 2009  
Baltimore, Maryland

**SHAPING FACULTY ROLES IN A  
TIME OF CHANGE:  
Leadership for Student Learning**

April 2-4, 2009  
San Diego, California

### SUMMER INSTITUTES

**GENERAL EDUCATION AND  
ASSESSMENT**

May 29-June 3, 2009  
Minneapolis, Minnesota

**GREATER EXPECTATIONS**

June 17-21, 2009  
University of Vermont

**ENGAGING DEPARTMENTS**

July 8-12, 2009  
University of Pennsylvania



# Enhancing Intentionality in the Requirement-free Curriculum

► **Laura Donnelly-Smith**, associate editor, *Peer Review*

**B**rown University has marched to the beat of its own drummer for decades, encouraging students to forge their own curricular paths and, in 1969, removing general education course requirements. While many colleges and universities have since expanded and solidified requirements for general education courses or a core curriculum, Brown's "new" curriculum has remained essentially unchanged for forty years. But since early 2007, a special task force at Brown has been revisiting its iconic curriculum, asking tough questions about the goals of a liberal education and how students can best reap its benefits. A report released in September 2008 presents the framework for an updated Brown curriculum. The changes are not drastic—there are still no required courses—but aim to provide what Brown Dean of the College Katherine Bergeron calls "a map of liberal education."

"The Brown curriculum is really about a commitment to dialogue between faculty and students on any number of issues," Bergeron explains. "There's responsibility on both sides."

The task force's final recommendations for action include:

- Develop and distribute a statement of liberal learning outlining what a liberal education should encompass at Brown
- Conduct a review of every concentration (major) that includes a departmental self-study detailing the rationale behind its courses and how they promote both liberal learning and the specific goals of the discipline
- Develop an electronic portfolio system to help document students' development and educational goals; share portfolios with advisers to ensure students are making progress toward goals
- Enhance the continuity of the advising experience over students' four years at Brown; add a Faculty Advising

Fellows program to complement regular advising

- Increase funding for new and innovative courses
- Develop online course evaluation software that would be available to all departments and would encourage more extensive student feedback

Brown released a draft of the task force's report to the campus community in January 2008 and solicited feedback from faculty, students, and alumni. As a result, the final report recommendations are, in many cases, already underway at Brown, and a "Plan of Action" section of the report includes a specific timetable of concrete next steps—most of which are scheduled for the 2008 and 2009 academic years.

## TASK FORCE GOALS

Brown hasn't always espoused the less-is-more approach to curriculum guidelines. In the first half of the twentieth century, a general education program for first-year students was established, and changes in the late 1940s made this curriculum more rigid, including sixteen required subjects and comprehensive examinations for seniors. (Office of the Dean of the College 2008) The requirements were relaxed to a degree in the 1950s and even more in the 1960s, when a "permissive curriculum" offered a great deal of flexibility in course choices. Brown's "new curriculum" was introduced in 1969. Eventually called simply "the Brown curriculum," it focused on students' educational journey rather than their destination:

Its most distinguishing feature as a curriculum has always had more to do with context than content, with the basic conditions for leaning than the subjects learned. Like undergraduates at other American universities, Brown students are expected to gain perspective on a range of disciplines and to concentrate in one; to perfect their critical faculties and to hone their judgment. The difference



lies in the freedom they have to shape this experience for themselves. (Office of the Dean of the College 2008) Since 1969, only minor changes have been made to the Brown curriculum. The number of concentrations—Brown’s term for what many other schools call “majors”—has grown to nearly one hundred, and the number of courses required for graduation increased from twenty-eight to thirty. But in 2007, the convergence of several factors prompted a new, closer look at the efficacy of the curriculum. The first factor was the curriculum’s upcoming fortieth anniversary, coupled with the fact that the only prior formal review of the plan had been conducted in 1989. In addition, Brown President Ruth Simmons’ Plan for Academic Enrichment, a 2007 report, recommended a stronger focus on undergraduate education. Finally, with Brown’s ten-year reaccreditation review slated for 2009, administrators decided to emphasize undergraduate teaching and learning during the accreditation review, and to use the curriculum review process to help them prepare.

The Task Force on Undergraduate Education, which included administrators, faculty members, and Brown students, convened for the first time in April 2007 and met nearly thirty times between April and December. The task force’s object was to develop a clear statement of the goals of a liberal education at Brown, and answer the question, “How do we define Brown’s educational mission today, and what is required to ensure its continued success?” This goals statement, once completed, would make unambiguous the learning outcomes students should be incorporating into their academic plans, and present intentional pathways to reach those goals.

The most significant difference between Brown and other institutions is not the lack of required courses, but

the articulated expectation that students make intentional educational choices. The curriculum calls for students “not merely to sample a range of courses but to make connections between them, to use perspective gained from one discipline as a window onto the next.” Intentionality has long been at the core of Brown’s curricular philosophy, Bergeron explains, but now the focus has shifted to ensuring that students understand and can make use of it.

### **MAKING LIBERAL EDUCATION INTENTIONAL**

The decision to clarify, rather than significantly change, Brown’s curriculum was an important one in framing the task force’s mission. In its forty years of

*The most significant difference between Brown and other institutions is not the lack of required courses, but the articulated expectation that students make intentional educational choices*

existence, the Brown curriculum has held up well to internal scrutiny. The 1989 curricular review, conducted by Brown professor and then-dean of the college Sheila Blumstein, found that most Brown students completed at least two courses in the humanities, in the sciences, and in the social sciences by the time of their graduation—even without being required to do so. (Blumstein 1990) More recent research from Brown’s Office of Institutional Renewal indicated that, of students in the class of 2007 who completed at least twenty-two courses at Brown, 82 percent took at least two science courses, 98 percent took at least two humanities courses, and 92 percent took at least two social science courses. (Office of the Dean of the College 2008)

Whether students are making

conscious connections in their coursework is harder to measure. Coursework completed within the concentration areas is highly structured, and administrators were unsure that students understand the relationship between their liberal learning and their specialized learning. So an important goal of the curriculum review was to examine the role concentrations play in the Brown curriculum. “We hope to gain better integration of the goals of concentration program with those of liberal education, by asking concentrations to speak to how and in what ways they help meet or enrich the goals of a liberal education—perhaps through enhancing writing and oral skills, doing community service as appropriate, enriching international opportunities and

emphasizing the global world we live in,” says Blumstein, also a task force member. “In the past, concentrations have been highly compartmentalized.”

The statement of liberal learning at the center of the task force’s report was developed in spring and summer 2008 and distributed to incoming Brown students in August. The statement, *Liberal Learning at Brown*, includes specific goals students can use to make the most of their education, including “Work on your speaking and writing,” “Evaluate human behaviors,” “Collaborate fully,” and “Apply what you have learned.” Each goal is followed by easily understood suggestions for concrete action, like “Seek out courses, both in and out of your concentration, that will help you improve your ability to communicate in English as well as in



another language.” The statement helps students—especially those with a few semesters already under their belts—to see what academic areas they have been drawn to and what they have avoided. It also provides an obvious starting point for students and advisers to use in planning the second, third, and fourth years of study. “For us, this is much better than the passivity of distribution requirements,” Bergeron says. “It provides a starting place for active conversation.”

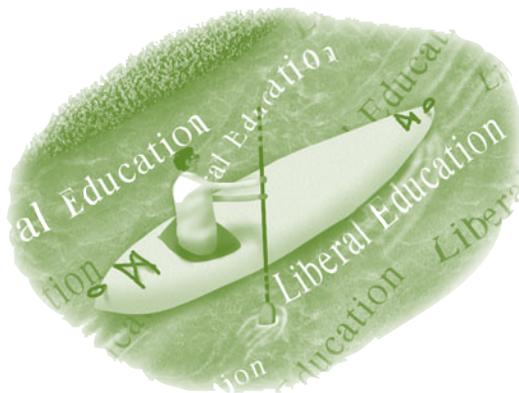
### ADVISING AND ASSESSMENT

Those active conversations are an important part of the task force’s recommendations, five of which focus on advising. They include the development of the new Faculty Advising Fellows program, already underway at Brown, in which six experienced faculty members live on campus and open up their homes to students several times each month for study breaks, lectures, and social gatherings, as well as make themselves available for informal advising. Ten nonresidential faculty advisers are also involved in the program, each affiliated with one of the six houses. The goal, administrators say, is to increase advising contacts and make conversations about educational choices commonplace. Students who might feel overwhelmed by the choices offered at Brown will be able to readily find advice from many different perspectives.

The task force also recommended Brown increase the continuity of students’ formal advising experience across their educational career. Under a new plan, students will retain the same adviser for the first two years, until they declare their concentration, and then will work with a concentration-area adviser for the final two years, says Blumstein. “Students will continue to receive advising for four years, but it will be more integrated

and contact will be more frequent,” she explains. “And through the faculty fellows program, we’ll provide ways for students to meet faculty outside the office and across a number of disciplines.” In addition, Blumstein says, e-portfolios documenting students’ growth will eventually be used to jump-start advising conversations and allow advisers to get “a deeper sense of the student—rather than simply having meetings.”

Brown student and curriculum task force member Jason Becker frames the



task force’s advising recommendations this way: “A smorgasbord goes from an exciting experience to a very unpleasant one if a diner is not judicious and wise in his or her choices,” he says. “The open curriculum can become overwhelming and uncomfortable in much the same way if a student is not prepared with the tools to make strong, informed choices.”

### NEXT STEPS

The e-portfolios, a project that is still in the planning stages at Brown, will include a selection of student writing samples spanning the first year through the senior thesis or capstone project. These reflections on learning goals and experiences will illustrate students’ progress through their programs, as well as provide a tool for administrators to analyze how Brown students approach

their requirement-free education. The goal for implementation of e-portfolios is fall 2009.

The main priority at Brown for the 2008–09 academic year, Bergeron says, is to continue refining the new programs already in place, and to focus on starting concentration-area reviews—nine are slated to be finished before June 2009. Brown community feedback on the task force’s final report has been mostly positive, she says, largely because the task force publicized its recommendations in the January 2008 draft, conducted open forums for students and faculty, and worked hard to incorporate the feedback into the final report. “The environment at Brown really encourages open dialogue, especially on this subject,” Bergeron says.

Jason Becker, the Brown student and task force member, says the benefits of the Brown curriculum go beyond allowing students more choice. “There’s a pervasive culture that supports personal responsibility, and competition among students is lowered dramatically because it’s rare that two students have similar schedules or motivations,” he says. “I am a far more active participant in defining what it means to be educated than I ever would have been at another school.” ■

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## Liberal Arts Matters at Butler University: An Experiment in Institutional Transformation

► **Judith Morrel**, associate professor of mathematics and associate dean of the College of Liberal Arts and Sciences, Butler University  
**Michael Zimmerman**, professor of biological sciences and dean of the College of Liberal Arts and Sciences, Butler University

The LEAP (Liberal Education and America's Promise) National Leadership Council has asked that American society give a new priority to what the council calls "the essential learning outcomes for college students" (American Association of Colleges and Universities 2007). These outcomes are the ones traditionally associated with a liberal arts education: high skill levels in critical thinking, communication, moral discernment, and individual and cooperative problem solving; knowledge of human cultures, the physical and natural worlds; attitudes of civic engagement and multicultural awareness; and a commitment to integrative and lifelong learning. The council also notes that work is needed on building public and student understanding about what a liberal arts education actually entails and why it is important for the twenty-first century.

While business leaders agree that student learning outcomes associated with a liberal arts education should be more emphasized (Jones 2005), there is evidence that the general public, current and prospective college students, and their parents do not fully understand either what a liberal arts education means or why it should be sought. A recent national survey (Hersh 1997) found that parents and prospective college students had little idea about what a liberal education is and that few groups, other than faculty and liberal arts college graduates, have a positive appreciation for such an education. (See also Graff 2003.) Even faculty at liberal arts institutions may not be doing all they can to help students understand and value their educations (Laff 2006); faculty often assume that students understand more about their own educational process than they actually do. Therefore, it is incumbent upon colleges and universities committed to the liberal arts to make concerted efforts to design strategies that effect changes in understanding, attitude, and appreciation of liberal education among current and prospective students and among broader constituencies.

The College of Liberal Arts and Sciences at Butler University has instituted initiatives to highlight liberal education, encourage the campus community to talk about its vibrancy and value, and promote the liberal arts. We are attempting to break the "conspiracy of voluntary silence" (Schneider 2003) that has helped hide the tradition of liberal education from the public. We are incorporating and expanding on best practices, inventing new ones, and framing them all as part of one comprehensive endeavor called Liberal Arts Matters. We have also begun an assessment program to determine if paying concerted attention to the liberal arts can have discernable results in student understanding and behavior.

Liberal Arts Matters is a multifaceted, long-term effort partly designed to ensure that all Butler graduates, independent of major, understand the meaning and appreciate the value of a liberal arts education. Our starting hypothesis is that most undergraduate students—even at institutions like Butler with a long and distinguished liberal arts tradition—do not have a full understanding of either the definition or the value of a liberal arts education. We are further hypothesizing that with deliberate interventions and strategies, we can effect changes in student understanding, appreciation, and behavior. We believe that by being more intentional with our students, we can change attitudes and behaviors, and, in fact, transform student culture. Currently, slightly less than one-half of the university's four thousand full-time undergraduates are enrolled in the College of Liberal Arts and Sciences, with the remainder pursuing degrees from four professional schools. Our goal is to reach all Butler students, regardless of discipline. We envision a time when "liberal arts across the curriculum" is as established as current Butler programs in "writing across the curriculum" and "speaking across the curriculum."



## LIBERAL ARTS MATTERS INITIATIVES

The Liberal Arts Matters program has multiple initiatives, directed at various audiences. Table 1 lists, by primary audience and agent, these initiatives. Details of each follow in the paragraphs below and on our Liberal Arts Matters Web site at [www.butler.edu/liberal-arts-matters](http://www.butler.edu/liberal-arts-matters).

they are being collected and posted on the Liberal Arts Matters site under Faculty Perspectives. The syllabus project asks each faculty member in the college to include on his or her syllabus for each course a statement about how that course fits into a liberal arts education. The response to this request has been overwhelming—more than three hundred

scientist and an English professor. In another symposium, professors from the fields of biology, theater, and psychology all addressed the topic of sex. The second year of the symposia featured a slightly different format. Two faculty members led the audience in a discussion of broad topics such as Art and Craft, Heart and Mind, and Freedom and Responsibility.

TABLE 1. LIBERAL ARTS MATTERS INITIATIVES

Initiative	Primary Audience(s)	Agent(s)
Essay contest	students/general public	students
First-year essay	first-year students	faculty
Syllabus project	students/faculty	faculty
Symposia	faculty	faculty
Core Values statement	general public	faculty
CrossCurrents	faculty/staff	faculty/staff
Recommended Readings	general public	faculty/staff
Board of Visitors	alumni/friends	BOV members
GALA	students	faculty
Embedded journalists	students/general public	students
Research project	general public	faculty

The college-sponsored liberal arts essay contest, open to all Butler undergraduates, awards a prize of \$1000. With this opportunity, we ask students to consider how the content and process of a liberal arts education illuminate the type of education most worth pursuing, with respect to future lives and ambitions, and to the lives they are living now and the people they are becoming. The submissions are judged by a committee of members of the faculty and of the college's board of visitors. Winning essays are posted on the Liberal Arts Matters Web site, and the author of the winning essay is recognized at the college's annual Honor Day.

Each fall during orientation, we distribute a faculty-written essay to incoming liberal arts and sciences students on the general subject of a liberal arts education. As these essays are written,

statements now appear on the Liberal Arts Matters site. Thus, students are regularly presented with thoughtful statements about the liberal arts. Since we share syllabi statements with all faculty at the beginning of each semester, meaningful discussion about this topic occurs.

The Liberal Arts Symposium Series is an annual series of six to eight symposia. For each symposium in the inaugural year, three faculty members from different disciplines addressed the same "big" topic from their disciplinary perspectives. The themes of the sessions were beauty, justice, truth, conflict, sex, despair, and harmony. All members of the Butler community—students, faculty and staff—as well as Indianapolis community members were invited to eat lunch, discuss and debate during the hour-long symposium. At the symposium on justice, the presenters were a chemist, a political

One of the most intriguing developments that has emerged from the Liberal Arts Matters initiative is a College Core Values statement. Written by a committee of department chairs and adopted by the entire college faculty in 2007, the statement is a lyrical two-page tribute to the history, value, and aims of liberal arts education. It addresses not only the past and present context of such an education, but also what the liberal arts means to us and to the world we inhabit. The discussion, both in college meetings and in the halls, surrounding the development of the statement was invigorating for the faculty, served to blur disciplinary boundaries, and contributed to a sense of shared purpose and college cohesiveness. This statement, which appears in the university *Bulletin*, may also be accessed in several languages from a link at the Liberal Arts Matters Web site; it has proved so popular that we have produced and distributed posters of a portion of the statement beginning with the words "Think for yourself and act wisely and well in the world."

CrossCurrents, another program that has inspired hall conversations at Butler, is designed to support reading and discussion among faculty and staff across the university on interesting topics. In this program, groups of five to ten faculty and/or staff members convene, read three books on a topic, and meet to discuss the readings. To encourage participation, the college funds the purchase of the books and refreshments. The only obligation of the group is to present a public panel on



the topic during the semester following the conclusion of discussions. To promote interdisciplinarity, a different department must be represented for each three participants in a group. Numerous groups have self-organized, including one around the theme of “empire,” another on the Holocaust in France, and one on women in science. Faculty and staff are also writing book reviews that are posted under Recommended Readings on the Liberal Arts Matters Web site; one review per week appears in a local newspaper under the college’s banner.

The college’s board of visitors has become engaged in Liberal Arts Matters as well. A portion of each board of visitors’ twice-yearly meeting is devoted to liberal arts topics such as a presentation about new initiatives or the reading of

*There is already ample anecdotal evidence of increased interest in and conversations about the liberal arts among faculty members, both within and beyond the liberal arts and sciences*

the winning student essay by its author. The Board has also agreed to endow the liberal arts essay contest. Additionally, we asked members of the board to contribute short, personal stories on the importance of liberal arts education, commenting on how such an education has enhanced their careers and private lives. These vignettes have been posted on the board’s Web site.

We believe that study abroad opportunities can have a profound effect on the lives, both current and future, of our undergraduate students. Accordingly, we have launched a program called Global Adventures in the Liberal Arts (GALA), which offers study abroad experiences in multiple locales during one semester. Approximately fifteen students study course material related to each locale and are taught by a variety of Butler professors,

one of whom remains with the group for the entire semester and three of whom travel to specific locations for two weeks. The courses blend classroom and onsite lectures, discussions, written assignments, and examinations. The group spends significant time in each location, allowing students to explore each setting. Our first GALA program was mounted in 2008 with a European slant. Students studied in London, Belfast, Paris, and the English Lake District with a resident faculty member from biology. Short courses on conflict, Paris history and architecture, and the arts were offered. Additional offerings (GALA-Asia, GALA-Latin America) are under discussion.

The “embedded journalist” initiative provides an opportunity for student scribes to travel with student groups

on short study abroad trips with the purpose of writing about the experience. In summer 2007, an embedded journalist accompanied a group of students and a faculty member on a two-week Shakespeare trip to England. Upon returning, the journalist published articles in the student newspaper and the alumni magazine. Another student journalist accompanied the Butler Wind Ensemble on a European concert tour. Once sufficient numbers of these experiences have occurred, we will use the articles to promote study abroad opportunities.

How will we know if our efforts are affecting student culture, attitudes, and behaviors? We have designed a longitudinal research project to look at this question. Since Butler University declares in its mission statement that we “integrate

the liberal arts into professional education,” we expect that students who matriculate here may already understand and value something about liberal arts education. To assess the depth of their understanding, we are surveying each incoming class of first-year students during orientation. We ask about behaviors relating to and views about liberal arts education. For example, we ask, “How frequently do you read an intellectually challenging book that is not required for school?” Other questions are about seeking out people who are different or attending cultural events. We ask about their thoughts on multilingualism, and how strongly they agree with the statement, “Critical thinking is fine but doesn’t really prepare students for life in the real world.” Finally, we ask an open-ended question about what the phrase “liberal arts education” means to them. We are currently assessing the data from the initial administration of this survey in 2006. We are also surveying each cohort during their sophomore and senior years to determine if the Liberal Arts Matters interventions make a difference.

There is already ample anecdotal evidence of increased interest in and conversations about the liberal arts among faculty members, both within and beyond the liberal arts and sciences. Robust attendance from all colleges at the symposia, eagerness to collaborate with colleagues in CrossCurrents or GALA, and growing participation in the syllabus project all point to an increase in the visibility and importance of the liberal arts within faculty culture. We also believe that the increase in conversation about liberal education is contributing to interdisciplinary and intercollege planning with respect to Butler’s new core curriculum, opening up opportunities for team teaching, and bridging disciplinary borders.

With respect to the larger audience, we believe that almost any thoughtful,



out-of-the-university conversation about liberal education can only enhance the understanding and increase the perceived value of the liberal arts. By engaging the College's Board of Visitors, highlighting Liberal Arts Matters in the *Butler Alumni Magazine* (Alexander 2007), distributing Core Values posters, and continually updating the Liberal Arts Matters Web site, we believe we are reaching important constituencies outside the academy.

While various pieces of Butler's Liberal Arts Matters initiative have been instituted at other colleges and universities, including the University of Wisconsin system, we are unaware of such a concerted and wide-ranging effort to promote the value of liberal arts education to all constituencies, and in particular, to

students. As the project proceeds, we will report useful or enlightening information gained from the various initiatives described above and those yet to come. As we are all aware, business and civic leaders are looking for graduates who possess the skills commensurate with a liberal arts education—communication, analytical and quantitative reasoning, etc.—as well as the attributes of liberally educated persons—global awareness, compassion, appreciation of diversity, civic engagement, and so forth (Jones 2005). We also strongly believe in the enriching value of a liberal education for the lives our students are living now and will be living in the future; we think that it is of paramount importance to help our students (and their parents) realize what

is perhaps most important about their college education. ■

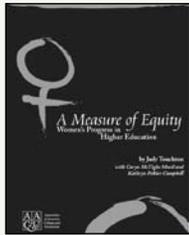
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BY SAMUEL M. HINES JR.



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he believes will be required to sustain the financial and intellectual integrity of the twenty-first-century university. In addition to fostering entrepreneurial skills and values in their students, Hines argues, faculty and other campus leaders also need to become more entrepreneurial themselves. Responses from Daniel Bernstine, Anthony Carnevale, Eric Gould, and Elizabeth Minnich are included.

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# Intentionality and Integration in Undergraduate Global Public Health Education

► **Ruth Gaare Bernheim**, director, Master of Public Health Program, University of Virginia

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**P**ublic health is capturing the energy and imagination of undergraduate students across the country, and University of Virginia (UVa) faculty, like many other faculties in both small colleges and large universities, are responding with innovative new courses and academic programs. As a relatively young academic field that dates back only to the early twentieth century in the United States, the study of public health illustrates the strengths and value of an undergraduate liberal education that features integrative learning, which draws on diverse academic perspectives from across the curriculum, and intentionality in learning, which embeds student-directed problem solving and experiential community fieldwork within academic programs.

The goal of the new initiatives in undergraduate public health education is not only to prepare future health professionals, but also and perhaps more importantly, to educate future citizens. *Who Will Keep the Public Healthy?*, a 2003 Institute of Medicine report, called for public health education for all undergraduate students and featured both themes, as did a 2006 Consensus Conference on Undergraduate Public Health Education, sponsored by the Council of Colleges of Arts and Sciences and national public health associations. Scholars recognize that public health requires a broad-based knowledge about human society and culture, as well as about the sciences and mathematics. And in addition, public health education has the potential to engage students—future health professionals and future citizens—on many levels, from reflection on enduring fundamental questions about civic responsibility and human rights to the use of intellectual and practical skills, such as critical and creative thinking, teamwork, and problem solving.

Students interested in pursuing an undergraduate public health education also demonstrate an increasingly global orientation. A recent editorial noted that a “feeling of enhanced connectedness on a

global scale—the sense of global community—is leading students ... in record numbers to seek educational experiences that enrich their understanding of other cultures ...” With increasing funding from government and foundation sources, media exposure, and inspiring leaders, global public health has emerged as a new field of great interest to students, albeit one without clearly defined educational goals and outcomes. While career paths are still being created, global public health issues do provide an ideal opportunity to engage students in real-world problems and motivate them to evaluate how or whether the solutions developed might actually work on the ground. This evaluation, at a distance or during an onsite experience, demands that students learn about and integrate the perspective of the community affected by the problem into their analysis. This analysis promotes an appreciation and respect for the historical, cultural, and political contexts that surround the issue.

## THE GLOBAL PUBLIC HEALTH MINOR AT THE UNIVERSITY OF VIRGINIA

At the University of Virginia, faculty are responding to intense student interest in public health by creating a broad array of courses that explore human health through a variety of diverse environments and multidisciplinary methods and by developing a global public health minor that includes a capstone academic experience and community fieldwork. New courses range from literature and history courses about human response to disease to environmental and chemistry courses about food, nutrition, and obesity.

The need to develop a structure for global public health education at UVa has fostered the growth of a learning community made up of faculty from the schools of arts and sciences, medicine, engineering, nursing, architecture, and others. This community has worked together to provide a global focus for new courses,



many of which are team taught by faculty members from different departments and schools. With support from the Fogarty International Center's Framework Program in Global Health, faculty have created new courses such as Adaptive Urbanism: Water, Biodiversity, and the Health of Cities; Healthy Communities: Healthy Food Systems and Global-Local Connections; and Ethics and Human Rights in World Politics. Through the courses, students often develop research projects or ideas for summer field projects in international settings, ranging from building water treatment systems to providing culturally appropriate HIV education.

For students who want a more detailed introduction to global public health, the global public health minor is now available. To enter the new minor, an application is required, and faculty review the applicants based on personal statements and the ensemble of their academic and extracurricular performance. Completion of the minor requires six courses (eighteen credits). The course of study is developed in conjunction with the faculty adviser and should represent a coherent plan centered around a region, a global health issue, or another theme. The required courses include a course on health policy, an introductory global health course, and a capstone course with a major writing requirement. In addition, the students are expected to choose three electives. Many of the elective courses were developed with support from the Framework grant in disciplines ranging from architecture to chemistry to nursing. A language requirement, preferably one that fits with the coherent plan of study, is also a feature of this minor. Finally, a public health field placement, domestically or globally, is mandated. The student must complete 80-120 hours in the field. A journal is kept during the fieldwork and is reviewed with the faculty mentor upon its completion.

The global public health minor has

accepted applications for the past three years. The students have clear and high expectations of what the minor will offer them, and they aspire to use the skills learned to make a difference. For example, one student noted in her application, "Through this program, I hope to learn more about the political, social, cultural, and economic relationships that appear to keep (health) disparities in place." Students admitted to the program often have extensive prior international experience and a variety of perspectives. Of the twenty-one students admitted to the minor in previous years, the majority (fifteen out of twenty-one) had prior international experience. More than half hailed from nonscience majors (thirteen out of twenty-one); some of the represented disciplines include anthropology, history, foreign affairs, and studies of women and gender. We have collected information on half of the students in the first graduating class. Two are pursuing masters of public health, two are pursuing medical degrees, one is in the Peace Corps, and one is working for a community service organization.

### DEFINING GOALS AND OBJECTIVES

Despite burgeoning interest by high-quality students, we have decided not to expand the program until we have developed an evaluation plan and assessed program outcomes. Defining the goals and objectives of the global public health minor remains a fluid process, given the diversity of the students and the interdisciplinary curriculum. For example, what should be the expectation for the students in regard to developing an understanding of the fundamentals of epidemiology? In addition, how should the field placement sites (especially the international ones) be identified, evaluated, and compensated? How should the students' performance at field sites be evaluated? How should the success of our program be evaluated? Ongoing dialogue among schools

developing global public health programs is essential to developing pathways that prepare the future leaders in global health.

In concert with the development of globally focused courses and the global public health minor, UVa faculty also are developing new integrative approaches to particular public health courses. The Healthy Communities Seminar is an example of an integrative course that applies nontraditional learning strategies with an emphasis on community engagement. While a more traditional approach to undergraduate courses often follows a top-down, didactic method, with faculty presenting large amounts of content to their students, scholars studying learning strategies identify inefficiencies of this traditional learning style and offer alternatives that begin with a consideration of the context of the class and dominant issues in the field, followed by learning goals, active or experiential learning approaches to ensure students learning, and an assessment of these, and then course content. This approach is described by Fink as "teaching for significant learning."

As an illustration, the Healthy Communities Seminar, offered through the school of architecture, is designed according to three phases. In phase 1, the instructor evaluates the context of the course including the nature of the subject, student characteristics, teacher characteristics, and special pedagogical challenges. Students come from a variety of backgrounds, primarily planning and public health, and the instructor is trained as an urban and environmental planner. Also, the topic of healthy communities is rapidly evolving, requiring a great deal of flexibility in content and information sources. The learning goals, however, remain the same with focus in seven areas: foundational knowledge, application, integration, human dimension, caring, and learning how to learn. The learning goals provide the basis for assessing student learning, since all in- and out-of-



class assignments correlate to these goals. For example, the “learning how to learn” goal seeks to have students develop skills to identify relevant research studies and engage communities in the critique of the research methods and findings, and then apply the lessons from planning and public health research to the communities’ current and future problems.

Phase 2 is when the major topics of the course are laid out, creating a thematic

structure for the course, with four to seven major ideas placed in an appropriate sequence and building on one another toward a culminating project (see table 1). These major ideas then follow an in- and out-of-class format that allows students to prepare at home, but engage in team-based learning activities during class time. Therefore, the policy memo or photovoice report assignments are modeled in class to better orient students to the expectations

and methods for completion and to offer learning activities that entail doing and observing experiences to activate learning and reflection opportunities. Photovoice, an approach developed by Caroline Wang (1994) to enable economically and politically disenfranchised populations to express themselves with greater voice, is a method where participants take pictures that address a particular topic and share them with others to develop recommendations

**TABLE 1. BUILT ENVIRONMENT AND PUBLIC HEALTH, A MODEL FIFTEEN-WEEK COURSE OUTLINE**

Units	Learning Goals	Session Topics	Suggested Assignments
<b>Unit 1:</b> Planning and Public Health Foundations (two weeks)	<b>Foundational Knowledge:</b> Understand public health and planning history, evolution and significant movements to present, and historical and current theories on the relationship between the built environment and public health.	Planning History Public Health History Interdisciplinary Applications	(1) Local Neighborhood Case Study (2) Campus and Neighborhood Walkability
<b>Unit 2:</b> Natural and Built Environment (six weeks)	<b>Application:</b> Identify contemporary features of the built environment such as patterns of development, parks, public works projects, houses, and transportation systems, and use methods developed by sociologists, anthropologists, public health leaders, urban planners and architects to address chronic illnesses and impacts of the built environment.	Land Use and Transportation Planning Design Approaches Health Impact Assessments Environmental Impact Assessments Indoor and Outdoor Air Quality Water Quality Food Security	(1) Service Learning Group Project (2) Activity Diary (3) Transit Use
<b>Unit 3:</b> Vulnerable Populations and Health Disparities (three weeks)	<b>Human Dimensions:</b> Learn about oneself and the context in which others operate to better integrate that understanding when evaluating differing built-environments, socioeconomic positions, social and cultural backgrounds, and health status. <b>Caring:</b> Adopt new feelings, interests or values based on issues addressed throughout the semester.	Vulnerable Populations (the poor, children, women, elderly, disabled, and minorities) and Health Disparities Mental Health Social Capital Environmental Justice	(1) Newspaper Op-Ed or Radio Perspective (2) Debates
<b>Unit 4:</b> Health Policy and Global Impacts (three weeks)	<b>Learning-How-to-Learn:</b> Develop skills to identify studies and engage communities, critique methods and findings, and apply lessons from planning and public health research to current and future problems.	Health Policy Sustainable Planning and Global Warming Healthy Housing	(1) Policy Memos (2) Photovoice Report
<b>Final</b> (one week)	<b>Integration:</b> Integrate current evidence regarding the impacts of the built environment on health with information and perspectives from other courses and/or personal experiences.	Final Portfolio	Healthy Communities Portfolio



and implementation plans. It is an effective way to share knowledge, thoughts, and beliefs about a given topic. This approach helps communities identify important issues and develops recommendations on how to make changes.

During class students review health policies and critique them with a focus on a particular local community about which students have become familiar through other assignments earlier in the semester. Students build on this class exercise by reflecting on discussed policies as they relate to the particular community, and they read relevant newspaper articles. When they return to class, students then discuss their policy memos or participate in a full photovoice exercise and end the time by viewing a short video and outlining the required memo or report submission. Following this session, students complete readings, draft their memos or reports and submit questions for guests. In class, students learn about sustainable planning and global warming policies. Students reflect on this lecture by integrating information in their memos or reports and prepare for a field visit the next day to a healthy housing project that incorporates many green design, leadership in energy and environmental design (LEED) certified or low-impact development components. By focusing on a single house or development, this site visit helps students cement many of the ideas generated through the sustainable planning and global warming talk. Finally, students read a case study that emphasizes the ethical dimensions of public health within a clearly defined built environment framework. A possible phase 2 activity would call for students to simulate a planning commission that is considering a rezoning request from a bathhouse operator and is concerned about community comments as well as possible health impacts to the region. This class session allows students to decide the best decision for stakeholders to make by role-playing and

applying lessons they learned in preceding sessions and in preparation of their policy memo and photovoice report, which is due the following week.

In phase 3, the teacher and students address the details of the course and focus on grading and weighting of assignments and debugging the course through a full review of the schedule of activities and the drafting of a syllabus. This phase also incorporates integration of evaluations at the middle and the end of the term, as well as periodic feedback that better assesses how well the course is going so that faculty can adjust to student needs.

### ASSURING CONDITIONS IN WHICH PEOPLE CAN BE HEALTHY

Overall, this integrative public health and planning course follows a nontraditional framework in its design as well as community emphasis. The course values a community-based approach to activities and assignments because it allows students to understand the people and place in which public health issues arise in order to better diagnose and/or respond to problems. Without this community approach, students might apply generic solutions to old and new public health concerns without understanding how to best engage a people and place in creating the customized solution that is required.

The Institute of Medicine's definition of public health describes why it is such a dynamic field for students who want to take on a complex topic, such as human health, as an integrating focus for their education: "Public health is what we, as a society, do collectively to assure the conditions in which people can be healthy." The words, "what we, as a society, do collectively" suggest the need for an enriched and integrated study of political philosophy, social psychology, and anthropology, for example, in order to understand how individuals and groups in society can take action together

to improve human health. The words, "assure the conditions in which people can be healthy," focus our attention on our biological, social, and environmental interdependence and the need for a broad knowledge of human cultures and the physical and natural world. UVa's new global public health minor, as well as our faculty's innovative approaches to course development provide examples of how academic centers can foster the development of the knowledge and skills essential for future public health leaders and informed, engaged citizens of the nation and the world. ■

### ACKNOWLEDGEMENT

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## Integrative Learning: A Room with a View

- **Jean Mach**, professor of English and director of the Center for the Scholarship of Teaching and Learning, College of San Mateo  
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**T**he College of San Mateo (CSM), one of California's 110 community colleges, sits atop a hill above San Francisco Bay. The campus architecture, a 1960s rendering of classical columns and flaring cornices, invokes lofty educational ideals.

We have many faculty here dedicated to those ideals. But teachers eager to try new pedagogies can be frustrated by the continuation of such severe architectural structures right into classrooms equipped with cramped rows of unwieldy desks. This rigidity may also characterize the college's organizational structures and human cultures. They are conjoined, sometimes uncomfortably, in serving the untidy needs of today's students. The external imperatives of a statewide system further constrain pedagogical innovation. Like the stern buildings and overgrown landscaping that block the expansive campus views, this organizational architecture and cultural landscaping can also obscure the glorious panoramas, glimpsed by some faculty here, of integrative learning.

That magnificent view—of what teaching and learning can be when disciplinary barriers are disassembled and when faculty and students collaborate in making all kinds of connections—is indeed breathtaking. Make no mistake, though: integrative learning is hard work. Often, for students and faculty alike, it is joyous work. But it can also be discouraging and contentious. The story of integrative learning at the College of San Mateo, we believe, is worth telling.

### THE COLLEGE OF SAN MATEO—WHO WE ARE

Although CSM is located in an affluent area, its 11,000 students, diverse in both ethnicity and age, are typical of many community college students across the country. We value and celebrate the diversity that makes our classrooms interesting and frequently gratifying places for teaching. A recent demographic snapshot

also begins to suggest some of the challenges we face, across all demographic lines, in engaging, teaching, and retaining these students. The majority of our students (72.2 percent) are part time, often working long hours at jobs. Our classrooms include working adults, often with families. A majority of students also come to us lacking college-level skills in writing and mathematics. Almost half of our enrollment (48.1 percent) consists of students with fewer than fifteen units completed, a fact that reveals a need to increase students' engagement with the learning process. Anecdotally, teachers also report that students often lack clear goals and consistent motivation; in fact, they don't know how to be students. They have widely varying technological skills and resources at home. They may be unwilling, for a variety of reasons, to avail themselves of the resources available on campus to help them succeed. In short, it's not easy to engage and teach our students.

A few faculty at CSM first became involved in learning communities, over a decade ago, out of a sense that there must be a better way to teach. Our first learning communities were what we now call "hard linked": two different classes with a common cohort of students, taught by two teachers who intertwine their curriculum in various ways to foster intellectual and social engagement. Pedagogically, the results were often spectacular. A few examples include ASSET Development, an elementary algebra class paired with a study skills class that nearly doubled the success rates of students in elementary algebra and significantly increased the persistence rate all the way through the remedial mathematics sequence; Writing in the End Zone, a basic-skills-level writing class paired with the football team's required physical education section that has become a model for helping athletes succeed; and Tools for Thought, an intermediate algebra class paired with freshman composition in which mathematical modeling and reading about



contemporary environmental and social issues gave students new understandings of the world they occupy. Such learning communities, we know, often dramatically changed the academic lives of the students and realigned the long-settled pedagogical foundations of the teachers. But those classes were reaching relatively few students and existed on the margins of a predominantly fixed, traditional educational experience.

### THE INTEGRATIVE LEARNING PROJECT

Nevertheless, those early learning communities led to CSM's participation in the Integrative Learning Project (ILP), held from 2004 through 2006. ([www.carnegiefoundation.org/programs/index.asp?key=24](http://www.carnegiefoundation.org/programs/index.asp?key=24)) Twice a year for three years, this initiative, sponsored by the Carnegie Foundation for the Advancement of Teaching and the Association of American Colleges and Universities, brought together ten institutions that were already exploring a variety of integrative strategies. CSM's goal while participating in the project was "to construct an overriding vision of integrated learning at the college through institutionalizing the learning communities program." Unlike the other teams involved, CSM's three-person ILP team consisted of only faculty members, with no administrator.

The three faculty members in the ILP, the authors of this article, began to see that integrative learning is not limited to hard-linked learning communities—that it means helping students find connections of all kinds to make their learning meaningful and intentional. We learned about e-portfolios at LaGuardia Community College, capstone courses at Philadelphia University, and integrative core programs at Portland State, to name just a few examples. At the same time, our hard-linked learning communities program struggled against a slew of problems that

had institutional origins: budget cuts, low enrollments due to inadequate information delivered by online class schedules and crippling online registration problems, lack of counselors' support, and a pervasive "just-check-the-boxes-for-transfer" culture that worked against unfamiliar course configurations. We tried long and hard to solve these problems, but failed in every case.

The second summer, facing what seemed like humiliation at the collapse of our ILP project, the three of us huddled in a closet at the Carnegie Foundation in 2004 to resuscitate integrative learning on our campus. Based on the wildly popular "Movie Night," a monthly cross-disciplinary event created by faculty in the philosophy and psychology departments, we invented (as far as we know) what we call the "Confluence Model." This learning community configuration fits more comfortably within the constraints of our campus and has an impact on the experiences of vastly more students. It solves the frequent enrollment problems of our hard-linked communities by taking a detour around the technical and cultural barriers on our campus. In a confluence model, any number of stand-alone classes in different disciplines, meeting at the same hour, form a community around a shared theme or reading that relates to significant issues in the world. Classes all meet together five or six times per semester to participate in common experiences that highlight various disciplinary perspectives on the themes, and students have opportunities to engage in interdisciplinary thinking and problem-solving themselves. In the individual classrooms, instructors consciously incorporate integrative and reflective practices.

CSM now offers confluence models aimed at both basic-skills and transfer-level students. Examples include *The Tragedy of the Commons*, *Food for Thought*, *Mountains Beyond*

*Mountains*, and *Dead Man Walking* learning communities, with even more in planning stages. ([collegeofsanmateo.edu/integrativelearning/learningcommunities/](http://collegeofsanmateo.edu/integrativelearning/learningcommunities/)) With a two-year cycle of offerings and more than twenty instructors involved, students can experience a rich array of interdisciplinary issues and approaches as they work through their general education requirements. We've often integrated counseling visits and reading and library support into these models, although such integration runs counter to institutional practice and structure. The "Friday Forums," with approximately three hundred students and instructors from different disciplines gathered in a single room, are videotaped and available on iTunes University, under CSM's "Events—Integrative Learning" site ([smccd.edu/itunesu/](http://smccd.edu/itunesu/)).

Student survey results collected each semester indicate overwhelmingly positive experiences. Frequent student reflection work also shows that students are succeeding in making integrative connections:

- I am appreciative of the effort to bring light to this situation that many young adults are not aware of. I really liked the forums because they provided a more engaging atmosphere rather than sitting in the same classroom the entire semester. I also liked that other classes of various subjects were integrated in the forums so that I was able to discuss this topic with a few other classmates. Overall, the experience was educational and certainly very different than traditional class experiences.
- I liked it because I learned how two different fields could tie together. Makes me realize that everything is tied to one another in some way, or in some degree. I would enroll in another one because I want to find more links between different subjects.



## WHAT WE LEARNED

We learned much from the opportunities offered by the ILP, so we were eager to sow more integrative seeds across the campus landscape. In meetings and presentations, we tried to share the vision with our administrators and other faculty members. We tried to think of even broader applications of integrative learning, to bring its rewards to even more students and faculty. In our campus efforts, we also recognized the value of the leverage we had gained through the association with a national project.

In 2006, the Carnegie Foundation for the Advancement of Teaching announced its CASTL Institutional Leadership Program. By then, we knew that students' gains in seeing and making connections often occurred in their writing, and we knew that we needed to be involved in the CASTL Program to further integrative work on our campus. Thus the Writing Across the Curriculum Initiative at CSM, an effort to move writing instruction and support into classes that do not normally "teach" writing, became the basis for our participation in the CASTL Leadership Program, 2006–2009. Aimed at supporting the growing numbers of students who were writing below college level in our transfer-level courses, our initiative's central research question asked the following: *Can WAC function as a teaching and learning tool for below-college-level writers who are enrolled, along with more advanced writers, in discipline courses with no writing prerequisite?* We wondered if WAC, using strategies such as carefully constructed and scaffolded assignments, individualized support for students in a writing center environment, clear feedback in grading rubrics, and collaboration and consultation between discipline experts and writing experts, could become a way to encourage the growth of critical thinking and integrative skills in basic-skills and developmental writers. Could WAC

provide a solution for a system that allows underprepared students to enroll in classes that require college-level skills and then watches them fail or drop out in alarming numbers?

Launching the WAC program ([collegeofsanmateo.edu/integrativelearning/wac.asp](http://collegeofsanmateo.edu/integrativelearning/wac.asp)), even more than the learning communities program, required us to start building cultures of collaboration and evidence in areas where none had existed before, at least on this campus. Writing, we discovered, can be a battleground in which each discipline has a weapons cache of opposing ideas and long-held resentments. About fifteen faculty members from mathematics, philosophy, sociology, biology, English, and ESL spent nearly a whole semester meeting every week, just talking, building respect for the different writing needs of each discipline and for each other. When we had established a congenial atmosphere, we quickly built what have proven to be useful and innovative tools and strategies, and we moved into implementing them in the WAC classes the following semester.

*Writing, we discovered, can be a battleground in which each discipline has a weapons cache of opposing ideas and long-held resentments*

These tools and strategies continue to serve us well. Creating "Comparative Disciplinary Writing Guidelines" has made the differences in the writing expectations of each participating discipline more visible and has helped us realize why students often feel that writing expectations are confusing and arbitrary in different classes. We now all discuss those differences openly with students. A handout on "Proofreading Symbols" gives us confidence that our paper markings make more sense to students. Our

group discussions of diagnostic writing samples, prompts, and grading rubrics contribute to better pedagogical tools in all the classes. Teams of instructors from different disciplines visit classrooms for draft workshops and class discussions of anonymous pieces of student writing. These visits, the pumping heart of the program, are powerful experiences for both students and faculty members. Certainly the importance of good writing in all disciplines is now being conveyed to a significant number of students, and we are all better writing teachers because of the classroom interventions and collaboration. But WAC admittedly remains on the margins of the institution.

## DEVELOPING ASSESSMENT TOOLS

Gathering evidence, both quantitative and qualitative, has been a concern from the beginning of our WAC Initiative. Although the participating classes enroll students not yet writing at college level, they also enroll many students nearly ready to transfer. So we needed to develop assessment tools that would yield information on

the impacts of WAC across the spectrum of students. First, we created an online student survey that asks students to rate their own progress toward our General Education Student Learning Outcomes (what students should know or be able to do by the time they are ready to transfer). Next, we designed e-portfolio templates (using the Carnegie Foundation's Keep Toolkit) ([gallery.carnegiefoundation.org/gallery\\_of\\_tl/keep\\_toolkit.html](http://gallery.carnegiefoundation.org/gallery_of_tl/keep_toolkit.html)) that the students would use to post writing demonstrating their progress toward



particular GE SLOs. These templates also required reflective writing that would discuss the reasoning and process behind the student's posting choices at the end of the semester: Why does this paper relate to that particular SLO? What was learned in and about the process of writing the paper? What challenges remain?

Finally, we asked our college researcher to give us data about student success, broken out by ESL or English placement level (either placement test or successful ESL or English course completion). Later, we added a rubric to analyze students' writing weaknesses, based on the initial diagnostic writing sample, in the hope that we could understand more clearly what specific writing challenges were correlated with lack of retention or success.

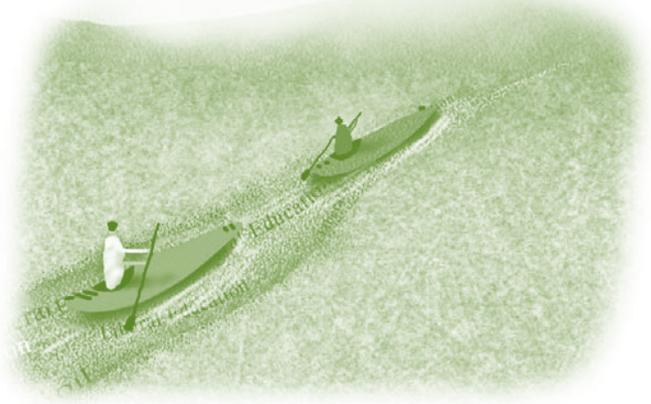
Going into the last year of the CASTL project, we have already learned much about ourselves, our students, and our college. We can now show that both students identified as English-language learners and those already writing at college level gain in skills and confidence from the strategies and support we bring into the WAC classes. However, those identified in the developmental native-speaker English sequence do not demonstrate any gain in the WAC courses, which require significant writing assignments. In fact, the data show specifically that the WAC courses lose or fail students who start with weak grammar skills at a greater rate than do other sections of the same transfer-level courses that may limit evaluation of learning to Scantron testing. It seems evident by now that WAC alone cannot provide adequate support for students who are inappropriately enrolled in transfer-level courses that require writing. We are convinced those classes must include writing assignments to foster meaningful learning. But we do not have adequate systems to support students in such classes; the regular support systems

of the college are nonintegrative. In large part, they reside within departments or divisions and are focused on helping "their" students. In reality, "their" students are "our" students; we all teach the same students. A mathematics student with a paper assignment is also an English student at another hour of the day, and he or she needs readily available support that crosses disciplinary boundaries.

What to do? We now recognize that we are poorly positioned to change course prerequisites for two reasons: (1) departmental and college enrollment figures—and subsequent funding—would be at risk and (2) there is a statewide community college culture that too often oversimplifies students' success as "getting through a program quickly." We are aware that, because decisions about funding are made primarily along departmental and division lines, integrative learning is seen by many as a new, illegitimate competitor for scarce resources. Our needs for research data are sometimes unmet, as integrative learning, once again, does not fit neatly into the college's program review structures. Although our institutional-level e-portfolio assessment was lauded at our last accreditation visit, there is no support for hosting even a free, open-source tool on our district's server. Through our integrative learning initiatives, we have learned much about what our students need in order to succeed, but we also know now that we have not been able to change the college's larger structures and culture—and certainly not the larger structures of California's higher education system—to fulfill those needs. So perhaps the dozens of faculty now involved in integrative learning on

our campus need to find a metaphorical closet, like the actual one at the Carnegie Foundation, and search for new detours.

Our story may resonate with other campuses trying to make integrative learning a permanent and intentional characteristic of the education they offer. It's important for them to know that, despite these frustrations, the thirty or more faculty involved at CSM have moved toward a different culture of teaching. Although we come from a variety of disciplines, we tackle common concerns and share interest in each other's pedagogies. We value a scholarly approach to our profession. We have watched students transformed from reluctant bodies slumped over desks in the back of the classroom to campus leaders, inspired learners, and engaged citizens. Although our experience has been that a few faculty members alone cannot achieve institutional change without large-scale systemic support, we are now watching our campus literally being rebuilt: old buildings are being demolished or renovated and overgrown landscaping is being cleared. The architectural plans show space for an Integrative Learning Center. Perhaps, as the magnificent views of San Francisco Bay emerge and become visible to all, so too will the panoramas of integrative learning. ■





## Intentional and Integrated Learning in a New Cognitive Age: A Signature Pedagogy for Undergraduate Education in the Twenty-First Century

► **June Youatt**, senior associate provost, Michigan State University

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From its very start, the land-grant approach to higher education focused on intentional and integrated learning in ways that distinguished itself from previous models of higher education. Students needed different skills to solve the real problems facing real people in real communities. And they needed those skills quickly. They needed practical knowledge accompanied by hands-on training. The land-grant university was built around those needs, with a new curriculum and a new pedagogy that were intentionally coordinated to integrate knowing with doing, in ways that mattered to those typically disenfranchised from higher education.

In many significant ways, the core mission and values of the land-grant university persist into the twenty-first century. Land-grant universities remain committed to providing higher education to advance the public good. Like Michigan State University (MSU), they work hard to maintain their commitment to be open to the poorest, and good enough for the proudest. Perhaps most importantly, they remain committed to responding to society's needs in ways that keep them relevant and engaged.

### GLOBALIZATION—AND ITS EVEN LARGER CONTEXTS

As Michigan State University moved into the twenty-first century, it became clear that the university remained committed to its original core values while stretching and shifting in ways that upheld those original values. The “state” university with eighty-three county offices now had more active international partnerships than local. The student population represented more countries than Michigan counties. Agricultural sciences were still concerned with crops, but making a rapid shift to research on plants as fuel and plastics,

rather than food. Departments, colleges, and other higher education institutions once seen as “competitors” were now “collaborators.” Undergraduate students, the traditional recipients of information, were increasingly expected to become generators of knowledge. Fundamental assumptions about what constituted a classroom, an academic semester, and definitions of scholarship were being challenged. The contours of the institution that claimed leadership in defining higher education in the nineteenth century were changing as fast as the science and technology on its campus.

While globalization is central to redefining higher education for the twenty-first century, it singularly fails to fully account for the *many* significant factors that have worked together to transform the university into the twenty-first century. *New York Times* columnist David Brooks wrote recently about rethinking the globalization paradigm, placing it in the even larger context of a *skills revolution* in a more demanding cognitive age (2008). Taken together, the two paradigms help more fully explain the significant transformative processes affecting the future of higher education.

### A SIGNATURE PEDAGOGY FOR A NEW COGNITIVE AGE: INTENTIONAL, INTEGRATED, EMBEDDED

The term “signature pedagogy” was of course coined by Lee Schulman, president emeritus of the Carnegie Foundation for the Advancement of Teaching. Schulman noted how distinctive teaching and learning practices in specialized professions such as medicine and law uniquely defined the student learning experience within those professional areas. Might there be signature pedagogy—distinctive teaching and learning practices—that differentiates a twenty-



first-century approach to undergraduate education in this more demanding cognitive age?

At Michigan State University, we began to answer that question by identifying noteworthy educational activities that combined our land-grant ethos with connected and purposeful learning, within a global context. As we examined our own best practices, we discovered examples of educational practices and programs that we believed constituted a newly emerging signature pedagogy for undergraduate education.

This new signature pedagogy can be characterized as *discovery-centered, interdisciplinary, integrative, translational, and contextual*. Although any one of these characteristics can contribute to an important and meaningful learning experience, it is the five together, interconnected in a program or experience, that results in the kind of twenty-first-century learning we are striving to achieve and assess.

*Discovery-centered learning* encourages students to produce original work that contributes to the knowledge or activity of a particular discipline or disciplines. It is research in the broadest sense—the finding out of something new that expands a working body of knowledge. Central to discovery-centered learning is the development of a faculty–student mentoring relationship. The processes associated with discovery-centered learning remain fundamental cornerstones in helping students become lifelong learners in their disciplines or professions. (See [www.venture.msu.edu](http://www.venture.msu.edu).)

*Interdisciplinary learning* is characterized by approaching a single topic or issue from a diverse range of disciplines. MSU President Lou Anna K. Simon noted in her February 2007 State of the University Address, “there is no problem or issue, domestic or global, which does not require an interdisciplinary definition and an interdisciplinary solution.

We will cut across boundaries—disciplinary, geographic, and political—to tackle the real problems society faces.” Problem-centered or issue-centered learning across the curriculum naturally employs interdisciplinary learning.

*Integrative learning* asks students to connect skills and knowledge from multiple sources and experiences, apply theory to practice in various settings, utilize diverse and even contradictory points of view, and understand issues and positions contextually. In doing so, it fundamentally connects knowledge to experience. MSU’s approach to general education – the Integrative Studies program – takes seriously the challenge of helping students develop the skills and abilities that promote integrative thinking and ‘ways of knowing’ across disciplines.

*Translational learning* prepares students to take what they learn in the classroom or lab and then apply it in a diverse range of real-world and real-work settings. Students are encouraged to apply new research or basic technology to a specific application or discipline and to then innovate beyond the original iteration or execution of an applied skill, by using it in new ways. Assignments and projects that prompt students to apply their cumulative learning experiences promote the application of translational skills.

*Contextual learning* is defined not just by location, but also by the consideration of the translation of knowledge within a specific environment. It requires students to not just know *how* to perform or respond outside the classroom, but to also consider the natural, social, and human-built factors of an environment to determine whether a new performance, in a new place, is appropriate, ethical, moral, and responsible.

### **SIGNATURE PEDAGOGY IN ACTION**

Not surprisingly, when we looked across our campus, examples of this newly emerging signature pedagogy typically crossed departmental, college, and disciplinary

boundaries. For example, the MSU Science, Technology, Environment, and Public Policy Specialization (STEPPS) program is a cross-collegiate program in public policy that relates to science, technological change, and environmental science. Instead of a singular disciplinary emphasis, the program emphasizes promoting change through the formulation of effective public policy.

Another “discovered” example of this new signature pedagogy in action was the MSU solar oven project. For this, engineering students carried out a project in Tanzanian villages that provided an alternative to the burning of wood and charcoal cooking fuels, thus addressing problems of deforestation and health. While effective, it required the native women in the villages to adopt a set of nontraditional behaviors. The solar oven project called on integrated knowledge from a variety of disciplines—from sociology to environmental science—well beyond the technology required to build the solar-powered cooking machine. At its foundation, this was a “discovery centered project,” but it also employed interdisciplinary and integrated knowledge, translated in ways that made it useful, in a specific cultural and geographic context. While our typical assessment strategies limit how we describe the outcomes of the experience, student participants have personally described it as “transformational” for them.

A newly emerging MSU program, the Information and Communication Technology (ICT) Global Corps, also embodies this new signature pedagogy for undergraduate education. This unique program combines global outreach and research. It engages teams of students in a study abroad program while they complete community-based ICT projects in developing regions of the world.

These are emerging examples of educational initiatives that demonstrate the signature pedagogy that we believe will help define undergraduate education in the twenty-first century. In its most basic



sense, it represents a natural evolution of the land-grant approach to higher education. It remains embedded in the values of the land-grant institution—quality, inclusion, and connectivity—now in a global context. The result is an approach to teaching and learning characterized by creativity, collaboration, and personal responsibility.

### LEARNING TO LEARN IN A NEW COGNITIVE AGE

The challenges facing our era will require not simply *more* education, but a different *approach* to education. College graduates are expected not only to know more than they did a generation ago, but to know *differently*.

The ability to know differently requires a different approach to learning, through educational experiences that are more intentional, reflective, and connected, experiences that result in the capacity of learners to make informed judgments. Promoting this kind of learning was at the heart of Integrative Learning: An Opportunity to Connect, a collaborative project of the Association of American Colleges and Universities and the Carnegie Foundation for the Advancement of Teaching. Michigan State University participated in the project, working on ways to “go global” with its integrative studies program through study abroad experiences. Our integrative studies program now reflects MSU’s approach to general education, providing courses that are integrative across disciplines, while emphasizing the skills that encourage students to integrate knowledge. We have a limited number of courses organized by one of our three centers – Integrative Arts and Humanities, Integrative Social Sciences, or Integrative Physical and Biological Sciences – each of which was carefully developed to advance the skills of integrative learning in the context of integrated subject matter.

Integrative studies represents one approach to helping students connect knowledge across boundaries. But in a

new global and “cognitive age,” universities need to be thinking broadly about both the ways in which they teach and the ways in which students learn. In the same way the land-grant university was an innovator for teaching and learning in the middle of the nineteenth century, it can again lead the way at the start of the twenty-first century. In the same way that the land-grant ethos spread and came to define an innovative approach to undergraduate education for colleges and universities that were not land grant, this newly emerging signature pedagogy has relevance to all of higher education.

### A SIGNATURE PEDAGOGY FOR WORLD-GRANT: REDEFINING UNDERGRADUATE EDUCATION AT A LAND-GRANT UNIVERSITY

One key component of this newly emerging signature pedagogy for undergraduate education at Michigan State University involves integrating it into our strategic positioning process, Boldness by Design. Central to this process is a commitment to transform the university from land grant to world grant. This concept of world grant was introduced by MSU President Lou Anna K. Simon, when she launched Boldness by Design. In 2005, on the one hundred and fiftieth anniversary of MSU’s founding, President Simon called for the university’s re-creation. There were seven years between the agricultural college’s founding (1855) and the 1862 Morrill Land Grant Act, for which MSU served as a model. Now, Michigan State University is aspiring to transform itself into a “world-grant” institution by 2012.

At its most basic level, world grant represents a natural evolution of the land-grant mission and ethos. Like land grant, world grant involves being responsive and responsible to society, but now in a global context. More practice than theory, more direction than definition, world grant signals a fundamental culture change within higher education, a culture change that focuses on

the way we work as much as the work we do. World grant sets itself apart from a previous era and approach to education in much the same way that land grant did, more than 150 years ago. For undergraduate education at Michigan State University, this culture change is embodied in what we’ve come to call our World-Grant Signature Pedagogy.

### WORLD-GRANT SIGNATURE PEDAGOGY: BEING CHANGE

Michigan State University continues to educate students in ways that promote their abilities to discover, problem solve, and make ethical judgments. Like other research universities, we are working on global issues; at MSU those include sustainability, economic development, energy, food and food security, technology, and health. In a land-grant institution, there is always the added commitment to make this knowledge accessible to real people in real communities. In the world-grant institution, the key is to resist defining these commitments as separate enterprises and to deliberately work toward integration, where one role supports and informs the other. The Signature Pedagogy of the World-Grant Institution connects the undergraduate student to that integrated mission, not as a passive learner, but as a working apprentice in advancing knowledge and transforming lives.

Accompanying the urgent calls for accountability, efficiency, and evidence-based outcomes in higher education is an equally urgent call for higher education to fundamentally change the way it prepares students to face the challenges of the future. A single, isolated, and short-lived program in one part of a university is clearly not the answer. An integrated, embedded, and long-term culture change within higher education is clearly required. The newly emerging signature pedagogy for undergraduate education represents that kind of change. ■

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# Why Integration and Engagement are Essential to Effective Educational Practice in the Twenty-first Century

► **George D. Kuh**, Chancellor's Professor of higher education, Indiana University–Bloomington

**A** *AC&U recently published High-Impact Educational Practices: What They Are, Who Has Access to Them, and Why They Matter, the latest report from its Liberal Education and America's Promise (LEAP) initiative. In it, George D. Kuh reports on decades of research proving that participating in certain high-impact educational practices correlates with higher levels of student performance. In the excerpt below, Kuh describes the high level of integration and engagement that seem to characterize the best educational practices.*

## WHY SOME EDUCATIONAL ACTIVITIES ARE UNUSUALLY EFFECTIVE

What is it about these high-impact activities that appear to be so effective with students?

First, these practices typically demand that students devote considerable time and effort to purposeful tasks; most require daily decisions that deepen students' investment in the activity as well as their commitment to their academic program and the college. Consider, for example, a writing intensive first-year seminar with twenty-five or fewer students that is team-taught by a faculty member (who also is the adviser for the students in the seminar) and an upper-division peer mentor or instructor. The composition of the instructional team coupled with the size of the course ensures that every student will get to know at least one faculty member well in the first year of college, in addition to the other students in the class. Advising is no longer a once-a-semester meeting with a person the student hardly knows, but an ongoing set of conversations about issues students are facing in real time. Because the seminar is writing-

intensive, students must also put forth more effort. They benefit more, especially when they get frequent feedback from the faculty member, peer mentor, and other students in the course. Similar patterns of benefits are reported by students who study abroad, in that they engage more frequently in educationally purposeful activities upon returning to their home campuses and report gaining more from college compared with their peers who do not study abroad.

Second, the nature of these high-impact activities puts students in circumstances that essentially demand they interact with faculty

*Opportunities to integrate, synthesize, and apply knowledge are essential to deep, meaningful learning experiences*

and peers about substantive matters, typically over extended periods of time. A human-scale first-year seminar makes anonymity impossible, fosters face-to-face interaction, and fuels feedback. Students who do research with a faculty member spend a fair amount of time with that faculty member; as a result, students learn firsthand how a faculty member thinks and deals with the inevitable challenges that crop up in the course of an investigation. Students who do research with faculty also are more likely to persist, gain more intellectually and personally, and choose a research-related field as a career. Collaborative problem-based assignments in the context of a course set the stage for developing a meaningful relationship with another person on campus—a faculty



or staff member, student, coworker, or supervisor. These and other high-impact practices put students in the company of mentors and advisers as well as peers who share intellectual interests and are committed to seeing that students succeed.

Third, participating in one or more of these activities increases the likelihood that students will experience diversity through contact with people who are different from themselves. Study abroad or other cross-cultural experiences are natural venues for this. But so are learning communities, courses that feature service learning, and internships and other field placements such as student teaching. These experiences often challenge students to develop new ways of thinking about and responding immediately to novel circumstances as they work side by side with peers on intellectual and practical tasks, inside and outside the classroom, on and off campus.

Fourth, even though the structures and settings of high-impact activities differ, students typically get frequent feedback about their performance in every one. Working with a faculty member on research, having a paper checked by a peer writing tutor prior to turning it in, and having one's performance evaluated by the internship supervisor are all rich with opportunities for immediate formal and informal feedback. Indeed, because students perform in close proximity to supervisors or peers, feedback is almost continuous. In addition, NSSE 2007 results show that students who receive feedback during or after working on a research project with a faculty member are more likely to report that their relationships with faculty are friendly or supportive.

Fifth, participation in these activities provides opportunities for students to see how what they are learning works in different settings, on and off campus. These opportunities to integrate,

synthesize, and apply knowledge are essential to deep, meaningful learning experiences. While internships and field placements are obvious venues, service learning and study abroad require students to work with their peers beyond the classroom and test what they are learning in unfamiliar situations. Similarly, working with a faculty member on research shows students firsthand how experts deal with the messy, unscripted problems that come up when experiments do not turn out as expected. A well designed culminating experience such as a performance or portfolio of best work can also be a springboard for connecting learning to the world beyond the campus. NSSE results show a net positive relationship for students who have had some form of culminating experience after controlling for a host of student and institutional variables.

Finally, it can be life changing to study abroad, participate in service learning, conduct research with a faculty member, or complete an internship. That is why doing one or more of these activities in the context of a coherent, academically challenging curriculum that appropriately infuses opportunities for active, collaborative learning increases the odds that students will be prepared to—in the words of William Cronon—“just connect.” Such an undergraduate experience deepens learning and brings one's values and beliefs into awareness; it helps students develop the ability to take the measure of events and actions and put them in perspective. As a result, students better understand themselves in relation to others and the larger world, and they acquire the intellectual tools and ethical grounding to act with confidence for the betterment of the human condition. ■

## NSSE DEEP/INTEGRATIVE LEARNING SCALE

- Integrating ideas or information from various sources
- Including diverse perspectives in class discussions/writing
- Putting together ideas from different courses
- Discussing ideas with faculty members outside of class
- Discussing ideas with others outside of class
- Analyzing the basic elements of an idea, experience, or theory
- Synthesizing and organizing ideas, information, or experience
- Making judgements about the value of information
- Applying theories to practical problems or in new situations
- Examining the strengths and weaknesses of your own views
- Trying to better understand someone else's views
- Learning something that changed how you understand an issue

Source: Thomas F. Nelson Laird, Rick Shoup, George D. Kuh, and M. J. Schwarz, “The Effects of Discipline on Deep Approaches to Student Learning and College Outcomes,” *Research in Higher Education* 49, no. 6 (2008): 469–494.



# Highlights of AAC&U's Work on Intentionality and Integrative Learning

## NEW SUMMER INSTITUTE

**THE ENGAGING DEPARTMENTS INSTITUTE** will provide campus teams of academic administrators, department chairs, and faculty with an intensive, structured time to advance their plans to foster, assess, and improve student learning within departments and across the institution.

The institute will concentrate on (1) leadership for learning within and among departments, (2) assessments for achieving and improving essential outcomes, and (3) preparing for educational effectiveness by identifying and then replacing barriers with aligned effective practices.

The first Engaging Departments Institute will be held July 8–12, 2009, on the campus of the University of Pennsylvania in Philadelphia. Applications for the institute will be available in February 2009. For more information about the Engaging Departments Institute, contact Gretchen Sauvey at [sauvey@aacu.org](mailto:sauvey@aacu.org).

## PROJECTS

### THE EDUCATED CITIZEN AND PUBLIC HEALTH

The Educated Citizen and Public Health is AAC&U's umbrella project for engaging undergraduate students with the world's major questions through the lens of public health, as an understanding of public health issues is a critical component of good citizenship and a prerequisite for taking responsibility for building healthy societies. In partnership with the Association for Prevention Teaching and Research (APTR), AAC&U has offered two curriculum and faculty development workshops to help faculty members create and teach undergraduate general education courses in public health and to make public health curricula coherent and intentional.

A special issue of *Peer Review* (Summer 2009) on liberal education and public health will also be made possible by support from the Josiah Macy Jr. Foundation.

### VALID ASSESSMENT OF LEARNING IN UNDERGRADUATE EDUCATION: VALUE



As institutions are asked to document the quality of student learning and to raise retention and graduation rates,

AAC&U's VALUE project helps campuses to define, document, assess, and strengthen student achievement of the essential learning outcomes that stand at the center of AAC&U's LEAP initiative. Recognizing that there are no standardized tests for many of the essential outcomes of an undergraduate education, the VALUE project develops ways for students and institutions to collect convincing evidence of student learning drawn primarily from the work students complete through their required curriculum, assessed by well-developed campus rubrics and judgments of selected experts, and demonstrated through electronic portfolios (e-portfolios) that can be organized and presented in ways appropriate for different audiences.

A draft of the VALUE integrative learning rubric is available for review by interested campuses. If your campus would like to field test the rubric or for more information about the VALUE project, please contact Wendy Morgaine at [morgaine@aacu.org](mailto:morgaine@aacu.org).

### INTEGRATIVE LEARNING: OPPORTUNITIES TO CONNECT

Several articles in this issue were written by former participants of the Integrative Learning: Opportunities to Connect project, a collaborative effort of the Association of American Colleges and Universities and The Carnegie Foundation for the Advancement of Teaching. The three-year project worked with ten campuses to develop and assess advanced models and strategies to foster students' abilities to integrate their learning over time. Valuable resources from the project can be found in the project's online public report at [www.carnegiefoundation.org/files/elibrary/integrativelearning/index.htm](http://www.carnegiefoundation.org/files/elibrary/integrativelearning/index.htm).



## SELECTED PUBLICATIONS

### HIGH-IMPACT EDUCATIONAL PRACTICES: What They Are, Who Has Access to Them, and Why They Matter

By George D. Kuh

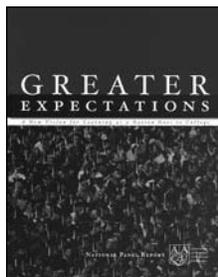


This publication defines a set of educational practices that research has demonstrated have a significant impact on student success. Author George Kuh presents data from the National Survey of Student Engagement about these practices and explains why they benefit all students, but also seem to benefit underserved students even more than their more advantaged peers. The report also presents data that show definitively that underserved students are the least likely students, on average, to have access to these practices.

### GREATER EXPECTATIONS:

#### A New Vision for Learning as a Nation Goes to College

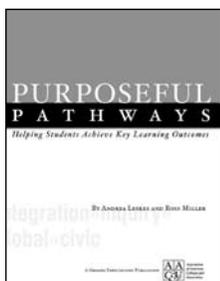
The report of the Greater Expectations National Panel, calls for a new focus on excellence to better prepare students for the twenty-first-century world. The report recommends the creation of a New Academy characterized by high expectations, a focus on learning, commitment to demonstrated achievement, intentional practices, and an engaged, practical liberal education for all students.



### PURPOSEFUL PATHWAYS:

#### Helping Students Achieve Key Learning Outcomes

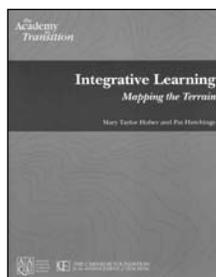
By Andrea Leskes and Ross Miller



The final publication of the Greater Expectations project reports on practices from high school through college to advance four selected liberal education outcomes: inquiry, civic, global, and integrative learning. From defining outcomes, to reviewing current practices, to charting sequences of learning over time, readers will find numerous resources helpful in their curricular planning.

### INTEGRATIVE LEARNING: Mapping the Terrain

By Mary Taylor Huber and Pat Hutchings

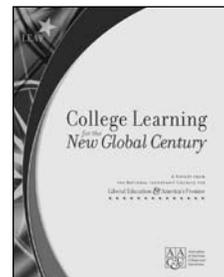


Published by AAC&U and the Carnegie Foundation for the Advancement of Teaching, this paper explores the challenges to integrative learning today as well as its longer tradition and rationale within a vision of liberal education. In outlining promising directions for campus work, the authors draw on AAC&U's landmark report, *Greater Expectations*, as well as the Carnegie

Foundation's long-standing initiative on the scholarship of teaching and learning. Readers will find a map of the terrain of integrative learning on which promising new developments in undergraduate education can be cultivated, learned from, and built upon.

### COLLEGE LEARNING FOR THE NEW GLOBAL CENTURY

This report from AAC&U's Liberal Education and America's Promise (LEAP) initiative outlines and discusses the aims and outcomes of a twenty-first-century college education. It is also a report about the promises we need to make—and keep—to all students who aspire to a college education, especially to those for whom college is a route, perhaps the only possible route, to a better future. This report, based on extensive input both from educators and employers, responds to the new global challenges today's students face. It describes the learning contemporary students need from college, and what it will take to help them achieve it.



### PEER REVIEW, SUMMER-FALL 2005— INTEGRATIVE LEARNING



Sponsored by The Carnegie Foundation for the Advancement of Teaching, articles in this issue explore how integrative learning fosters connections among disciplines and cocurricular experiences and transcends academic boundaries. Several full text articles from this issue can be found at [www.aacu.org/peerreview/pr-sufa05/pr\\_sufa05contents.cfm](http://www.aacu.org/peerreview/pr-sufa05/pr_sufa05contents.cfm)



# Integrative Learning: Setting the Stage for a Pedagogy of the Contemporary

► **Veronica Boix Mansilla**, lecturer, the Harvard Graduate School of Education and principal investigator, Interdisciplinary Studies Project, Project Zero

Underlying the significant social and technical changes of our increasingly global society is a profound transformation in the very nature of learning. Twenty-first-century learners view themselves as dynamic agents in multimedia and global environments. These learners create complex social networks and operate comfortably in them. They learn experientially in real and virtual worlds alike. They express their views and make their lives public with ease. Many of these learners show greater interest in the global environment and human rights than their immediate predecessors. As the recent elections suggest, many are increasingly willing to organize around public matters online and from the grassroots up. New learning presents important challenges as well. As the world “flattens,” global proximity can yield discomfort and sharp retreat to local values. Virtual spaces are misused, information misinterpreted, virtual identities misconstrued, social networks misguided. This generation experiences pressure to perform, to succeed, to move at a fast and efficient pace, with little time for self-reflection or developing deep understanding of the changing world in which we live.

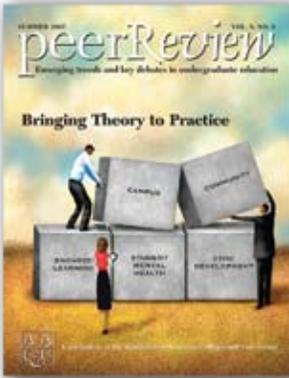
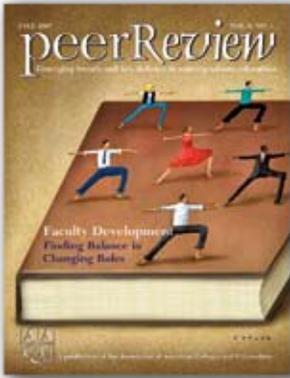
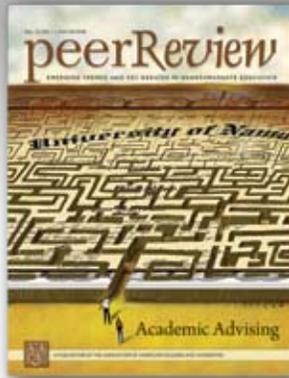
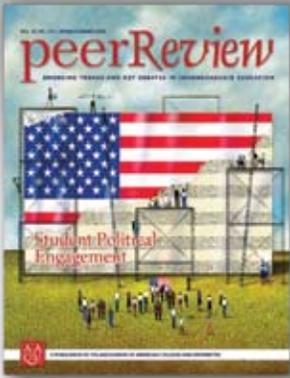
Contemporary societies’ demands on learners invite a paradigmatic shift in our characterization of learning and teaching for the future. Taking the lead in the early 1990s, the Organization for Economic Cooperation and Development advanced a series of competencies that learners must develop to have successful lives and contribute to a well-functioning society. Competencies range from

interacting in socially heterogeneous groups, to acting autonomously in large contexts, and using tools and knowledge interactively and well. The Association of American Colleges and Universities too has recognized the need for *greater expectations* for a growing student population. Learners of the present and the future must be agents in their own learning, critical inquirers, able to collaborate, able to apply higher order thinking skills to real-life problems, to manage cultural complexity and to make meaningful connections across disciplines. What role does integrative learning play in our efforts to prepare young people for today’s and tomorrow’s societies?

Seeking to overcome the last century’s knowledge fragmentation to provide an education that is relevant to contemporary life, higher education and funding institutions have increased their support of interdisciplinary initiatives on campuses. A 2006 *U.S. News and World Report* college and university ranking found that 62 percent of liberal arts institutions offer interdisciplinary studies majors. A Teagle Foundation study of liberal arts colleges and universities found 99 percent of institutions reporting being *somewhat* or *very* oriented toward interdisciplinarity. While few empirical studies have measured the benefits of integrative learning systematically, learning theorists associate it with higher-order epistemological beliefs (beliefs about knowledge and inquiry); high levels of mental complexity; critical and analogical thinking as well complex and collaborative problem solving—all key competencies in today’s knowledge society.

In my view, when rigorously conducted, integrative learning embodies a more profound opportunity to prepare the young for today and tomorrow’s societies. When well-conceived, integrative learning enables students to focus on multidimensional issues in their full complexity. It invites them to weigh, apply, and combine disciplinary insights to move beyond naive views. Most important, it enables them to bring the very forces changing the planet—from climate change to globalization, from the digitalization of everyday life to the ethics of global health and medical technologies—into the classroom for detained interdisciplinary exploration. Clearly disciplinary learning too can focus on topics of present and future relevance and do so with effective precision, but because integrative learning expands the nature of the questions that we can legitimately ask in class it expands the epistemic jurisdiction of our courses. In so doing it gives room for a novel point of departure for curriculum development: where our world of today and tomorrow becomes the source of problems for study and helping students make productive sense of such problems becomes our goal. Framed in the context of the future of learning, integrative learning sets the stage for a pedagogy of the contemporary. That is a pedagogy in which systematically, students are rigorously tooled to reflect upon and address the questions of environmental and cultural survival of our times; and gain practice for the work that they will need to do as members of their generation. ■

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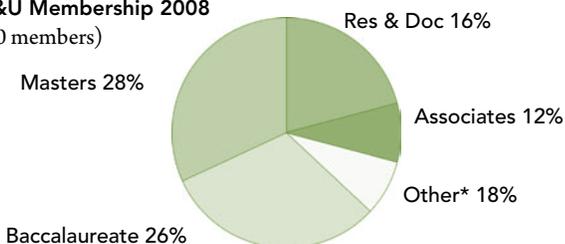
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AAC&U is the leading national association concerned with the quality, vitality, and public standing of undergraduate liberal education. Its members are committed to extending the advantages of a liberal education to all students, regardless of academic specialization or intended career. Founded in 1915, AAC&U now comprises more than 1,150 accredited public and private colleges and universities of every type and size.

AAC&U functions as a catalyst and facilitator, forging links among presidents, administrators, and faculty members who are engaged in institutional and curricular planning. Its mission is to reinforce the collective commitment to liberal education at both the national and local levels and to help individual institutions keep the quality of student learning at the core of their work as they evolve to meet new economic and social challenges.

Information about AAC&U membership, programs, and publications can be found at [www.aacu.org](http://www.aacu.org).

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