

CURRICULAR TRANSFORMATION

BY PETER SMITH

Why We Need It *How to Support It*

I've been in higher education for over 30 years, with time off for a diversion into elective office at the state level and in the United States Congress. Throughout my career, I've watched, listened, and engaged in the swirling debate about the need to transform our colleges and universities and our approaches to students, teaching, and learning. But, sadly, despite a lot of research and advocacy to the contrary, the basic shape of the box—the American university and how we do business inside it—hasn't changed very much.

Despite an enormous diversity of institutional types and our historic commitment to access, there is a numbing sameness across our campuses when it comes to the actual practice of teaching and learning. Different colleges recruit different students, serve different audiences, and teach different bodies of knowledge. But they do it all using the same basic academic model.

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A scholar-professor appears in front of students largely in isolation from the world outside. Instructional encounters are structured in terms of standard blocks of time of approximately three hours per week, organized around a central text and syllabus tailored to fill up a 12- to 16-week period. We are similarly universal and unvarying in what we expect of students, no matter their individual needs or background. They are expected to come as they are and be ready to learn, to absorb the teaching they receive, to prove that they learned it, and to go on to a higher level for more of the same.

And while technology has certainly modified many courses, the reality is that even technology-infused course designs continue to treat all students similarly and that the cost of technology is usually treated as an “add-on” not as an investment in transformation. Consider as a parallel

hundreds of restaurants, each claiming to be unique, but all serving one dish: white rice. Some of it might be fried, some of it might be steamed with saffron. Some of it might even be part of a fricassee dish. But it’s all rice.

No matter where you go, what campus you visit, which students you interview, the assumptions behind the teaching-and-learning process are unchanged: to absorb knowledge from someone wiser, regurgitate it to the wiser person’s satisfaction, and move on.

This classic academic model has worked pretty well for America over the last 250 years. So what’s the problem? The problem is that the world we serve is changing before our eyes and the current model of education won’t get us to where we need to be as a society. Our learners are changing, becoming more diverse in ethnic background, age, and participation patterns. Our capacity to support high-quality teaching and learning through use of technology and the World Wide Web is growing dramatically. And our knowledge base about how people learn is developing rapidly.

The world that is emerging requires new instructional approaches, new organizational forms, and new academic cultures to meet its needs. Any one of these three forces constitutes a significant challenge to the traditional academic establishment. The interplay of all three creates an urgent dynamic that we can neither ignore nor outlast.

New Students: Beyond Access to Effectiveness. Colleges and universities today are faced with a dilemma. We have succeeded in creating enormous potential opportunity through financial and physical access to college. But, once learners are through the front door, the pathway to success is tortured. Students and their learning do not constitute the organizing center for what we do; faculty and tradition do. Faculty teaching loads, schedules, gaining tenure, and attracting research funding all take priority over student learning.

Raul Yzaguirre, the president of La Raza, the United States’ largest Hispanic organization, spoke to a gathering on

Capitol Hill late in 2001. His gentle voice filled with conviction when he said, “The education gap between the Hispanic and majority community is not narrowing, it’s getting wider. And at the same time, especially for you Members of Congress, I need to remind you that the American public school system, when it comes to Hispanics, isn’t a pipeline; it’s a sieve.”

He is right, and for more learners than just Hispanics. Our relative failure lies in those parts of the population that are growing fastest. And the consequences of our failure include the disappearance of the middle class in America’s future. If you look at our record of success beginning in the ninth grade, our record for successfully graduating learners from college is the story of Raul Yzaguirre’s sieve.

First, persistence and success in high school are still highly sensitive to income and ethnic background. Students graduate from high school in disproportionate racial groupings. That’s troubling enough. But even for those who do graduate from high school, the probability of going to college and graduating is less for those who are poor and of ethnic minorities.

Here’s the bottom line. For every 100 ninth graders, an average of 18 students graduate from college after 10 years. When students’ ethnic background and income are factored into this already low rate, the true dimensions of the problem become clear. Now that’s a sieve!

None of our nation’s students, especially minority students, are achieving college degrees at rates acceptable for society’s long-term well-being. When one combines the population increases for minorities with the disparity in college achievement by race and income, we are risking a nation driven by potentially yawning educational and occupational gaps.

New Knowledge about Learning.

Much of the evidence that we’ve accumulated over the years about the way people learn contradicts traditional “common practice” in teaching and learning. And this is not just new

research. For example, Jean Piaget’s work on the development of cognitive capacity suggests how seriously flawed the traditional approach to teaching and learning can be. Piaget demonstrated that as a child’s brain grows through puberty, much of the learning is “additive” (one block of knowledge is stacked on another). As we age, however, our learning is increasingly “adaptive”—that is, we evaluate what we are told based on our experience.

Similarly, Allen Tough’s research on adult learning tells us that we are constantly learning, even if our learning is never recognized or assigned a value by a college. Furthermore, we know that intelligence has many faces. The artist and the mathematician see and experience the world differently, the introvert and the extrovert work differently. Every human be-

ing has a “personal learning portrait” that is as distinct from all others as a Monet from a Picasso.

Yet sadly, because employing this emerging knowledge challenges the historic structure of universities, we ignore it. Higher education has treated new and well-established knowledge about why people learn and how they learn best as either threatening or superfluous. Ignoring such new knowledge, most colleges and universities operate like an emergency room where the first thing the attendants do is put a splint on your arm, regardless of your complaint. Imagine the conversation:

“What happened to you?”

“My head and neck are killing me. I was whip-lashed when my car was rear-ended.”

“Okay, let’s just get this splint on your arm, and then we’ll talk.”

Absurd? Absolutely. Despite our best intentions we have organized American higher education—from classroom architecture to graduation standards—around the interests of the university, not the needs and the learning profile of the student. As one example, we know that large lectures, though they generate considerable revenues for the institution and constitute the staple diet for lower-division students, are only marginal learning environments for most learners. And yet we continue to pack our most-deprived and least-prepared students into lecture halls as soon as they walk through the door.

A doctor would not dream of prescribing medication or recommending treatment without taking the time to learn about the person in front of her. But in higher education, where we now have the capacity to similarly diagnose every learner, we simply end up doing again what we did for everybody else last year.

Increased Technological Capacity.

Technology is transforming our understanding of how to employ time, space, and locus of responsibility in teaching and learning. No college or university can any longer imagine itself as the sole, or even the main repository of knowledge. Nor, in the longer term, can any college or university president believe that parents will continue to pay escalating tuition costs for their children to access what is already available, essentially free, on the Internet.

Technology means that we do not need to leave our workplaces to become learners. Technology enables us to learn before the bells ring and after the school doors have been locked. Technology does not care whether its user is Muslim or Christian, eight or 80, wealthy or poor. The reality of technology as it exists today—let alone as it will be tomorrow—is spreading tremors across every traditional campus in America.

The traditional model of education built on research agendas, classrooms and teachers, textbooks and homework, is a mutually reinforcing, hierarchical collection of incentives, practices, and policies that is almost impervious to serious

change. But the way we’ve “always done it” has simply become inadequate.

Throughout society, the information revolution exerts relentless and growing pressure on centralized authority, continually pushing knowledge and services out to increasing numbers of individuals in unexplored settings and formats. The notion of “access to college” is already being redefined. College roles and structures will keep on shifting as significant academic programs continue spinning outward to individuals, corporations, and community-based organizations.

BUILDING A NEW KIND OF INSTITUTION

Curricular transformation in the face of these challenges must be embedded in clear assumptions about teaching and

learning, and it must be surrounded by a university organizational structure that supports those activities and is committed to their effectiveness and continuous improvement. It must be fully a part of the culture, policies, and practices of the larger institution, not driven by a small group of people (see “A Tale of Two Articles” on page 32).

Everyone, drawn from all parts of the institution, must share a common vision and a consistent set of assumptions if the university is going to be effective. In universities, as in other organizations, organizational supports and incentives must be mutually reinforcing and must be woven throughout the institution’s financial and policy structures. If they are not, change efforts will wither because they are not reinforced by the dominant culture’s investments, rewards, and incentives.

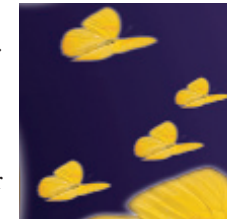
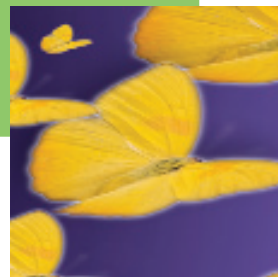
How many positive programs have “failed” after their founders lost energy or the soft money dried up, having failed to thrive in the barren soil of the wider university. Such failure to thrive is a *structural*, not a philosophical or a rhetorical

issue. It happens because change efforts do not align with the core assumptions and practices of the institution. As a result, they starve.

Conversely, change persists and succeeds when it is sufficiently comprehensive to be self-sustaining within the larger culture and when it is actively supported by the assumptions, services, rewards, and incentives of the organization. In this model, funding for innovation is core funding, restructured policies and practices are core policies and practices, and new academic assumptions reflect the values, rewards, and incentives of the institution as a whole.

My institution, California State University–Monterey Bay (CSUMB), is not “there” yet as an example of the culture of curricular transformation. But we are on the journey and are learning how to do better every day (see “A Vision in Action” on page 34). As a learning community, we have identified strategic themes, core academic values, an outcomes-based education framework, and an academic program model which,

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A TALE OF TWO ARTICLES

In the November/December, 2002 issue of *Change*, Lee Shulman ("Making Differences: A Table of Learning") and David Schoem ("Transforming Undergraduate Education") offered important insights into the difficult issue of reconceptualizing the undergraduate curriculum.

In his thoughtful presentation of the "Table of Learning," Shulman suggests that pedagogies of engagement, broadly understood, have multiple dimensions and multiple uses. They are educationally valuable in their own right, as well as being the sources and enhancers of other learning. They are ends in themselves as well as bridges to cognitive and affective growth through reflection.

Shulman's "Table of Learning" includes six different "way stations" on the learning journey: engagement and motivation, knowledge and understanding, performance and action, reflection and critique, judgment and design, and commitment and identity. Shulman goes on to make two additional points, the first directly and the second by implication.

First, he asserts that there is no "first stage" or preferred sequence of events on the learning journey. All of his "way stations" are understandings that the teacher and learner can use to deepen and strengthen learning however they arise or are harnessed. Shulman also acknowledges that each of the "way stations" needs all of the others, and that great teaching and learning will incorporate all six in response to a given learner's needs and the learning's requirements.

Second, he implies that teaching and learning are about more than just mastering subject matter. Good pedagogical practice in the 21st century should be based on what we know through the scholarship of teaching and learning, not just a full knowledge of content.

Enter Schoem, with his articulate analysis of the independently established, isolated, and perpetuated hierarchy that continues to typify academia today. He correctly identifies the many professional, disciplinary, and curricular silos that persist on most campuses, which keep emerging good practices from finding synergy. So he calls for professionals



who are "boundary-busters," a university vision that is cross-disciplinary, and organizational structures and policies that intentionally support proven change efforts.

Among the latter are multidisciplinary courses, new approaches to assessing learning, and comprehensive first-

year programs. If, as Schoem implies, the key obstacles to transforming undergraduate education lie in the *culture* of the academic tradition—in its assumptions and historic aspirations—then proposed solutions won't work unless they seek actively to replace the established academic culture with another.

As he describes the challenges and obstacles involved in this kind of change, Schoem identifies a critical core principle: *You need to transform the organization if you want to support a transformed curriculum.* In closing, Schoem asks the 64-thousand-dollar question: "How do we move beyond yet another 'good idea' to a reconceptualization and transformation of undergraduate education?...What would it mean to build comprehensive, integrated links among the many new and good programs that have each found a small place in college life over the last couple of decades? What is the powerful vision we could see if we finally got hold of the big picture of undergraduate education?"

The link between Shulman's "Table of Learning" and transforming undergraduate education lies in creating an academic structure that is organized and provides incentives to develop, promote, support, and incorporate the "way stations" he describes in whatever cycle or order they naturally present themselves.

By focusing on the learner, by helping each learner develop clear expectations and aspirations for his or her course of study, and by developing an intentional academic model to support every learner as he or she does so, we create an academic climate that allows Shulman's "Table of Learning" to function. In doing so, moreover, we are enacting the institutional model of systemic cultural change that Schoem is looking for. ☺

taken collectively, constitutes a comprehensive alternative example of this kind of self-reinforcing system.

To anticipate the needs of 21st-century society and the learners who inhabit it, we need malleable organizational structures that reinforce continuous improvement and flexibility in the face of changing need. By focusing on pedagogy as well as content and by engaging each learner in the design and implementation of his/her own program, the academic program model at CSUMB embodies the characteristics of an embedded, articulated educational model in an continuously renewing organizational setting.

I know from experience that making good policy is a difficult business. I've been involved in education policy for over 30 years. I've served in elected positions at the local, state, and federal levels. And I've worked at the local, state, and national levels in program and policy development. Too often in such settings, the tendency of leaders is to try to control, to direct, and to limit the scope of activity. As we evolve collegiate policies and practices to respond to the new learning ethos, however, we need our leaders—be they presidents and chancellors, corporate and business executives, or community champions and policymakers—to adopt some new core values.

Foremost among them must be:

- Sustaining a *climate that rewards change and experimentation*,
- Creating new partnerships in educational delivery,
- Creating the kind of education that mirrors a global, learning-centered age,
- Supporting active and engaged pedagogies for learning, and
- Reviewing and making the best use of external opportunities for review.

Let me say a bit more about each of these. First, we must be committed to a *climate that rewards change and experimentation*. We do not want deadening sameness across our curricula or our institutions. America is diverse and its colleges and universities should be equally diverse in both form and function. Policy should focus on results and quality processes—on learning, not teaching. A "standard" approach to teaching or learning won't serve us well. High standards and common expectations for results will.

Second, we must be committed to *creating new partnerships in the delivery of postsecondary education*. Our policy vision must extend beyond government authority to embrace our chambers of commerce, our teacher unions, our school boards, our neighborhood centers, and our corporate boardrooms. Higher education can no longer be the province of a few. It must become "the commons" for nearly all of us. Continuing economic development in a high-technology, global economy requires engaging our partners

in business in the design and delivery of lifelong, workplace-based education.

Third, we must commit to developing policies that *enhance the delivery of higher education in a global, learning age*—a process in which all citizens participate. Personal learners—at work, at home, and in their communities—are the largest target of opportunity for educators and entrepreneurs today. They comprise hundreds of millions of friends and neighbors, cousins and colleagues, who are waiting for accessible learning resources that can help them assess what they know (and thereby identify what they need to learn), can organize and direct their learning, can help them find new learning opportunities, can validate their learning through further assessment—and, in doing all of these things, can enhance their lives.

Two important groups of personal learners are currently underserved: people with *untapped potential* and people with *untapped knowledge*. People with *untapped potential* are those who disappear from our schools and colleges before they graduate. They have the capacity to learn and to contribute, but they do not persist in either school or in the workplace.

Business leaders have been telling us for years that the dramatic change we are experiencing in the face of our nation's demographics will lead to an equally powerful change in the face of our nation's workforce. With 65 percent of all jobs now requiring at least some level of post-secondary education—a number that is increasing daily—we must take on a commitment to build a higher education that leaves no person behind.

People with *untapped knowledge* have capacities that are already developed but that remain unrecognized because the credentials given by higher education have been withheld from them. They need to have their knowledge assessed and recognized, and to gain advanced placement for

what they already know. I've seen no empirical data assigning an economic cost to untapped knowledge but it is bound to be enormous. We lose what people with untapped knowledge have to offer and we simultaneously lose the opportunity for them to learn even more. Social justice, as well as economic interest, compels us to open doors for them toward greater economic success, higher standards of living, and greater contributions to society.

According to the Educational Testing Service (ETS), we entered the 21st century forfeiting nearly a quarter of a trillion dollars every year as a result of our failure to educate Hispanics and African Americans alone. These are among the populations that are full of untapped potential and untapped knowledge. They have remarkable skills and vast capabilities, all largely ignored or turned away by our traditional models.

Federal and state legislative bodies can encourage *reform that supports active and engaged pedagogies for learning*. Foremost among these pedagogies is service learning. Serving our communities through deliberately constructed service

**Personal learners—
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and in their
communities—
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of opportunity
for educators
and entrepreneurs
today.**



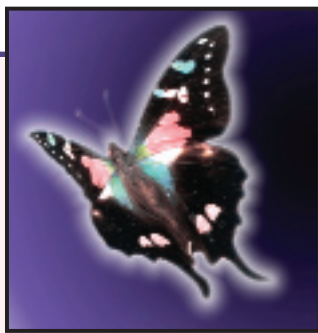
A VISION IN ACTION

California State University–Monterey Bay (CSUMB) is centered on teaching and learning. We are committed to the success of a diverse student body, including historically underserved populations and first-generation college-goers. We are committed to outcomes and results for the learners who share their dreams, their potential, and their time with us.

This means that we have tried to employ a culture of evidence in everything we do. We ask students for results. We ask ourselves, as staff, faculty, and administrators for results. And, because we have agreed on and built the climate, the culture, and the program model together, we are starting to create a new institutional model for teaching and learning, as well as for organizational renewal and effectiveness.

Our *strategic themes* are: a multicultural, pluralistic community; student-centered learning environment that supports student learning; and an engaged campus. This list is a distillate of what our community believes is important, the things that we are willing to live by, and that we try to strive toward in everything that we do.

Our *core academic values*—on which academic support, curriculum, and pedagogy are based—are: interdisciplinarity, applied learning, multiculturalism/global perspectives, technological sophistication, collaboration, ethical reflection and practice, and service learning. Faculty and academic administrators are committed to incorporating all of these values in every curricular experience. We emphasize these values as our core activity, our *raison d'être*.



We collect information about our performance in doing so. We ask students how we are doing. When we interview new faculty, we actively look for these professional capabilities and commitments. And we look at them again when we evaluate performance as a key component of our approach to promotion and tenure.

Our *academic program model* connects those core values to the larger vision and mission of the institution and the knowledge about how people learn that is available to us today (see Chart 1).

Its major elements are as follows:

- All first-time lower-division students begin the program by enrolling in the First Year Seminar. This required course is part of a larger first-year experience and is taken in the student's first term. It provides an orientation to CSUMB and its academic program, provides intensive writing development, and assists students in preparing individualized plans for the learning that they will undertake at the university.

CHART 1. CSUMB ACADEMIC PROGRAM MODEL



learning programs is to plant the seed corn of democracy. At the same time, service learning is a powerful pedagogy that has been repeatedly tested and proven. Experiential learning makes the learner wiser.

Service learning makes the community stronger. When meaningful opportunities for service are absent, we all suffer silently. People in need languish and the souls gathered at the country club are just that much drier. A national policy on service learning is a critical element of the learning age and we need to advocate for one relentlessly.

Finally, *external opportunities for review* like accreditation practice and policy must be examined and harnessed to support the kinds of learning organizations that we want. In the past, regional accrediting organizations have assured minimum standards for resource investments and consistency in degree-granting programs.

And nothing can diminish the importance of this peer-based

system. But few areas of higher education will be as challenged as the role of accreditation to assure quality in the face of an increasingly diverse instructional delivery system—where educational outcomes and institutional effectiveness—not particular structures or processes, become the sole earmarks of quality.

Quality assurance in the 21st century will rest on accredited institutional capacity, educational and organizational effectiveness and demonstrated results in the form of better learning. By 2025, we will undoubtedly embrace a wider and fundamentally different conception of quality founded not on tradition, but on evidence-based results-oriented standards. Our standards for quality will build *up* from learning outcomes for every student and *around* the institution's capacity and effectiveness—regardless of its organizational form—to add value to a learner's life through education.

Colleges are difficult organizations to change. And we know

- As students develop their plans, they also begin working on the general education learning outcomes, the University Learning Requirements (ULRs). Our general education requirements are statements of mastery and attainment, not course or credit accumulations.

This formal process of engaging the ULRs begins each student's educational journey by forcing him or her to consider what each needs to “know and be able to do” to meet every ULR requirement, and how each chooses individually to approach that learning. We believe that this personalizes every student's learning and deepens its impact.

- All lower-division students also engage in Service Learning I, the first of two service-learning experiences that are required of all students. At this level, service learning is embodied in a formal course that places students in a wide range of community-based agencies and organizations for a term-long project.

We believe in the value of applied learning and engaged lives for everyone. This requirement connects proven pedagogy with engaged learning and living. Through Service Learning I, students learn at two levels. First, they learn about people and communities that are different from the ones they grew up in. Second, they experience directly the pedagogy of engagement.

- Rising juniors and all community-college transfer students begin work in their majors by enrolling in a Major ProSeminar that is required in all degree programs. This course provides an orientation to CSUMB for junior transfers, introduces students to the academic terrain, and the methodologies of the interdisciplinary degree that they will be pursuing. It helps them to start constructing an academic plan and portfolio for their program of study, and addresses the particular areas of

knowledge and skill that they will need to master to meet the program's graduation requirements (called Major Learning Outcomes or MLOs).

While more refined and related to the student's interdisciplinary major, the process used in the Major ProSeminar is a replay of the sequence that they experienced in the First Year Seminar with respect to the ULRs. We believe, that like riding a bicycle, learning how to learn requires coaching, focus—and a lot of practice.

- As part of their program of study in all degree programs, students participate in Service Learning II. In this upper-division, non-course-based service-learning experience, service is used as a pedagogy in which students have an opportunity to apply the knowledge and skills being learned through the MLOs to real needs and problems in the community where they are placed.

- In their final semester in all programs, students enroll in a Capstone Course. The capstone is intended to provide an opportunity for students to integrate and apply their learning through a significant thesis or independent project. Students then publicly present and display their capstone projects to all members of the CSUMB community in a Capstone Festival just before graduation.

These interrelated elements of our academic program delineate a common sequence of steps that all students experience during their learning careers at CSUMB. It addresses our strategic themes and it incorporates our values. It is designed to accommodate a pluralistic student body, to encourage active and collaborative engagement, and to support and stimulate student learning. And it reflects the intentionality of our community to make these things happen effectively for our students through a visible and culturally supported design. ☺

that they have gotten even larger and more unwieldy in the last century. In 1920, the average four-year institution had 457 enrolled students and the average two-year college enrolled 154. By 1980, these numbers had swelled to 4,070 and 3,604 respectively. And these averages mask the real story about typical institutional size because more than half of all college and university students—and nearly half of all professors—inhabit the mere 10 percent of institutions that enroll more than 10,000 students. Institutions of such magnitude carry with them significant inertia that resists change in uncountable ways.

Even within small institutions, the weight of tradition is leveraged against every appeal for change. Indeed, colleges and universities are some of the best examples of the phenomenon that Mary Douglas saw in all sorts of institutions: “There are four decisive arguments against organizational change,” she wrote. “There is no time. It is unnatural. God prohibits it. And there is no money.” Most of us have experienced

many variations on these themes. And we will hear them again every time we propose to revamp established collegiate models and programs to match the realities of a learning-centered age.

The organizational orthodoxy of our colleges and universities is stifling creative responses to a changing environment. There's a rising tide of new knowledge about the way people learn. But it has not yet permeated the American educational process. We are developing a technological capacity that boggles the mind. But we lag in using it to support learning. We face a flood of new students who, because they are Americans, see the right to earn a degree as a basic expectation.

But our success rates are still defined largely by ethnicity and income. Until we come to grips with these new realities as a nation and until we adapt our organizational structures, policies, and practices to meet their challenges, we will be unable to reinvigorate the promise of opportunity that has been ours for more than two centuries. ☑