



# REDEFINING UNDERGRADUATE EDUCATION FOR THE 21<sup>ST</sup> CENTURY

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It's an honor and a privilege for me to be with you today. Let me begin by thanking everyone here for the work you do every day to strengthen education and make college dreams a reality for millions of young people across the country and around the world. I should also like to commend the trustees of the College Board for all the good work they do on behalf of education.

Each of you here today – whether you work at high schools or colleges – affects the lives of young people. Indeed each of you helps shape the destinies of your students. You don't go into education unless you care deeply about two things: First, young people – their dreams, hopes, and potential. And second, the pivotal importance of educated citizens to the world's stability, prosperity, and progress. These two values, I venture to say, are what motivate you to do your job with passion, commitment, intelligence, and integrity.

All of us here are in the business of building up individuals and institutions at a particularly challenging time. On the one hand we are operating in a keenly competitive climate, in which students and their families are stressed by the demands of selective

admissions, and in which colleges and universities are stressed by the mandate to “succeed” – that is, to operate in the black.

This level of competitive stress is at an unprecedented high. Just the other day one of our student leaders, a senior, said to me, “Dr. Sample, admission to USC is now so competitive, I couldn't have gotten in.” Mind you, this is a physics major with a music minor who holds a 3.6 GPA, and who is an outstanding student-athlete competing in cross-country. And he entered USC only three years ago!

As I go around the country talking with USC alumni, I constantly hear this refrain: “USC is so hard to get into now, I wouldn't be admitted today.” I reassure our alumni that if they had grown up in a culture like today's, where children have to start preparing for college in grade-school, they too – being smart, ambitious people – would have risen to the challenge and competed vigorously for admission. For better or worse, I don't believe we'll witness even a modest slackening of this competitive pace for at least another decade.

On the other hand, we are operating in an environment in which, for some of our students, competition seems to matter very little. Some of you have students who aren't motivated, who aren't prepared, and whose families seem apathetic toward higher education. Some of you work in a climate in which there are glaring inequities, in which even ambitious young people face enormous obstacles posed by limited resources and poor preparation in their secondary schools.

Amidst this almost bipolar climate, we are witnessing many changes in K-12 education and a multitude of proposed remedies and improvements. In many areas of the country, elementary school, middle school, and high school education is being mended and amended, reviewed and refashioned. But unfortunately these changes are not always beneficial to students. Thus, there is a real threat that American education, even at the postsecondary level, may be losing ground to international competition.

The good news is that there is a dawning realization on the part of the public that we in higher education must keep pace with the breathtaking rate of change occurring around the world, that we cannot do business as usual, that we cannot simply presume American higher education will continue to be the gold standard for the world.

I think higher education is in the midst of a major transformation. And spurred by this transformation, we must redefine undergraduate education for the 21st century. That is my topic today. I want to focus on three trends that I believe are helping to precipitate a revolution in higher education:

- first, the changing role of the baccalaureate degree;
- second, the importance of teaching our students to be engaged citizens in their local communities; and
- third, why it's important to help our students become global citizens.

## **The Changing Role of the Baccalaureate Degree**

Let me start by noting that the baccalaureate degree plays a different role today than it did half a century ago. To better understand this evolution of the B.A. degree, let's first take a brief look at history.

From the founding of Harvard in 1636 through the better part of the 19th century, the so-called classical curriculum prevailed in practically every college in this nation. The classical curriculum was relatively simple: it comprised essentially Greek, Latin, moral philosophy, and mathematics. Higher education at that time was equated with virtue, religion, and discipline of the mind. Its purpose was to produce gentlemen who adhered to upper-class values, and who would become upper-class leaders.

In the 1870s a revolutionary notion entered American higher education – the idea that original research and scholarship should be an integral part of academic life. This idea implied that the storehouse of knowledge at that time was not fixed, but in fact could be expanded. This led to a very fundamental shift in academic philosophy, which in turn led to specialization in the academic disciplines and the creation of majors in the 1920s and 1930s. Students came to the university, not to follow a prescribed curriculum, but to study subjects of interest to themselves, concentrating much of their coursework in particular areas of their own choosing.

As recently as 50 years ago, the baccalaureate was the terminal credential for most students, even those at highly selective universities. Of course some of these students went on to medical school or law school, but the vast majority finished their formal education with the bachelor's degree.

However, the nature of the bachelor's degree has changed dramatically over the past half-century. Today, for most students at highly selective universities such as USC, the baccalaureate is simply a preparatory degree. Almost all of these students will go on to master's or doctoral programs or professional schools.

This transformation of the B.A. has occurred for several reasons. First, knowledge is being generated much more rapidly today than in the past. The speed with which data can be processed and manipulated has been increasing exponentially. A few years ago, Bell Labs issued a report that claimed we live in a world in which a single issue of the *New York Times* contains more information than could have been learned in a lifetime by a person living in the 15th century. Thus, no undergraduate program today can teach students all they'll need to know or learn throughout their lives.

Then too, the increasing complexity of our world is drastically changing every aspect of our students' futures. When I address our freshman class each year at USC, I make a few predictions about their futures. I tell the freshmen that many of them will live healthy and productive lives past the age of 100. Most all of them will still be working in their 80s, either by choice or necessity. And as a result, they will need to reinvent themselves and their careers several times during their lifetimes. Most of them will have three or four different careers. Not jobs – but careers. And essentially all of them will eventually go on to some kind of postgraduate education, many of them more than once.

Several years ago I predicted the decline of the B.A. as the terminal degree in higher education. My prediction was based in part on the observation that the M.D. had lost its place as the terminal degree in medicine, and had become simply a way-station in the process of preparing young people to be practicing physicians. In short, residency training had replaced the M.D. degree as the terminal credential in the process of becoming a competent doctor.

### **Breadth With Depth**

Fifteen years ago at USC we revised our entire undergraduate curriculum in recognition of the fact that, for most of our students, the baccalaureate degree would be simply a milestone on the way to becoming an educated person. We realized that the university of the 21st century would have to prepare students for the complex challenges they

will face in the future. So we created a program to help our students stretch their intellects through what we like to call “breadth with depth.”

Our ideal is to help students develop the kind of intellectual flexibility displayed by the best thinkers of the European Renaissance. Take Leonardo da Vinci, for instance. The breadth of his knowledge and experience was extraordinary. During various parts of his life Leonardo was a military engineer. He learned mechanics, studied optics, and wrote treatises on descriptive geometry. He also studied physiology and anatomy, along with color, form, and balance. But Leonardo's breadth was not superficial. Leonardo was not a superficial engineer, or a superficial anatomist. He didn't possess a superficial knowledge of pigmentation and color. He certainly wasn't a superficial artist. Rather, he was able to comprehend a wide range of ideas in great depth, and bring them together in a way that serves as a paradigm of liberal education to this day.

Is it possible to develop such a broad and deep range of knowledge today? At USC we believe it's possible – indeed even necessary – to help our students strive for such an ideal. USC students are encouraged to major in whatever field they choose, but are then encouraged to take a second major or a minor in a field which is widely separated across the intellectual landscape from their major.

To help foster this concept of “breadth with depth,” USC has created more than 130 minors, which we believe is the widest selection of minors at any university in the country. These minors include such diverse subjects as “Medical Anthropology,” “Peace and Conflict Studies,” and “Video Game Design,” as well as minors in all of the more traditional fields.

Our students use their own creativity to find new and interesting combinations of majors and minors. If you ask a USC student, “What's your major?” you might get the following response: “I'm double majoring in computer science and biology, with a

minor in classics.” Or, “I’m double-majoring in violin performance and English, with a minor in international relations.” Or, “A double major in communications and political science with a minor in cinematic arts.” These combinations of majors and minors were taken from the real-life experiences of USC students.

Breadth with depth represents a dramatic departure from undergraduate education of the past. In fact, it’s the opposite of what I was encouraged to do. As an undergraduate engineering major I wanted to take courses in French, and I was willing to take heavy course loads to do it. But the engineering dean told me that the faculty really didn’t want engineering students studying such frivolous subjects as French. To soften his resistance, I had to resort to a little fabrication. I came up with the story that I wanted to practice engineering in former French colonies. Only after hearing that did he relent.

In essence, all undergraduates 50 years ago were encouraged to pursue minors that complemented their major. For example, students majoring in English were encouraged to minor in British history or comparative literature, while those majoring in electrical engineering were encouraged to minor in physics or mathematics. But today I tell our engineering students to take as few classes in engineering as they can possibly get away with, and then take as many classes in the arts and humanities as possible. Likewise, I counsel arts and humanities majors to take as few classes in the arts and humanities as they can in order to just fulfill their major’s requirements, and then devote the rest of their course work to science, mathematics, and engineering.

### **Interdisciplinarity**

Breadth with depth led us naturally to another trend, which is becoming something of a buzzword in the academy – interdisciplinarity. Interdisciplinarity is quickly becoming the *sine qua non* of the research university of the 21st century. The reason for this change is the fact that it is often at the boundaries which separate the traditional disciplines from

each other that creativity and invention can come to full flower. Thus we don’t do interdisciplinary work simply for the sake of interdisciplinarity. Nor do we do it because it’s *au courant* or politically expedient. Rather we work across the disciplines because it is the best and often the only way to address the complex problems of our world today.

In his book entitled *Consilience*, author and Harvard biologist Edward O. Wilson does a wonderful job of stating the case for interdisciplinary education. Wilson said, “Half of the legislation coming before the United States Congress contains important scientific and technological components. Most of the issues that vex humanity daily – ethnic conflict, arms escalation, overpopulation, the environment, endemic poverty, to cite several most persistently before us – cannot be solved without integrating knowledge from the natural sciences with that of the social sciences and humanities. Only fluency across the boundaries will provide a clear view of the world as it really is, not as seen through the lens of ideologies and religious dogmas or commanded by myopic response to immediate need.” So, breadth with depth and interdisciplinary teaching are not simply fads. They’re not simply buzz words. They’re essential for the education of students in the 21st century.

### **Serving Society**

Now that I’ve talked about the redefinition of the baccalaureate degree, let me shift gears and talk about what I see as the second important trend in higher education today. And that is creating citizens who are deeply engaged with their respective communities.

The noted children’s advocate Marian Wright Edelman has defined the purpose of education: “Education is for improving the lives of others and for leaving your community and world better than you found it.” That’s an inspiring way to describe education, isn’t it? We’re not just filling students’ brains with facts and concepts. We’re teaching them values. We’re teaching them how to add value to their lives, and to the lives of everyone around them.

At USC we believe so strongly in values-based education that we feature it in our one-page mission statement. I quote: "The central mission of the University of Southern California is the development of human beings and society as a whole through the cultivation and enrichment of the human mind and spirit." Our Role and Mission Statement also says that we strive to help our students "acquire wisdom and insight, love of truth and beauty, moral discernment, understanding of self, and respect and appreciation for others."

But we're not merely paying lip service to the importance of serving society and being engaged citizens. We back it up with results. In fact, community service has become a hallmark of a USC education. More than half of our undergraduate students participate in volunteer activities each year. By the time they graduate, virtually all of our students will have had at least one intense experience in public service.

The strength and scope of our community outreach programs were what persuaded *Time* magazine and the *Princeton Review* to name USC "College of the Year 2000." That honor was a tremendous testament to the hard work of our students, faculty, staff, and neighbors, and the primacy we give to building respectful partnerships in our neighborhoods, working in concert for the good of all.

You can imagine, incidentally, how excited we were about being named College of the Year 2000 by *Time*. As I recall we ordered half-a-million reprints of the eight-page spread announcing our selection, and distributed them to every Trojan and friend of USC, living or dead. In fact, one day the chairman of the USC Board of Trustees presented me with a copy of the article completely laminated in plastic. "Now, Steve," he said, "you can take the damned thing into the shower with you and re-read it every morning!"

Keep in mind that community service at USC is not mandatory – it's voluntary. Our students aren't punching a time clock to fulfill a community service requirement in the curriculum. They're

not trying to pad their résumés. Rather, they're embodying the values that we hold dear, the values that have fueled great societies throughout history. And they're using their special skills and talents not only to make a contribution, but also to make a difference.

### **Neighborhood Academic Initiative**

Let me tell you a story about how a volunteer experience can change lives. Each spring I co-teach, with Warren Bennis, a leadership class for upperclassmen at USC. One of the students in our class told me about her involvement in a volunteer program that we call our Neighborhood Academic Initiative, or NAI. The NAI is a long and rigorous college preparatory program at USC. Neighborhood students enter the program at the beginning of seventh grade, and the program's teachers and staff work closely with these students and their families all the way through high school. Those students who complete our NAI program, who apply to USC, and who get accepted by our own demanding standards, get a full-ride scholarship to our university. About one-third of the students who participate in the NAI program end up at USC as undergraduates. Ninety-seven percent of our NAI students attend some type of college. Practically all of our NAI students are the first members of their families to attend college. Keep in mind that these students are in a school district where more than half of the students don't even graduate from high school.

Now back to the student in Warren Bennis's and my leadership class. She worked with a young man who participated in our NAI program. Eddie grew up in the neighborhood near our University Park campus. As a child he'd wander onto the USC campus. He'd look around and picture himself as a student. Becoming a Trojan was his deepest heart's desire. The son of working parents who had never finished high school, Eddie kept that flame of hope alive. When the opportunity presented itself at his middle school, he and his parents signed up for our Neighborhood Academic Initiative. Every Saturday he came to USC with other program participants for supplemental instruction in biology,

chemistry, and mathematics. His parents also came to provide moral support to Eddie. And at the end of his regular school day, he stayed on campus two hours for further learning through the NAI program. He and his family members did this for six years. When it came time, he applied to USC, along with 34,000 other students from around the country and the world. And even though we admit fewer than 25 percent of our applicants, Eddie was admitted with flying colors. His dream came true. He's now attending USC as a political science major – and his full tuition is paid by the NAI program.

The student from my leadership class said that her experience with Eddie, more than any other moment at USC, proved to her the life-changing power of education. And it inspired her to become an educator herself. At the same time, Eddie has become an inspiration, a shining example, to his friends and family members. If he could make it, they could too. And that's what community service – based on mutual self-interest – can do.

### **The Global Citizen**

Now let me take a few minutes to talk about what I believe is the third important challenge for higher education – teaching our students to become global citizens. The Reverend Martin Luther King Jr. once said, “Through our scientific genius, we have made the world a neighborhood.” Today our world has truly become a neighborhood: economically, politically, and socially. Geographical divides are being bridged over, tunneled under, and torn down. And competition from around the world for jobs is becoming greater than ever before.

Author and *New York Times* columnist Thomas Friedman put it this way. He said, “When I was growing up, my parents told me, ‘Finish your dinner. People in China and India are starving.’ Today I tell my daughters, ‘Finish your homework. People in India and China are starving for your job.’”

To help our students prepare for the challenges of globalization, we need to provide them with

the tools that will allow them to be citizens of the world. The young people of America today will face much tougher competition during their lifetimes than their parents have had to confront.

In particular, American youngsters must learn to shed their insularity, broaden their horizons, and work more effectively with their peers in other countries. Therein lies a major challenge for all levels of the American educational system. Because in many ways the United States is the most parochial country on earth. Most of our students exit our elementary and secondary school system with only a marginal proficiency in just one language – English. That's inconceivable in other countries! Moreover, the first two years of college work are essentially remedial for the average American student, especially when compared with his peers in other countries. Only after they become juniors and seniors in college do most American young people have a chance to catch up educationally with their age-cohort in other countries.

A Japanese educator once told me that every high school student in Japan is required to read two of Shakespeare's plays before graduating. I asked, “In Japanese?” “No,” he replied, “in English.” I was astonished. Most students in America are not required to read even one of Shakespeare's plays before graduating from high school.

We also need to do a better job of helping our students learn how to write persuasively and cogently. The College Board has recognized this problem, and the new writing portion of the SAT exam is an important spur toward helping all students become more proficient in expressing themselves through the written word. Our students should be able to write easily, clearly, and coherently, and express both complex and subtle ideas with great facility. I commend the College Board for creating the National Commission on Writing, not only to assess the state of writing around the nation, but also to focus our political leaders and educators on the important task of providing our students with the tools to master their own language.

Teaching our students to become global citizens begins with grounding their education in strong values, and teaching them history, literature, and languages. When it comes to teaching our students about different cultures around the world, we need more than just knowledge; we need understanding. All of which is not to denigrate or devalue mathematics and science. Indeed, our children's economic futures will depend directly on how well we prepare them in math, science, and technology. But technical training is not, by itself, sufficient. Our goal must be to intertwine the quantitative and the qualitative in the minds of our students, from kindergarten through college.

### **Diversity**

One of the best ways for our students to gain understanding of other cultures is by promoting diversity at home. And here I'm talking mainly about diversity of ideas, mindsets, and cultures. At USC we're pluralistic. We've managed to do something that is very rare: We've dramatically improved our selectivity and simultaneously increased our diversity. USC enrolls the largest population of international students of any university in the United States. These international students are a rich resource for teaching and learning among our domestic students. In fact, among both private and public research universities in California, USC has perhaps the most diverse student population in terms of race, country of origin, ethnicity, religion, culture, and/or beliefs.

Economically as well we're more diverse than ever, with 20 percent of our students eligible for Pell Grants. I know of no other university that could match USC's record of diversity while maintaining combined math and verbal SAT scores that average 1375.

I'm sure that diversity is a goal that most of our nation's colleges and universities embrace. I applaud those efforts, and I applaud the hard work that so many of you right here in this room have done, and will continue to do, to ensure that our campuses reflect genuine and vibrant pluralism.

### **The Tasks Ahead**

I should like to close by saying that although many aspects of higher education will change in the future, many other aspects will remain timeless and enduring. As I noted earlier, at USC our central mission is the development of human beings and society as a whole through the cultivation and enrichment of the human mind and spirit. I would hope that central mission will remain unchanged at USC for centuries to come.

Leading research universities of the 21st century, including USC, must continue to be havens for original thinking and the free and open exchange of knowledge and ideas. We must continue to encourage breadth with depth in the undergraduate curriculum. We must continue to teach our students the value of being good citizens in their local communities. And we must encourage our students to be global citizens, treating all people with civility and respect, including those whose ideas we find repugnant.

All of us here today have heard the clarion call to improve our educational system, to help prepare young people for new and daunting demands, and to ensure equity in education. We have before us a long list of challenging tasks. Let us face these challenges with a sense of exhilaration, knowing that we live in one of the greatest eras of human history. And let us celebrate the fact that ours is an era which is being shaped to a significant degree by colleges and universities – those hardy and noble institutions to which most of us here have gladly dedicated our lives.

