Educating Students for the World of the Future: A Case Statement
Quality Enhancement Plan for Duke University
June 7, 2007—draft #5

The Topic (Not the Title). The topic is on its face a puzzling one: What else *could* we be educating our students for if not the "the future"? That said, perhaps it is not a given that we are, in fact, preparing our students for the world of the future—maybe we are doing a better job, in some ways, at preparing them for the world of the present (or even the past). That is to say, perhaps we are not intentionally and holistically considering the extent to which we are grounding our entire educational experience—curricular and co-curricular alike—in the enhancement of the skills and qualities necessary for our students' productive lives over the course of their life span.

The topic is also a bold one: the "world of the future" is uncertain, and we do not have a crystal ball. Yet certain trends apparent in the here and now will certainly accelerate, and thus we do have a blueprint of sorts for planning purposes. Re-accreditation—with its attendant requirement of a self-study focused on student learning and deriving from ongoing planning and data collection—provides the opportunity for us to ask ourselves these pointed questions: how well are we preparing our students for their future as citizens, community members, and workers in a more intensely global environment, and what plans must we set in place to improve the educational experiences we now provide?

Charting the Territory. In a recent *Chronicle of Higher Education* essay, Lee Bollinger, the president of Columbia, touched on several aspects of the obligation that universities have toward their students:

> Universities understand that to remain competitive, their most important obligation is to determine — and then deliver — what future graduates will need to know about their world and how to gain that knowledge. While the last century witnessed a new demand for specialized research, prizing the expert's vertical mastery of a single field, the emerging global reality calls for new specialists who can synthesize a diversity of fields and draw quick connections among them. In reordering our sense of the earth's interdependence, that global reality also cries out for a new age of exploration, with students displaying the daring, curiosity, and mettle to discover and learn entirely new areas of knowledge.
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> The experience of arriving on a campus to live and study with classmates from a diverse range of backgrounds is essential to students' training for this new world, nurturing in them an instinct to reach out instead of clinging to the comforts of what seems natural or familiar. We know that connecting with people very — or even slightly — different from ourselves stimulates the imagination; and when we learn to see the world through a multiplicity of eyes, we only make ourselves more nimble in mastering — and integrating — the diverse fields of knowledge awaiting us ("Why Diversity Matters", CHE, The Chronicle Review, June 1, 2007, p. B20) .

Bollinger describes several of the skills, habits of thinking, qualities, and experiences that are critical for navigating the world now and into the future: the ability to synthesize, to discover, to go out of one's comfort zone.

We at Duke need, before all else, to examine and define these qualities and skills for ourselves. Once we define them, justify them, and spell them out, we will have created a kind of blueprint for integrating and improving various aspects of our students' curricular and co-curricular lives. We will more compellingly articulate what we want to happen to students during their time at Duke ("learning outcomes"). We will be better able to differentiate between programs essential for our students' success and mere "bells and whistles." We will be able to develop assessment mechanisms based on Duke's stated educational aims, reviewing our current programs on those bases as well as developing new programs. Such a blueprint will prove useful across campus, on the macro and micro levels.

People, Places, and Things. Three interlocking aspects of "the world of the future" are salient for our discussions now at Duke: in shorthand they are "people, places, and things." One of our goals should be the development of our students' propensity to encounter people, contexts, and ideas different from their own—that is, to enlarge their sense of self so that they become "bigger," as it were, from having attended Duke.

The people. Working and living collaboratively with diverse peoples will undoubtedly continue to be not only a hallmark of our students' lives after graduation but a necessity if we are to co-exist on this shrinking planet.

"Diversity" has been a buzzword for a long time in higher education and the work force as American institutions have sought to be more inclusive for reasons of both equity and excellence. But what does "diversity" really mean for and at Duke in this period, and what will it mean as our students graduate and move on? The term, it seems to us, is more and more subtly nuanced and broadly defined.

Duke University is more diverse in *numbers* of different kinds of people than ever before in our history—the same might be said of the American workforce and, to some degree, communities. But what would we say at Duke about meaningful opportunities for connections between and among diverse groups? How would "meaningful" be best described? As definitions of groups have become more complicated (both looser and tighter), and boundaries between people more fluid, have we reached an optimal level of boundary crossing and community building? Navigating the often slippery and tricky boundaries between identities within the self and between the self and others is an art that we should be helping students to learn while they are at Duke.

The places. In the future, students will live and work in a different place both literally and figuratively. On the literal level, many of them will enter careers that take them to far-flung sites around the globe— sometimes several different locations over the course of a lifetime. On the figurative level, the American workforce has become more diversified as boundaries between countries and their workers have become more fluid;

whether in the American workplace or through technology, our students will increasingly interact physically and virtually with workers from other countries.

At the same time, only one of two workers in this country has been employed at his or her present company for more than five years[1], and trends suggest that our students will switch careers in the future more often than their parents and certainly their grandparents did—another kind of place change.

This movement from place to place requires the ability to navigate successfully the different environments in which one finds oneself. This successful navigation requires attention to our potential negative as well as positive effects on the communities we enter when we move across boundaries with our different values, positions, economic status, and backgrounds. We do not wish for our students or our graduates to travel too "lightly" from place to place without meaningful engagement. Thus, we need to ensure that we are preparing our students optimally for embracing mobility as both a necessity and a good.

The things. By this term we refer to *information and knowledge*. The world of modern information is one in which the sheer amount of data to which we have access is ever growing; with so much information competing for our attention, how do we focus on what is important and determine what is relevant and true? The challenge for our students today and into the future is how to appropriately access information, sort it, assess it, put it together in meaningful ways, and work with others to use it.

Information is necessary but not sufficient for knowledge. Knowledge entails analysis, understanding, and meaning, and the discovery and dissemination of knowledge by faculty and students alike is what a research university like Duke is all about. Since the *content* of future knowledge itself is unknown, it is imperative that we facilitate "learning how to learn."

Increasingly, knowledge is gained by interdisciplinary study and teaching, whether through collaboration between disciplines, expansion of disciplinary self-definition, or emerging interdisciplinary programs. Experiential education, a hands-on approach to knowledge, is also of increasing importance outside the laboratory setting; in essence, education writ large is looked upon more and more as a laboratory, with connections drawn more overtly between the classroom and the rest of a student's world (in the smallest and largest senses). Research; service learning; internships; study abroad; DukeEngage—these and more constitute experiential learning.

All three aspects of "the world of the future"—people, places, and things—are concerned in important ways with *boundary crossings*. In some ways, therefore, the topic would build upon, and expand, the 1988 self-study topic: "Crossing Boundaries" (subtitled "Interdisciplinary Planning for the Nineties).

[1] See glumbert.com/media/shift for an interesting presentation on the future entitled "Shift Happens."

Potential Foci for the QEP:

What changes do we need for the curriculum/a? Revisiting the meaning and content of "the liberal arts."The term "liberal arts" goes back to classical antiquity and refers to the seven "arts and sciences."[2] (A more-or-less synonymous term in the Renaissance referred entirely to the wisdom and achievements of the past.) What do we mean *toda*y by this term and how does the definition play into the ways in which we provide educational opportunities for all our undergraduate students? Aside from subject matters, such modes of inquiry and pedagogy as team work and experiential learning did not play an integral role in the liberal arts in the past. What are the defining characteristics of a "liberal" education in the 21st century? What is the role for the past—and for books themselves—in this education? What is the role for direct experience (in its many forms)? What aspects of education are timeless and what dated? Where should our emphases lie?

We would also ask about the connection between "the liberal arts" and pre-professionalism." One question is, How can "the liberal arts" at Duke play more of a role in the education of our engineering students, thus helping to make Pratt a unique engineering school? How can "professional" coursework and other experiences—whether in Pratt or the graduate and professional schools—enrich and even transform "the liberal arts"?

What changes do we need for the curriculum/a? Rethinking the majors. Curriculum 2000 concentrated on changes in general education within Trinity College. The time is ripe for a hard look at all our undergraduate majors in light of the renewed emphasis on "preparing our students for the world of the future." This review would include the numbers and kinds of courses needed for the major, and the frequency of the evaluation cycle. It would examine interdisciplinary and experiential education, potentially reducing the boundaries between curricular and co-curricular activities and thereby making the Duke education more of a piece.

If we can define what our students need in order to be prepared for their futures as citizens and workers (and family members), how would we go about developing these qualities and abilities in the classroom? It is important for us to articulate these desired outcomes in such a way that each department can relate to the overall rubric and adapt itself accordingly. As one example, we might wish to help faculty become more knowledgeable about and comfortable with incorporating collaboration in their syllabi and pedagogy.

What changes do we need for the curriculum/a? Revisiting Curriculum 2000 including rethinking whether the Trinity College modes of inquiry actually help to facilitate the development of the habits and values we think necessary for thriving in the world of the future. The CCI already questioned how the cross-cultural inquiry requirement plays out in reality; the same could be said about the ethical inquiry requirement, and how we inculcate scientific and technological literacy.

[2] The arts: grammar, rhetoric, logic; the mathematical sciences: arithmetic, geometry, music, astronomy.

These possible foci for Duke University's self-study largely concentrate on the undergraduate academic experience. In some ways, therefore, the topic would build upon one prong of the 1998 self-study topic "Balancing the Roles of the Research University, which dealt with the meaning and goals of a liberal education, including learning through research.