INTRODUCTION

It is time for plain talk about the potential for information and communications technology (ICT) and online learning to enable systemic change in higher education. This article explores the following perspectives:

- **Raising Sights and Broadening Aspirations**: Our aspirations for leveraging both technology and online learning have been too low. Mostly we have aspired to do what we already do, only better and more efficiently. We should embrace the potential for leveraging technology and e-learning to enable systemic change.

- **What Systemic Problems Need to Be Solved?**: Leaders in American higher education have the tendency to believe that we have no systemic problems, only resource shortfalls. In reality, the recent cutbacks in state funding for higher education, increases in tuition, and rollbacks in services and offerings have dramatized several systemic problems: (1) the cost of learning is too high; (2) current approaches to e-learning have merely digitized existing practice; (3) flexible, learner-centric experiences are needed; (4) current models of faculty employment and professional development are unsustainable; (5) we have failed to get the value out of our investment in technology; and (6) growth opportunities exist if we can address these systemic problems.

- **How Do We Enable Systemic Change?**: Innovation in American higher education begins with several faulty assumptions. First, we assume there are no real systemic problems to be solved, that our system is the best in the world, just under-funded. Second, we focus on individual innovation, encouraging a thousand points of light. Third, we assume that good innovations will be replicated, in spite of evidence to the contrary. All of these assumptions are flawed. Many of our problems can only be overcome by systemic, enterprise-wide change. Enterprise-wide, systemic, expeditionary change requires different leadership, metaphors, and approaches.

- **Evolving an Electricity Grid for Learning and Professional Development**: In a number of state systems of public higher education, we have introduced the metaphor of an electricity grid to describe how learning and professional development resources and experiences should flow, engaging learners, tenure-track and adjunct faculty, instructional development specialists, knowledge management tools, practitioners, mentors, and other participants in fresh ways. The electricity grid is fluid, builds surplus into the system, uses team approaches to content and course development, and spans existing boundaries—physical, jurisdictional, and disciplinary. Using this model, the marginal cost of e-learning can be fully covered by tuition in public institutions.

These perspectives can be applied by leaders in most settings in higher education.

RAISING SIGHTS AND BROADENING ASPIRATIONS

When it comes to online learning, we have set our sights too low, by far. We have largely digitized our existing approaches to learning—paving the cow paths, as it were. Most practices have focused on existing learning relationships and experiences, rather than on new experiences and value propositions that could be created for students, faculty, staff, and other stakeholders. Many institutions have failed to see e-learning infrastructures as part of emerging institutional and system-wide infrastructures that fuse academic and administrative processes, experiences, and value propositions. And many institu-
tions have so far failed to create enterprise-wide strategies for leveraging these resources in new ways. Moreover, we have nurtured individual innovations with a lower case “i” rather than the systemic, enterprise-wide innovations that can truly leverage the potential value from enterprise resources, relationships, and practices. We must raise our sights and broaden our aspirations.

Enterprise-wide innovation is hard work. But it is the new gold standard for Knowledge Age enterprises. It is where the potential lies to truly build value.

This challenge is especially acute for public systems of institutions. What does it mean to be part of a system? In the Knowledge Age, can we finally make the whole greater than the sum of the parts? What does systemic change mean for a system of public institutions?

Finding Models to Emulate and Drive to the Enterprise Level

As recently as several years ago, there was a dearth of proven innovations that could be used to drive enterprise-wide innovation in higher education. This is no longer true. Last year’s “back to school” issue of the EDUCAUSE Review offers dramatic examples. “A Revolution in Knowledge Sharing” describes emerging innovations in knowledge sharing and digital asset management (Norris, Mason, Robson, Lefrere, & Collier, 2003). Twigg highlighted the Pew Foundation-funded work of the Center for Academic Transformation, which utilizes a wide variety of tools to reinvent large lecture sections and leverages those techniques in different settings, reducing costs and enhancing performance (Twigg, 2003). Barone describes the evolving work of the National Learning Infrastructure Initiative (NLII) to support learning innovation at the individual, departmental, institutional, and consortium levels (Barone, 2003). She cited a number of noteworthy enterprise-level innovations: the Modular Organizer and Teaching System (MOATS) at the University of Arizona, which provides guidance in developing learner-centered practices across the institution; the Student Learning Objectives (SOL) System at the University of Washington, defining learning objectives for the institution’s 6,000 undergraduate courses; and the Multimedia Educational Resource for Learning and Online Teaching (MERLOT) to advance the sharing of knowledge objects for learning.

Moreover, Guskin and Marcy’s (2003) article in Change showcases the work of the Project for the Future of Higher Education. They describe a set of practical principles for establishing a learning-focused culture, a sustainable faculty professional experience, and reduced costs per student, all driven by changes in the undergraduates experience, as enabled by leveraging IT-based innovation.

In spite of such models, most institutional leadership remains frozen in existing practices, visions, and metaphors. Breaking the ice requires something new.

Leveraging Technology and E-Learning to Solve Systemic Problems

Higher education is not alone in its need for systemic solutions. Leaders in corporations, government agencies, the military, professional societies, associations, and other non-profits are lamenting their first generations of e-learning platforms and practices. They complain that e-learning providers think that an e-learning strategy consists of identifying the learning management system platform. They are looking for solutions in new providers, innovative companies, fundamentally different perspectives, and systemic solutions that address multiple problems.

WHAT PROBLEMS DO WE NEED TO SOLVE?

Let us begin by defining the problems, challenges, and opportunities we should be seeking to address. We will begin with learning but will broaden the focus to include other issues.

Early stage distributed learning is an extension of current practice. Most institutions develop their distance learning offerings as extensions of their existing platforms for degree/course/learning. They do not change the basic model for preparing course materials or leverage on-campus faculty with off-campus faculty resources. Using their home campus as a base, many broadcast or project e-