

Highlights of the EDUCAUSE 2007 Program Plan

*prepared for the EDUCAUSE Board of Directors
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The mission of EDUCAUSE is broad in scope, as are the programs that have been undertaken in support of the membership:

EDUCAUSE advances higher education by promoting the intelligent use of information technology.

This Program Plan is intended to serve a variety of purposes important to EDUCAUSE:

- to communicate to the membership the scope and range of activities being undertaken by the association;
- to create a composite set of objectives that will be used to evaluate segments of the program, as well as to provide a basis for performance appraisal for the staff;
- to provide an integrated view of the budget and the programmatic initiatives of EDUCAUSE.

Each year, EDUCAUSE prepares such a plan and posts it on the Web so that the entire membership can see the scope of activities and priorities of this association. A more in-depth internal version of this plan for management purposes includes more detailed budgets, performance measures, etc.

Proposals for major initiatives for 2007 were presented in draft form to the Board of Directors of EDUCAUSE in August 2006, where they, along with a preliminary budget, were reviewed by the Board. Based upon that feedback, amendments and modifications were made, and a summary of significant priorities for 2007, with budget detail, was presented and approved at the Board meeting held in association with the annual conference. The full plan, outlining all association efforts for fiscal year (calendar year) 2007, is posted on the Web in December after approval by the EDUCAUSE Board of Directors.

Functional Areas

In this program plan, the operational philosophy and the financial structure of the association are defined in the context of six distinct functions, into which all activities of EDUCAUSE have been aggregated:

LEADING EDGE INITIATIVES

Leading Edge Initiatives include the EDUCAUSE Learning Initiative (ELI); the

Net@EDU program; the EDUCAUSE Center for Applied Research (ECAR); and the efforts that EDUCAUSE undertakes in support of policy, particularly its relationship with the Coalition for Networked Information (CNI) and coordination and cooperation with other professional societies.

MEMBER PROGRAMS AND SERVICES

This section covers a number of specialized services and programs to help members of EDUCAUSE derive the best benefit from their relationship with the association and better accomplish their jobs within their home institutions. This area includes a broad-based technology transfer effort to take the lessons drawn from the EDUCAUSE leading-edge initiatives and share them with the entire membership. It includes a variety of information resources as well as programs to encourage communication with and among members, such as Member Committees and Constituent Groups, and programs to enable effective, productive relationships with corporations.

ANNUAL CONFERENCE

The annual conference is the signature event of the association, attracting nearly 7,000 attendees annually. This event is critical to the diffusion of new developments, professional development efforts, and exchange of information on best practices. It provides an opportunity to recognize outstanding accomplishments in the field and is a forum for debating and developing new ideas.

PROFESSIONAL DEVELOPMENT

Professional development is a critical and high-profile focus of EDUCAUSE. The EDUCAUSE professional development program seeks to inform higher education leaders about key issues related to the management and use of information technology, and to provide members with opportunities for personal and professional growth. Professional development opportunities occur through a combination of in-person and online events, online communities formed through formal constituent groups and discussion lists, and opportunities for individual exploration of the myriad resources offered through the EDUCAUSE Web pages. Programs offered under the Professional Development umbrella include the annual, regional, and topical conferences; management and leadership development programs; and seminars, summits, and other programs offered either independently or through ad hoc partnerships and formal affiliations with related organizations.

COMMUNICATIONS AND PUBLISHING

The publishing program includes the EDUCAUSE periodicals *EDUCAUSE Review* and *EDUCAUSE Quarterly*, the electronic digests *Edupage* and *Washington Update*, and books, monographs, and other publications that support the broad mandate of the association. The communications program entails efforts to present positively both the association and the higher education information technology community as a whole, as well as to promote the importance of information technology and information resources to higher education. It includes communications among staff, between staff and members (for example, *EDUCAUSE Online*), and between the association and the

many communities (institutional, corporate, political, association, and the press) who share EDUCAUSE interests.

ADMINISTRATION AND FINANCE

Administration, a necessary function in any organization, involves the management of human resources and the physical office environment to support association activities, and prudent stewardship of association financial resources. Also included are the technology and records-management infrastructures that enable the association to conduct its business and maintain financial records of its relations with members and potential members, which can be used in a variety of programmatic ways.

Program Highlights for 2007: New Initiatives

The activities described in this document encompass a wide range of strategic and functional initiatives. Four particular areas will be major priorities in the coming year.

Background to new program plan initiatives

As IT professionals, we believe that information technology is critical to higher education. Technology underpins a vibrant and growing research enterprise. It has enabled teaching and learning to transcend space and time, making learning more flexible—and successful. Students say the Internet is like oxygen to them: they can't live without it. Likewise, the administrative business of higher education could not be done without IT.

Not only does IT make a difference, but so do IT professionals. IT leaders no longer need to worry about how to get on the “radar screen” of presidents and provosts. CIOs have taken their place on the senior leadership team because of the growing realization that IT is central to everything the institution does.

Still, IT looks different to a president, provost, trustee, faculty member, staff member, or student than it does to an IT professional. To some in the campus community, IT is essential to institutional transformation. To others, IT is a financial black hole that brings with it a host of other problems—security, piracy, and plagiarism, for example. These others are much less likely to see the transformational potential of IT and more likely to see its disruption of the status quo.

Perhaps these differences are due to the focus of the various communities. The focus in IT organizations often revolves around things like enterprise systems, single sign-on, and replacement cycles. The impact of IT on mission-critical challenges—such as access, affordability, and competitiveness—is rarely part of these conversations. For IT to really matter in higher education, the IT applications deployed need to have direct relevance to the concerns of campus academic leaders.

At the same time, economic forces, rapid advances in technology, globalization, and

private-sector competition are calling into question some of the basic operating assumptions of higher education. Higher education needs to find a way for members of the campus community to help and to support each other as we face a competitive and rapidly changing environment. This calls for a new pattern of thinking.

As an executive team, we have begun to ask “What’s next?” for EDUCAUSE as a professional organization and for the institutions we represent. We have borrowed a powerful metaphor from the National Science Foundation (NSF), which reinvented its agenda by asking not about scientific priorities but about global priorities with scientific implications. The NSF reframed its national dialogue and agenda by looking at what it described as grand challenges.

We must now reevaluate our roles and contributions in light of the grand challenges facing higher education. In this spirit, we ask:

- What challenges and opportunities face higher education?
- How can technology be used to capitalize on opportunities or to mitigate risks in addressing these challenges?
- What can and should EDUCAUSE do, either by itself or in collaboration with other organizations, to address these challenges?

To achieve transformational change in higher education, it is not enough for IT leaders to focus on well-planned and well-maintained infrastructure. All of us in higher education IT need to be partners in addressing campus issues, not just campus IT issues.

In an effort to move the discussion into reality, over the past year EDUCAUSE has held a variety of focus sessions and open discussions with members at regional and national conference locations. We framed the notion of this “Grand Challenges” initiative and sought the feedback of our membership. We held an invitational workshop involving key thought leaders, leaders from colleges and universities of all types, and industry. After several months, we began to see patterns and formulate key themes. After much deliberation, we identified a number of projects in four major areas:

- Improving student success
- Lowering the cost of doing business through IT
- Achieving sustainability
- Improving innovation and the competitive edge

Themes running through each area are:

- *Professional development*: No matter what the project, we should incorporate findings and related issues into various EDUCAUSE professional development outlets (conference presentations, workshops, magazine articles), as well as through channels of other higher education organizations such as NACUBO and ACE.
- *A culture of evidence*: Projects should be empirically based, continuing the culture of evidence that EDUCAUSE has tried to foster over the past several years.
- *Analytics*: We should also take advantage of the new insights that massive amounts of

information are bringing us. Analytics, which marries IT and statistics, has great promise as a predictive and problem-solving tool. Rather than just talking about analytics, we should do it.

- *International/global focus:* We must not limit our approach to any of these issues to a U.S. perspective, but be cognizant of the international and global implications of all initiatives.

We were also advised to “clean up our own house first,” applying these principles within IT before extolling the virtues of new IT solutions to other parts of the academy.

EDUCAUSE plans to begin its Grand Challenge efforts by focusing on the following projects in 2007.

2007 initiatives to address the grand challenges

Renewing and rethinking campus IT services

A great number of campus-based information technology services have evolved by accident—artifacts of the political and economic decentralization of colleges and universities. History has left a spotty legacy, and the elephant in higher education’s room is an expensive patchwork of IT services that too often incorporates redundant investments (witness multiple e-mail services, portals, Web sites), deficient services (see the ECAR research study *Good Enough: IT Investment and Business Process Performance*), heightened risk (IT security), missed opportunities (campus cyberinfrastructure), and occasional outright service failures. The net effect of an “unguided service delivery architecture” is the perception of higher average costs and of lower service levels for IT in higher education.

The challenge is to articulate and ideally to demonstrate enhanced service delivery architectures that incorporate enhanced IT governance, management, service quality, and economics. This is emphatically not merely the re-centralization of IT; it needs to be a serious effort at the institutional optimization of IT. Included in this work would be an analysis of scale economics in IT. Where does centralization make sense (infrastructure, messaging, IT security, middleware)? How do standards get adopted? What are ways to think about aggregation points for service (for example, what is the right level of aggregation for mail services, the central IT organization, or Google)? How should institutions govern and finance the emerging cyberinfrastructure? How should they invest in “the commons” while continuing to leverage the innovative propensities of local academic units? Significant EDUCAUSE leadership in this area signals that the IT community is serious about managing costs of IT and the quality of services and exploring the establishment of a functional shared services enterprise.

This ambitious program/project features three essential deliverables:

- A conceptual framework that articulates a new service-delivery paradigm/architecture and that details the governance, service, management, and economics

of the framework.

- A research project that assesses the state of the practice regarding key elements of the patchwork of IT services with an eye to enhancing our understanding of (1) the gap between the “as is” state and the desired state; (2) effective practices now in use; and (3) policies, practices, incentives, etc. that may impede higher education’s adoption of new service delivery approaches.
- A business plan to undergird and provide feasibility for a significant project to demonstrate the viability of a new service delivery approach.

Determining what IT costs

Currently many in higher education IT leadership positions are in a defensive position because they are perceived as being accountable for IT at their institutions (that is, they are CIOs) and yet in fact they rarely control or even inventory IT programs and expenses beyond the central IT organization and its budget. It is generally understood that at some doctoral institutions, local IT expenses exceed those of the central IT organization by two-to-one or more. Ascertaining the total cost of IT makes it possible to compare those costs, link costs to service outcomes (assess value), and situate efforts to realign IT governance, investments, etc. on a factual economic basis. This challenge would leverage work already begun in this arena. Notably, Indiana University has developed a robust activity-based costing infrastructure, and Stanford and MIT have done serious work in devising methods of ascertaining total IT costs.

EDUCAUSE can build on and leverage this interest and these efforts. Stanford, MIT, Carnegie Mellon, and the University of Minnesota have expressed keen interest in furthering the work begun by MIT and Stanford. EDUCAUSE would engage in a literature search, review all significant efforts under way in this arena, and produce a summary for possible publication as *IT Costing in Higher Education: State of the Practice*, also reviewing and summarizing the literature and practice outside of higher education. We would develop a mental model/framework for costing, and then elaborate the framework and develop it fully. We would identify initial areas of costing (e-mail, help desk, wide-area networking, storage) for pilot testing; conduct field research and hone costing methods as needed; and finally publish a framework and results from the data collections. Ideally, we would also develop a sustainability plan for extending and perpetuating this work (possibly as adjunct to the EDUCAUSE Core Data Service).

Improving student retention and graduation through analytics

Analytics is an emerging discipline that marries large data sets, statistical techniques, and predictive modeling. Whether the catalyst for adopting analytics is a call for accountability from outside higher education or the need for scorecards or decision-making models within, analytics is in higher education’s future. IT and institutional leaders need to begin to understand analytics as well as the changes it may require in data standards, tools, processes, organizations, and institutional culture.

As an initial step in improving the awareness and accessibility of information about analytics, EDUCAUSE will explore the state of analytics in higher education and develop educational resources. As a starting point, we will synthesize and report on the “state of analytics in higher education” and integrate analytics into EDUCAUSE programming (conferences, publications) to increase community awareness.

Beyond explaining analytics to the community, we will explore its application to one of higher education’s most challenging problems: student success. Student success can be defined in many ways—student retention and graduation are among the most common. Using these measures, American higher education faces significant challenges. Approximately 40 percent of students in four-year institutions graduate in four years; only 60 percent graduate by the end of six years. Graduation rates are uneven when considering ethnic groups in particular. The six-year graduation rate for Asian students is 65 percent, followed by white students at 60 percent. Latino student graduation rates are 47 percent, followed by African-Americans at 40 percent and Native Americans at 39 percent.

Most research and intervention programs focused on student retention and graduation have been hypothesis driven. Analytics and data-based decision making go beyond descriptive statistics; they use tools such as predictive modeling or optimization routines. Already used to create a competitive edge for major corporations, tools such as multi-attribute utility theory or failure analysis promise new insights and perhaps new breakthroughs in student success. Analytics represents an application of IT that would bring great value to higher education in multiple areas, not just student success.

The goal of this EDUCAUSE initiative is to identify how information from sources such as course management systems and student information systems can identify at-risk students through analytics and predictive modeling, alert key stakeholders, and suggest interventions. Academic success dashboards would likely emerge from this work as well, such as performance metrics that enable institutional leaders to monitor academic risk and success at the level of the department, division, or institution.

The project involves three phases:

- Explore applicable work, identifying useful retention and graduation studies in higher education as well as approaches from other sectors that might apply to retention and graduation.
- Define a pilot project(s) and enlist collaborators (corporate and institutional).
- Synthesize the results and disseminate findings. If successful, modify the pilot and expand participation.

Managing cyberinfrastructure strategically

Cyberinfrastructure (CI) presents a great challenge to campus IT leaders. They face unprecedented demands for the support of CI components that are increasingly difficult to support at the level of departments and laboratories. Ongoing thorny issues

of system administration, security, business continuity, upgrade and replacement cycles, access, collaboration, and replacement funding call for a more strategic, institutional strategy. This growing problem is one of the largest, most complex, and most expensive areas of concern for IT in higher education today.

EDUCAUSE will build on recent activities such as the ECAR study on IT engagement in research and the formation of the new CCI working group in Net@EDU to address the grand challenge issues of CI in three initial ways. First, EDUCAUSE will provide immediate and practical advice for campus IT leaders who face the new challenges of CI. Following the successful model of the EDUCAUSE/Internet2 Security Task Force, we will collect examples, perform studies, commission papers, convene workshops, and benchmark other efforts to build a corpus of effective strategies, “how to” and “the case for” papers, and other practical advice about dealing with pressing issues of CI on campus. At the request of NSF, EDUCAUSE will serve as the repository for strategic plans and other information related to the NSF CI initiative. We will share our findings widely with our community through all appropriate channels, filling an important void.

Second, we will explore critical issues of governance that make CI so difficult to address as a campus issue. Much of CI is funded and governed by separate departments and labs, yet it increasingly requires central support and planning. As CI expands and proliferates, “business as usual” will no longer suffice. What new business models might work better? What relationship does the new CI have with traditional IT services? How can CI serve the arts and humanities? How can smaller institutions participate? How can we better collaborate across institutions with respect to CI? As a first step, EDUCAUSE is exploring sponsoring an Executive Summit to work toward solutions to IT governance issues that complicate the effective support of IT (and CI) on campus.

Third, EDUCAUSE will attempt to develop an effective “Federal Strategy” to influence policy issues of the funding agencies for CI. Present government funding policies can distort campus business and planning models for CI. The funding agencies, however, have expressed the need for more effective coordination and communication with institutional leaders (such as the CIO or VP for research) in the development and support of CI. EDUCAUSE will partner with appropriate organizations and agencies to identify and recommend policy changes that could help all concerned better meet their objectives.

IT workforce development

One major sustainability issue that is closely associated with both IT costs and the delivery of institutional services is the issue of the IT workforce. Most analyses, including one performed by ECAR in 2004, suggest we will see an acceleration in the retirement of baby boomers across all levels of higher education and IT. This tidal wave of retirements is exacerbated for higher education by a number of factors:

- The output of US trained computer scientists has declined sharply since the mid 1990s.
- The IT recession of the late 1990s is over, and IT employment in 2006 equals the peak of employment during the dot-com boom. During that boom, IT recruitment and retention was a top-of-mind concern among higher education IT leaders.
- To date, higher education has shown a reticence to engage in alternative sourcing arrangements (outsourcing, shared services), which have been and are likely to be a major strategy that private corporations will use to cope with the same workforce issues.

These factors conspire to create a picture of a labor market that will become very tight. Combined with declining enrollments, reduced state and federal spending, etc., these factors suggest a possible gathering storm around the IT workforce in general and IT leadership in particular.

To address these needs, EDUCAUSE can take advantage of its already strong position in IT management and leadership development. The EDUCAUSE Institutes Management and Leadership programs and the Frye Institute are well-established and widely known residential programs to prepare future leaders, and all have strong reputations among members. The executive workshops at the Seminars on Academic Computing provide leadership development experiences for even the most seasoned professionals. In 2005, a new leadership program for IT staff working in educational technologies was added, and a curriculum review of the leadership and management offerings in 2005 has strengthened all the programs.

EDUCAUSE could build on an already strong base by exploring a range of activities to address the development of the IT workforce in higher education:

- Creating programs for accelerated leadership development (fast track to IT management or leadership)
- Designing and testing new programs for recruiting students into higher education's IT workforce
- Creating specialized IT worker recruitment tools for higher education
- Developing strategic relationships with onshore and offshore IT service suppliers and exploring broker-hosted services

A first step in pursuing these projects would be to hold a focus group with members of the professional development committee to discuss top needs for IT workforce development and to advise on best approaches for EDUCAUSE..