

# Duke Center for Instructional Technology Strategic Plan for 2004 - 2007

The Center for Instructional Technology supports the academic mission of Duke University by helping faculty find innovative ways to use technology to achieve their educational goals. Drawing on expertise in both technology and pedagogy, CIT staff assist faculty with projects, examine the impact of technology on teaching and learning, and share information about effective practices across the entire university.

We believe instructional technology can continue to contribute to Duke's academic excellence by: increasing student engagement with learning materials, supporting active learning strategies, improving the match between teaching and learning styles, fostering communication and collaboration, streamlining course administration and building student skills for future learning and work.

To realize this potential, we will focus our efforts over the next three years in five key areas:

- **Generating ideas** about how technology can support teaching and improve learning.
- **Encouraging innovation** in instructional technology through a mixture of incentives and project support.
- **Connecting technology plans and services at Duke** through participation in a variety of committees, groups and projects.
- **Building partnerships beyond Duke** to leverage resources and exchange ideas.
- **Learning what works best** in instructional technology through diverse research and evaluation activities.

## Instructional Technology at Duke

Over the past five years, the university has expanded its planning and support for technology. In Spring 2000, a university planning group on instructional technology made a number of recommendations that were incorporated into the university's 2001 strategic plan, *Building on Excellence*.<sup>1</sup> One of the plan's key goals was "Intensify the use of Information Technology."<sup>2</sup> The Duke Libraries strategic plan, developed during the same time period, also called for expanded use of technology in its services and in the physical spaces of the new library building and renovated Perkins Library building.<sup>3</sup>

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<sup>1</sup> *Instructional Technology Task Force Report*, June 14, 2000.

<sup>2</sup> See Goal 6 of *Building on Excellence*, <http://www.planning.duke.edu/princ.htm#goal6>.

<sup>3</sup> See the Library's plan, *Critical Choices*, <http://www.lib.duke.edu/plan/>.

In working to accomplish the goals laid out in these plans, CIT and its partners have<sup>4</sup>:

- Introduced the Blackboard course management software, which was used by only 18 courses four years ago and now is used by more than 1,000.
- Introduced streaming media tools that have been widely adopted by faculty.
- Included library research guides and e-reserves in Blackboard courses sites.
- Ensured that the public computing clusters have the software students needed to complete new types of course assignments requiring specialized software and hardware.
- Helped support distance learning projects in the School of the Environment, School of Nursing and School of Medicine, in addition to assisting faculty across all schools with online education.
- Assisted more than 100 faculty in completing instructional technology projects.
- Sponsored events on instructional technology for staff and faculty from all Duke schools.
- Helped faculty acquire external funding for technology projects.
- Put on the annual Instructional Technology Showcase, which began four years ago as a one-hour reception with a handful of faculty but grew into an event with 50 Duke presenters and 240 people attending from Duke and surrounding schools.

During this same time period, Duke's technology environment changed. The Office of Information Technology hired a new chief information officer, Tracy Futhey, and a created an Office of Web Service. Several organizations have been working together to implement a Web content management system. Schools at Duke have added new technology capabilities to their classrooms. The Duke University libraries—Perkins Library and its branches, and the libraries serving Business, Divinity, Law and Medicine—are implementing Ex Libris, a new suite of library management software to enhance access to digital and non-digital research resources.

Adoption of instructional technology has varied. Some faculty have experimented with new uses of technology. Yet, other faculty are unsure about what they could do with technology, how to get started or where to get help. The faculty who began using instructional technology by posting a syllabus on the Web are now interested in using more sophisticated and interactive tools. Departments are now seeking ways to expand and institutionalize instructional technology projects that began as small experiments. A growing number of schools and programs are interested in combining online technologies with the specialized expertise of their faculties to offer new types of educational programs.

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<sup>4</sup> For details on CIT activities, see the CIT's annual reports, available on the CIT's reports website: <http://cit.duke.edu/about/reports.html>.

## Generating ideas

CIT helps faculty understand the potential value of using technology in their work, supports them in planning for it and provides opportunities for Duke faculty who have used instructional technology to share what they have learned.

### *General Strategies*

- Publicize information about faculty at Duke who are using technology in teaching.
- Offer training, speakers, demonstrations and Web resources that highlight uses of technology in teaching.
- Provide instructional technology information and project exemplars tailored to specific interests of faculty.
- Conduct graduate student training in uses of technology for teaching.
- Survey faculty on instructional technology interests.

### *Specific Projects for 2004-05*

1. Strengthen CIT's departmental liaison program in conjunction with library staff. Deliver discipline-specific information to faculty through this program, and develop summaries of faculty interests.
2. Host Instructional Technology Showcase in Spring 2004 and Spring 2005.
3. Revise CIT and Blackboard support Web sites to reflect discipline-focused information that responds directly to questions faculty have raised.
4. Use CIT's Web site to illustrate new types of information technology (e.g., dynamic events listings, RSS feeds, content management tools).
5. Revamp CIT's use of its mailing list to provide more timely information about CIT activities, projects at other schools, IT trends and pilot project opportunities.
6. Expand use of Scout Portal Toolkit as a repository for project examples.
7. Offer instructional technology information sessions to departments.
8. Work with Duke's Office of News and Communication to develop stories about Duke faculty and departments' use of instructional technology. Publicize those stories via the Duke Dialogue and Duke University home page. Provide ongoing access to these stories via the CIT's "Profiles" Web site.
9. Offer graduate student training sessions in current uses of instructional technology.
10. Review CIT's training for departmental IT staff and decide whether to continue this activity or develop other avenues for staff to receive training.

### *Assessment*

- A variety of events are held, which are well-attended and highly rated.
- CIT Web site usage patterns and focus group evaluations demonstrate good use of information.
- Spring Showcase has faculty presenters from different parts of the university and is attended by faculty, staff and students from across the university and outside the university.
- Increasing number of faculty use CIT services.
- CIT maintains active connections with all departments through consulting with faculty, planning visits, collaboration with IT staff and ongoing communication with deans and department chairs.

## *Challenges*

How can CIT, which focuses on the improvement of teaching, work most effectively in a research-centered environment? For example, are there ways to promote technology as a connector between research and teaching? How might CIT draw on the world-class research of Duke faculty and the unique primary resources of its Library to help faculty produce outstanding online materials useful to Duke and the larger community of research universities?

New technologies that appeal to faculty may create disruptions in existing technology environments. How can CIT best work with local IT staff to support faculty as they experiment with new technologies?

Faculty are very busy and have many events competing for their time. In last year's department planning meetings, faculty often requested services that already exist, but of which they were unaware. How can CIT get and hold faculty attention?

## Encouraging innovation

In response to faculty who say they lack the time, skills, resources and professional incentives to create and use technology-based course materials, CIT offers training, consulting, funding, direct project assistance and recognition for successful projects.

### *General Strategies*

- Identify technology tools of interest to faculty and students and conduct pilot projects.
- Provide grants and support services to encourage faculty to try innovative projects.
- Act as the primary driver for successful use of the university's new course management system by faculty; enhance course management system functionality to make it easy for faculty to experiment with new teaching activities.
- Develop plans for migrating successful innovations into the university's general computing environment.
- Maintain the CIT lab where faculty can experiment with new technologies and complete IT projects with on-site consulting.
- Explore ways that distance/online technologies can support Duke's educational offerings.

### *Specific Projects for 2004-05*

11. Upgrade to Blackboard 6.1x.
12. Host pilot projects of Brownstone.EDU, Tablet PCs and other new technologies.
13. Integrate Blackboard with new Library ILS e-reserves system.
14. Decide whether and how to support Brownstone EDU as instructional tool
15. Offer the CIT grants programs with better delineation of target audience and types of support for each program. Continue focus on broad impact and sustainability.
16. Offer the CIT Faculty IT Fellows program with modified program activities to fit faculty needs. Continue offering priority to faculty who apply as a department or school group.
17. Strengthen the departmental liaison component of the Faculty IT Fellows program by working with department chairs, departmental IT staff, and librarians as well as CIT Fellows.
18. Systematically use evaluation data to modify CIT programs and services.
19. Find ways to mesh new CTL (general teaching and learning support activities) with other CIT activities for synergies and effective use of staff time and energy.
20. Decide whether and how to support Edufolio EDU as instructional tool.
21. Work with other campus IT groups to plan for improved audio-visual services and digitizing services (e.g. loan of cameras, digitizing video, scanning images); reduce amount of digitizing CIT does for faculty and define more carefully CIT digitizing services.
22. Implement part of University iPod project by identifying and supporting course related experiments.
23. Strengthen evaluation component of CIT project support through developing model assessment plans, online guides and examples of project assessment, improved application materials and better final project report process.
24. Monitor course management systems products and projects to determine whether Blackboard is still the best tool for Duke. Plan for possible future integration of other course management options. Develop white paper on course management trends and Blackboard's role at Duke.

25. Seek instructional technology pilot projects that capitalize on student interests, e.g. instant messaging and multimedia projects.
26. Develop CIT information guide on distance education/online course planning, focusing on strategies that fit Duke's culture and individual schools' goals.
27. Encourage broader and deeper use of Blackboard by increasing its functionality and smooth integration with other university systems. E.g., Utilize Blackboard building blocks. Explore Blackboard linkage with new content management system and with LUNA.
28. Post information about CIT research group activities on Web site.
29. Identify CIT role in Apple Digital University planning (lead person will be faculty)
30. Enhance student worker program to better support faculty projects.
31. Investigate possibility of teaching award that focuses on excellence in teaching with technology.
32. Shift most support for streaming media to Office of Information Technology or other campus units.
33. Complete Nicholas School of the Environment and Earth Sciences project to develop an online master's degree program. Launch Nursing School group Fellows project related to online course activities.
34. Decide whether to offer office visits on topics beyond Blackboard, and if so, define plan.

### *Assessment*

- Growing number of courses have some type of Web presence and/or technology-based activities, as appropriate to course goals.
- Blackboard upgrade is completed successfully. New components are added or integrated with Blackboard to increase functionality. Faculty and students report satisfaction with Blackboard and expand upon current uses.
- CIT pilot projects with new tools are completed; conclusions are posted on CIT Web site and shared with others.
- CIT grants and fellows programs attract good proposals.
- Faculty projects are completed, with adequate evaluation data to judge the value of the technology innovation.

### *Challenges*

Teaching is mostly an individual activity at Duke. How can CIT balance support for innovative individuals while also ensuring that projects have continuing impact? How can we promote better planning in schools for sustaining project activities after CIT start-up help ends?

CIT has a small staff and depends on OIT and Library IT personnel for quite a bit of project infrastructure (servers, software installation, etc.) How can CIT test a variety of new technologies with limited help from OIT? Should CIT utilize Perkins Library technology support for more projects? What additional resources are needed in OIT, the Libraries and school IT groups to make it easier to move pilot projects into the mainstream technology environment. How can CIT do effective joint planning with all these groups?

To jump start faculty IT projects, CIT has taken on a number of production tasks that strain its resources and limit its ability to be innovative. CIT would like to reduce its role in digitizing images, audio and video for faculty, but right now, the alternatives for faculty are to do the digitizing themselves or use fee-for-service units on campus. There is a need for an articulated service model for digitizing course materials, especially in Trinity College of Arts and Sciences.

CIT's positive relationship with faculty is built on a high level of individual service in support of their project activities. How can CIT maintain high quality service and still find time for thorough testing of new software tools, research on instructional projects outside Duke, etc.?

## Connecting technology plans and services at Duke

Duke's decentralized planning and budgeting for IT encourages innovation and allows decision making by those most directly affected by the decisions. At the same time, it creates confusion for faculty seeking help and may lead to either overlap or gaps in services. One of CIT's key roles has been to serve as an information broker across schools, connecting individuals with common interests and looking for opportunities to share technology resources. CIT staff work with individual faculty, department chairs, deans, advisory groups and committees to better coordinate IT services.

### *General Strategies*

- Serve as an advocate for faculty needs at all levels of IT planning and provide an instructional perspective in IT planning.
- Advocate for integration of technology services that support teaching and learning.
- Connect faculty and IT planners from different schools and departments to facilitate discussion and joint projects.
- Convene task forces and evaluation groups around new technologies.
- Give highest priority to projects that advance curricular initiatives.

### *Specific Projects for 2004-05*

35. Prepare summary report of department visits done with Lee Willard. Share with Library and CIT dept liaisons for follow up actions. Begin re-visiting schools and departments around IT planning.
36. Follow through on Dept/School visits re: action items identified in reports.
37. Plan for connections between CIT projects and other campus technology projects such as Portal, content management system, LUNA Insight, Library Ex Libris ILS implementation, new Library Web site project
38. Use CIT's annual showcase of faculty projects as a forum for sharing information across campus.
39. Have CIT staff serve on a wide range of planning groups.
40. Plan for integration of foreign language technology support to faculty with CIT staff and services.
41. Plan for transition of Language Labs from current spaces into new library spaces.
42. Integrate CIT activities more closely with library planning via participation in Executive Group, and through joint projects.
43. Integrate CIT activities more closely with OIT planning via participation in Futhey's Extended Staff meetings, and through joint projects.
44. Integrate CIT activities more closely with overall University IT planning via participation in ASTEC meetings, meetings with Deans and through joint projects in schools.
45. Start revisiting departments who had earliest IT planning visits to see how they are moving toward their goals.
46. Develop stronger planning model for Blackboard at Duke, with clear decision path for resolving policy issues and setting priorities for technical changes.
47. Work with Perkins renovation team to plan new types of technology-enhanced spaces. Plan for integrated support services to library and CIT users.
48. Plan for CIT's role in supporting non-IT teaching support as it transition from Arts & Sciences Center for Teaching, Learning and Writing.
49. Have CIT Advisory Board review academic software license requests.

50. Continue collaborative staffing models with Arts & Sciences (Foreign Language Technology Support) the Graduate School (Educational Technology Specialist) and the School of Medicine (Program Evaluator).

### *Assessment*

- CIT staff are active participants in diverse IT planning groups. CIT supports cross-department and/or cross-school projects.
- CIT projects are well integrated with IT projects in other parts of the Libraries, schools and OIT.
- Schools and departments make progress toward IT goals identified in planning visits.
- Deans and department chairs report that CIT-supported projects in their departments meet faculty development needs and are aligned with departmental and school priorities.

### *Challenges*

CIT strives to plan projects in ways that will mesh with the broader technology environment, but there is so much variability across schools and departments that it is hard to know what will work in any given location. Any deviation from current hardware and software is perceived as creating a support burden. CIT's capacity to promote innovation depends on schools and departments having the capacity to support new technologies after the pilot stage.

The locus of responsibility for IT decision making is hard to identify and decision making is often slow. How can CIT move more quickly on innovative projects while still including a broad constituency in planning?

Multiple faculty groups have advisory roles in IT decisions. How can we gather broad faculty perspectives and still get faculty consensus or approval on IT issues (e.g., course Web site retention)?

There is no university clearing house for copyright-related questions, yet copyright issues crop up regularly in instructional technology projects.

There are significant differences across schools in their level of IT use, their goals for IT and their support for IT. Sharing tools or support across schools is especially challenging but can also be highly effective in conserving university resources.

## **Building partnerships beyond Duke**

Because technology innovation requires significant investments of time, energy and money, we must seek opportunities for collaboration with private industry, foundations, and other educational institutions. Professional development and networking with groups outside of Duke are central parts of all CIT staff members' jobs.

### *General Strategies*

- Research and share information about technology trends and funding opportunities for instructional technology.
- Participate in conferences, professional organizations and cross-institutional projects as a way of sharing our expertise with a broader community and enhancing Duke's reputation for creative use of instructional technology.
- Support faculty in the development of grant proposals for external funding.
- Meet with individuals from corporate, government and educational organizations to leverage resources and exchange ideas about instruction technology.

### *Specific Projects for 2004-05*

51. Host the Blackboard Southeast Users Group in September 2004.
52. Publicize Duke instructional technology projects to the broader academic community via an annual Instructional Technology Showcase, news stories, Web profiles of faculty projects and conference presentations.
53. Closely monitor SAKAI and other national projects involving instructional technology.
54. Continue "show and tell" of new products and non-Duke IT projects as a regular part of weekly staff meetings.
55. Require all staff to attend conferences, training workshops and professional meetings; encourage staff presentations in as many settings as possible.
56. Post information about CIT professional activities on CIT Web site.
57. Publicize information about external funding opportunities for instructional technology, and match specific grant opportunities to specific faculty.
58. Continue staff participation in TRI-IT, a semi-annual meeting CIT launched in which instructional technology specialists from the Triangle and Triad area share information and plan joint ventures.
59. Continue CIT staff participation in professional organizations.
60. Host public events featuring speakers from other schools and organizations, e.g. keynote speaker at Showcase and one or two speakers at other events;

### *Assessment*

- Events featuring instructional technology projects outside Duke are well attended.
- CIT staff are active in professional groups and IT projects involving non-Duke people.
- Proposals for joint projects with vendors, other schools are developed.
- CIT's Web site and email list serve as an information source about instructional technology at Duke for other schools and organizations.

## *Challenges*

Busy schedules along with multiple information dissemination systems make it hard to get good attendance at guest speakers, vendor demos and special events.

CIT has contributed to several successful external grant proposals, but it has been difficult to get faculty to apply for available external funds for instructional technology projects (e.g. Pew, Mellon).

Duke is located in the Triangle with other top research universities and technology companies nearby. How can CIT take better advantage of this environment in planning instructional technology projects?

Current budget situation at Duke limits funding for staff travel to conferences.

## Learning what works best

To ensure that resources are wisely invested, that faculty time and effort are well used and that successful innovations become institutionalized, CIT staff conduct various research and evaluation efforts. We seek feedback on CIT programs and services, help faculty reflect on the impact of new technologies on their teaching, benchmark Duke's IT activities against those of other universities, and discuss IT plans and progress with a variety of groups on campus and outside Duke.

### *General Strategies*

- Establish clear goals and evaluation strategies for all major CIT programs; use evaluation data to improve CIT services and offer input to other IT planning groups.
- Consult with individual faculty on assessment plans for their instructional technology projects; summarize lessons learned and help other faculty apply them.
- Benchmark CIT activities and IT developments at Duke with those of other schools.
- Use CIT Advisory Board as oversight group for CIT activities.

### *Specific Projects for 2004-05*

61. Participate in an external 5 year review of CIT (April 2004) and use feedback to shape future CIT plans.
62. Provide easy-to-use evaluation guides on CIT Web site for faculty to develop project evaluation plans.
63. Participate in Ivy Plus Academic Computing group, Educause planning groups and Blackboard planning groups to benchmark Duke's instructional technology activities against other institutions.
64. Report regularly on CIT activities and findings to Duke's president, provost and deans, as well as ITAC and other groups involved in IT Planning.
65. Use department visits, individual consultations, teaching observations and surveys to learn more about Duke faculty teaching styles and interests.
66. Fund half-time program evaluator, shared with Medical School, to assist with CIT evaluation efforts. Review whether full time position is needed.
67. Revise CIT Web site to make reports easier to find; use revised Web site to publicize information about best practices in instructional technology.
68. Conduct surveys, interviews and focus groups to understand current Blackboard use and faculty-student needs around future course management system.
69. Prepare CIT annual report in July and disseminate broadly.
70. Develop better internal systems for CIT staff to track faculty questions and projects and use that information to develop best practices documents for both staff and faculty to use.
71. Improve analysis and reporting on evaluation of CIT supported projects

### *Assessment*

- CIT evaluation plans are developed and implemented.
- Summary reports are prepared, posted on CIT Web site and disseminated.
- Faculty project evaluations yield information that can be helpful to other faculty.
- Faculty and administrators use the evaluation content on CIT's Web site and find it useful.

## *Challenges*

Despite a requirement that all CIT-supported projects have an evaluation plan, faculty do not always collect enough information about their projects to measure direct impact of technology in the course. How can CIT help faculty gather useful evaluation data when faculty are most interested in generating and using new technology activities? Are there ways to connect evaluation of IT projects with other types of faculty research?

Although there are many existing models for successful IT projects, faculty have a strong bias for creating new materials and programs rather than adapting proven models. How can CIT help faculty find the right balance between creating new materials versus adapting existing ones?

## **Appendix A: CIT at a glance (as of May, 2004)**

*CIT staff and associated staff:*

*Full time staff:*

Lynne O'Brien, director

Neal Caidin, applications manager

Amy Kenyon Campbell, senior academic technology consultant

Jim Coble, senior technology specialist

Cynthia Varkey, Web designer

Matt Gardzina, academic technology consultant

Randy Riddle, academic technology consultant

Sean Aery, program coordinator

*Part time or contract staff:*

Jim van Gorder, technical specialist for CIT equipment support (30% time, shared with Library ITS)

Yvonne Belanger, program evaluator (50% time, shared with Clinical Research Training Program)

James Todd, content writer (20% time, one year contract, also works for Duke News Service)

*Affiliated staff:*

Samantha Earp, director, Foreign Language Technology Services (Arts & Sciences)

Patrick Murphy, instructional technology specialist (Graduate School)

*Location:* Staff offices on 2<sup>nd</sup> and 3<sup>rd</sup> floors of Perkins Library; CIT lab in Perkins Room 223A

*Web site:* <http://cit.duke.edu>

## **Appendix B: Contributors to this plan**

This plan was drafted by Lynne O'Brien in consultation with CIT staff. The plan has been reviewed by and discussed with:

The CIT Advisory Board

The Library executive group

Tracy Futhey, CIO

A&S Deans, including Melissa Mills, Bob Thompson, Lee Willard

## **Appendix C: Campus Committees on which CIT Staff Serve**

- Arts & Sciences Computing Committee
- Blackboard Advisory Group
- Blackboard Project Team: OIT, SISS, CIT
- Center for Teaching, Learning and Writing Advisory Board
- LAC - campus system administrators
- Duke University Libraries Staff Association
- Duke University Medical Center Education
- Foreign Language Technology Task Force
- Information Science and Information Systems Advisory Board
- Information Technology Advisory Committee
- ITAC Video Services Steering Committee
- Learning Management Systems Group
- Macintosh Administrators Group
- Medical School Educational Technology Curriculum Subcommittee
- OIT Survey Software Evaluation Team
- On-line Spanish placement test planning group
- Perkins Library Content Management System Implementation Team
- Perkins Library ILS planning group
- Perkins Library Web Accessibility working group
- Perkins Library Web Architecture and Design Group
- Research and Evaluation Group
- Student Portal Pilot Project, Services Team
- University Writing Program Steering Committee
- Videoconferencing Working Group
- ViewsFlash survey software evaluation group

## **Appendix D: Professional Organizations in which CIT Staff Participate**

- American Council of Teachers of Foreign Languages
- American Evaluation Association
- Blackboard Advanced Systems Administrators
- Blackboard Open Source
- Blackboard Southeast Users Group
- Computer-Assisted Language Instruction Consortium
- EDUCAUSE Program Planning Committee for Mid-Atlantic Regional Conference
- Humanities Computing Reading Group
- Instructional Technology Conference Advisory Board
- International Association for Language Learning Technology
- Ivy-Plus Academic Computing Directors
- Linguistic Society of America
- National Institutes of Health Review Group for T15 and K01 Grants on Research Ethics
- New England Association of Schools and Colleges Accreditation Team
- North Carolina Project Management Institute Education Committee
- Professional Development Series in Foreign Language Technology
- TRI-IT, an instructional technology group from Triangle and Triad colleges and universities