

BEST PRACTICES IN FACULTY ENGAGEMENT AND SUPPORT

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(Author's Note: The author is one of two Fellows working with the NLII for the 2000 calendar year. He is a Professor and Chair in Political Science at The University of Memphis. He is not an "Entrepreneur" in the area of technology-enhanced teaching in learning. In fact, he fits in very well with the characteristics of "second-wave" faculty which are described in the following paper. His observations, as will be noted, have a decidedly "faculty-oriented" focus.)

The Winter 1999 issue of *Multiversity*¹ features an article written by David G. Brown, of Wake Forest University, and Elson S. Floyd, of Western Michigan University, which discusses the "best practices" that are present at their Universities which promote faculty development in the area of the introduction of enhanced, computer-based techniques and processes into the learning environment. This excellent article should be read in conjunction with this white paper because our intent is to build on the work of Brown and Floyd rather than develop an alternative set of classifications. This paper, which should be taken as a "work-in-progress," will present the following topics:

- A brief discussion concerning the differences in faculty development issues when comparing faculty "entrepreneurs" with "second-wave" faculty;
- An examination of the resources, incentives, and benefits identified by the "best practitioner" entrepreneurs as important in their work of incorporating new learning technologies into their course work;
- Some possible reasons why potential "second-wave" faculty are hesitant to adopt new learning technologies and why some "best practices" may only be effective within certain types of institutional cultures ; and

¹"Best Practices in Faculty Development", David G. Brown and Elson S. Floyd, *Multiversity*, Winter 1999 (<http://www.hied.ibm.com/multiversity/Win99/bestpractice.html>).

- A brief description of some “best practices” designed to facilitate the engagement of the “second-wave” faculty member in these new paradigms of learning in the following areas:
 - training
 - grants/support
 - “just-in-time” technical assistance
 - information exchange
 - assessment

I will argue, based on this inventory, that institutions which are preparing for transformation in this area, should adopt a “best systems” mentality, rather than concentrate on specific practices.

Entrepreneurial Faculty and “Second-Wave” Faculty Differences in Engagement

The topic of whether a University is ready to transform itself is the subject of another NLII white paper² and will not be examined here. However, it is important to note, as Brown and Floyd do, that an “enabling environment” is a precondition to institutional change. These environments include the following: universal student access, reliable networks, multiple opportunities for training and consulting, and “a faculty ethos which values experimentation and toleration of falter.”³ Without these preconditions, even entrepreneurial activity on the part of self-starters is difficult, if not impossible. Even when these conditions are in place, transformation is neither easy nor automatic. The first stage of transformation is marked by the appearance of “first-wave” adopters, or “entrepreneurs,” who seek out the resources and the expertise to implement their own, personal commitment to incorporating technology into their own learning environments. The second stage, and the one of most concern to us for it represents the first significant turn toward the transformation of the institution, occurs when faculty who have strong commitments to quality learning, but who are wary of the new technologies, come to perceive the national disciplinary and institutional support/reward structure as an opportunity rather than a threat.

These two groups of faculty, while united in their commitment to quality learning environments, are very different in both their technical capabilities and their attitudinal readiness to embrace these new technologies. It would be a serious mistake for administrators to make allocation decisions based solely on the characteristics of the “entrepreneurs,” since their needs and their motivations can differ greatly from the “second-wave” faculty. To illustrate this point, the next section examines the needs and motivations of faculty identified as members of this “entrepreneurial” group.

²“Don’t Try This at Home: Some Pre-Conditions for Institutional Transformation,” Draft Prepared for the NLII Task Force on Institutional Readiness, January 19-21, 2000, New Orleans, LA

³Brown and Floyd, *op. cit.*

Entrepreneurs: Resources, Incentives, and Rewards

In 1997, *Yahoo* developed its first list of “Most Wired Campuses.” While there still exists a debate over the validity of the categories which produced these rankings,⁴ it is probably safe to say that the schools which are featured in the list feature environments which are more conducive to instructional technology “entrepreneurs.” In an attempt to better understand what it was that these instructors are doing, David G. Brown contacted the Provosts and Deans of thirty-six of these “most wired” campuses and asked for recommendations of names of instructors who were using innovative technology applications in their course work. Brown then invited these scholars to submit vignettes which resulted in the book: *Interactive Learning: Vignettes from America’s Most Wired Campuses*⁵. The book features ninety-three case reports on the use of classroom, and out-of-classroom, technologies and is cross-indexed according to discipline area, computer tools and techniques, and educational beliefs. The articles also attempt to bring in data and/or author impressions regarding the assessment of the impact their innovations brought to the learning environment. Overall, this volume represents a very useful and informative survey of the great variety of application approaches and innovation which already exist.

The book concentrates on the descriptions of the techniques themselves and less on the resource and reward environments which brought them into being. Going on the assumption that the book’s educators represent a selection of “early starters” or “entrepreneurs,” we were interested in the characteristics of the resources, incentive, and reward environments which accompanied their “best practices.” We contacted thirty of the book’s authors and asked them: 1) What the source of the resources for their innovations was; 2) What the incentive for innovation was; and, 3) What benefits, beyond the educational benefits for their students, did they receive from implementing learning change through instructional technology. The results from this “survey,” which should be taken as suggestive not scientific, are discussed below.

Resources - About a third of the respondents stated that their innovations were totally self-contained and required no additional resource support. The remaining respondents cited five areas which provided support necessary resource support. *Departmental Support* came mostly in terms of additional hardware and was cited by only five of the respondents. *College Support*, cited by eight respondents, consisted of hardware provision and classroom renovation. *University Information*

⁴ See: Young, Jeffrey R. “Colleges Question Data Used by ‘Yahoo’ to Rank ‘Most Wired’ Campus.” *Chronicle of Higher Education* (May 9, 1997): A29; Florence Olsen, “Academic Technology Group Enters the Fray Over What Makes a ‘Wired’ campus”, *Chronicle of Higher Education* (March 9, 2000)

⁵David C. Brown (ed.), *Interactive Learning: Vignettes from America’s Most Wired Campuses*. Bolton, MA: Anker Publishing Co., 2000.

Technology Centers were identified as important resource providers by a third of the authors. These centers provided resources including full funding of projects, training for students and faculty, provision of GA's to the project, and ongoing technical support. *University-Level* support was noted by more than a third of the respondents as well. This support came in the form of summer stipends, project grants, hardware and software, GA support, grants, and seed monies. Finally, *Outside Agencies* were identified by six of the authors. Three authors stated that the outside funding covered 100 percent of their resource needs. Two agencies identified were NSF and an Alumni gift which was targeted toward learning innovation. Overall, there was clearly a lack of concern over the resource issue from this group of entrepreneurs. For those who did not have the personal resources or expertise to achieve their projects' goals, their environments appear to have provided them with the necessary training and/or equipment.

Incentives - Beyond the basic question of resource support, authors were asked to detail the incentives offered by their Universities (the source unit was not specifically asked for) to incorporate learning technologies into their courses. The overwhelming (70%) response was that there were no outside incentives provided to initiate these changes. Almost to a person, the central reason given for undertaking these innovations was that it "was the right thing to do" or "the students deserved to have the quality of their education improved." Several authors indicated that there were actually disincentives which marked their work. One wrote:

"In fact, since no release time was provided and the annual merit raise procedures do not give weight to this kind of development work, you might say that there were disincentives."

A handful of authors did cite incentives provided by their institutions. These incentives included: a promise that such work would figure in the tenure process, summer salary, and new equipment. But for the majority, innovations were pursued because the resources were there and the potential benefit to the student was high.

The importance of student-centered incentives was reiterated in a best practices study conducted by the American Productivity and Quality Center, to discover the best organizational strategies for helping faculty members integrate technology into their teaching. The study indicated that: "Faculty incentives come in many forms. Among the most powerful motivators is a newfound pride in teaching."⁶

⁶For the Executive Summary of this report, "Today's Teaching and Learning: Leveraging Technology," see:

<http://www.store.apqc.org/cgi-bin/vsc.exe/Jacket/CMTEACHFID.htm?E+Bookstore>

Benefits - Finally, the authors were asked to identify benefits gained from the project, apart from those experienced by the students in their courses. Again, about 65% of the authors stated that student benefit, and the attendant personal satisfaction of a job well done, were the only rewards for their innovations. Reading the responses, one gets the impression that the authors were quite disappointed in the lack of official recognition and the lack of colleague interest in their innovations. As one author stated:

“The PR Office wrote the project up for a paragraph in the alumni magazine, but there was no official recognition. Quite the contrary, I got the impression that those evaluating me considered the project an oddity and a possible waste of my time, before they forgot about it completely.”

For those citing benefits, three cited extensive University publicity given to their projects, one stated that a salary increase was tied to their work, four believed that their receipt of a teaching award was connected to their work, and three moved into University positions dedicated to the spread of interactive learning. One of these wrote:

“ Partly as a consequence of...(my work)..., I’ve shifted from my faculty role to an administrative role split between faculty development and learning technology, and one distinctive feature of my work in that role has been a very strong prejudice against special incentives and in favor of authentic, routinizable, scalable support. In my view, this is a very pro-faculty position, since nearly everyone I know who took on technology projects under the lute of special incentives found that they ended up with large undocumented increases in workload, generally with no way to get out from under.”

From this brief examination of our sample of “entrepreneurs”, several observations can be put forward:

- While they work in more technologically supportive environments, the impetus for their enterprise is internal;
- They share a strong interest in bettering the quality of the education delivered and the learning produced;
- They possess enough expertise to give them the confidence to proceed;
- Standard academic incentives did not play a key role in their enterprise;
- They did not receive substantial returns on their enterprise from their institutions; and
- Their expressed disappointment may influence the extent to which they will continue their transformations and, perhaps more importantly, share their

positive experiences with their colleagues.

Clearly, if faculty ranks consisted solely of the types of educators identified above, the revolution in educational transformation could be easily accomplished. These scholars are in environments which allow access to the resources necessary to transform their teaching methodologies (which, in some small way provides some validation to the Yahoo ranking system) and proceed to do so regardless of the fact that neither the antecedent incentive structure nor the benefits produced by the transformation seem to be present. As evidenced in their vignettes in Brown's book, the real incentives here are rooted in the scholars' commitment to improving the learning opportunities available to their students. The benefits, as seen in their individual "Lessons Learned" sections of their vignettes, are expressed as the satisfaction of having something valuable done right. But, as we know, these educators do not represent the mainstream but, rather, are at the vanguard. Therefore, our next question is: Who is next?

Engagement and Support for "Second-Wave Faculty"

Having looked at some of the characteristics of "self-starters," we turn to a consideration of those faculty who need a different set of engagement criteria than those discussed above. Four possible sources of hesitancy are:

- **Fear of the Unknown** - Faculty, especially older faculty, are quite used to being in control of their subject matter, and in the way they present it. Adopting new technological forms of presentation necessarily demands a learning curve, the dimensions and length of which is unknown to them.
- **"If it Ain't Broke..."** - We have encountered many faculty who excel in "face-to-face" forms of learning but who resist the new technologies. They offer at least three arguments in support of their attitude. First, if they are doing a superior job already, why change? The second reason is more pragmatic: They know that they are good educators now, but there is no assurance that this success will translate across different forms of presentation. Finally, faculty are fearful of a failed attempt in transformation resulting in an entire class of victims, as opposed to educated students.
- **"We're All Alone in this Together"** - Unlike the "entrepreneurs," potential second-wave faculty will demand more "user-friendly" levels of institutional support. The greater the apparent effort to adapt, the more likely that the first two reasons above will come to dominate the faculty's thinking.

- **“Know Thyself”** - Adoption to new teaching environments represents a major commitment on the part of the faculty member to re-evaluate their own personal approach to learning. As Tony Bates observed: “...some basic understanding of the teaching and learning process, and in particular the different kinds of teaching approaches and the goals that they are meant to achieve, need to be understood.”⁷ It is a basic fact that many of the best teachers possess natural communication and information management abilities which, for many, are assumed rather than the product of intensive self-examination. One requirement for transformation involves coming to grips with how the new technologies can enhance learning objectives. The problem is that many successful teachers have never engaged in this form of articulation and self-evaluation and they may be disinclined to do so.

The second-wave faculty described here are not hesitating due to the lack of University rewards for faculty transformation and learning innovations. They share the first-wave faculty’s commitment to quality learning, but are more risk averse.⁸ Perhaps, as universities change their reward structures in the tenure and promotion process, a third-wave of faculty will emerge- those who see adopting as a way to advance their professional careers. Second, it is important to point out that what works “best” at one institution, may produce failure at another. This may have nothing to do with differences in implementation strategy but may be related to the differing cultures which exist within the implementing institutions. As Jan A. Baltzer observed:

For an information technology professional, success or failure within an organization can be the direct result of the individual’s ability to analyze his/her corporate culture and then develop strategies to work within that culture.⁹

⁷Tony Bates, Managing Technological Change: Strategies for College and University Leaders. San Francisco: Jossey-Bass, 2000. pp. 102-103.

⁸See: William Geoghegan, “Instructional Technology and the Mainstream: The Risks of Success,” in Diana Oblinger and Sean Rush (eds.), The Future Compatible Campus (Bolton, Mass.: Anker Publishing, 1998)

⁹Jan A. Baltzer, “People and Places: Managing the Human Side of Information Technology Application,” The Association for the Management of Information Technology in Higher Education, Professional Paper Series #7, CAUSE, 1991

Innovations and Institutional Cultures

While the relationship between innovation and culture has been recognized, both in classic works such as Rogers'¹⁰ and also in newer works such as Lights'¹¹, it's application to teaching transformation is less well developed. Table 1 presents an example of how two cultural dimensions, across high and low resource environments, might lead administrators to consider using different engagement options depending on the cultural "mix" present at their institution. Each one of the cell entries can be viewed as a process-evaluation hypothesis which begs for cross-institution testing.

Table 1 About Here

This point will be raised again in the conclusion of this paper but will made here as a cautionary note before presenting the selected "best practices." If institutional culture is an important consideration affecting the success or failure of teaching transformation, innovators must consider the systemic characteristics rather than the "practice" characteristics prior to transformation. As Everett Rogers pointed out:

Change agents seek to determine the needs of their clients, and then to recommend innovations that fulfill these needs. Discovering felt needs is not a simple matter; change agents must have a high degree of empathy and rapport with their clients in order to assess their needs accurately.¹²

To impose any one of the following practices and expecting it to work because it is a "good idea" would be a mistake. The better route is, once an institution has undergone a serious self-assessment in regards to transformation and the identification of needs, is to produce an integrated "package" of "best practices" which is congruent with those identified needs.

Selected "Best Practices"

The following practices by no means constitute a complete inventory of the work which is being done in these areas. Many of the sites were collected via "snowball sampling" where one site contained

¹⁰Everett M. Rogers, Diffusion of Innovations, 4th Edition (New York: Free Press, 1995)

¹¹Paul C. Light, Sustaining Innovation: Creating Nonprofit and Governmental Organizations that Innovate Naturally, (San Francisco: Jossey-Bass, 1998)

¹²Rogers, *op. cit.*, p. 228

information which led us to another site. Also, it will become clear that many of the practices identified here can fall in more than one of the support categories. We are also grateful to David G. Brown who allowed us to read a draft copy of his soon-to-be-published book detailing the experiences of sixty scholars from eight different Universities.¹³ Our descriptions of the sites will be brief and we encourage readers to make use of the hyperlinks which are connected with each item entry.

Training: This area addresses the third concern of potential adopters (“We’re all in this together alone.”) Regardless of the form of learning technology employed (asynchronous, enhanced presentation, partial web-based, totally web-based), second-wave faculty, by definition, lack the expertise necessary to self-start a learning transformation. However, best practices institutions don’t provide explicit “training” to faculty members in curriculum redesign, but promote their acquisition of curriculum development skills through project-oriented initiatives.¹⁴ There exists a wide variety in the way that training is delivered. This, we believe, is due to the wide variety of institutional cultures which exist. Getting faculty to undergo new training is difficult in and of itself; in some institutional cultures it may even be far more difficult, hence, the need for a variety of different approaches.

- **Auburn University**
 - ***Instructional Media Group***
<http://www.auburn.edu/img/imgsem.htm>
 - List of seminars for which there is on-line registration.

- ***Bellevue Community College***
 - ***Northwest Center for Emerging Technologies***
<http://www.nwcet.org/main.asp>
 - Curriculum design sites
 - Courseware provision and instruction
 - Benchmarked by American Productivity and Quality Center for innovation and advancement in the leveraging of teaching technologies

- ***California State University Pomona***
 - ***Faculty Center for Professional Development***
 - http://www.csupomona.edu/~faculty_center
 - Workshops and discussion groups on new learning technologies

¹³David G. Brown (ed.), Teaching With Technology: Sixty Professors from Eight Universities Tell Their Stories. Forthcoming, Summer 2000.

¹⁴APQC, Executive Summary, p.9.

- Individual consultation services
- ***Embry-Riddle Aeronautical University***
 - Good example of how to train students to access and use web-based instruction
 - <http://online.erau.edu/about/webct.html>
- **IUPUI**
 - ***Center for Teaching and Learning***
 - http://www.center.iupui.edu/course_dev.html
 - Menu-driven course development tool training
- ***Raritan Valley Community College***
 - ***Instructional Design Center***
 - <http://rvcc2.raritanval.edu/~idc/IDC.htm>
 - Good example of centralized support at a community college
- ***Rensselaer Polytechnic Institute***
 - ***Center for Academic Transformation***
 - <http://www.center.rpi.edu>
 - ***The Pew Learning and Technology Program***
 - “Improving Learning & Reducing Cost: Redesigning Large-Enrollment Courses”
 - <http://www.center.rpi.edu/PewSym/mono1.html>
- ***Tufts University***
 - ***Power!Teams***
 - <http://www.tufts.edu/tccs/at/powerteams>
 - Provides technical support for development of course learning materials
 - ***Center for Computing and Information Technology***
 - <http://www.u.arizona.edu/~fri>
 - Faculty Resources for Instruction (FRI)
 - Learning software instruction and check out system

- **University of California, Berkeley**
 - ***Demystifying Technology for Teaching***
 - <http://www.itp.berkeley.edu:80/demystifying.html>
 - Synchronous and asynchronous training modules for faculty, students, and staff

- **University of California, San Diego**
 - ***Instructional Web Development Center***
 - <http://libnet.ucsd.edu/se/full.html?record=501>
 - Facilitates the development of web-based materials for courses and technology support for faculty

- **University of Central Florida**
 - ***Course Development and Web Services***
 - <http://reach.ucf.edu/~idl6543/>
 - Interactive Distributed Learning for Technology (IDL6543)
 - Eight week simulation course offered once a year
 - 60 contact hours
 - Faculty required to take the course prior to offering web-based courses
 - Number of web-based courses has exploded over a three-year period

- **University of Delaware**
 - ***Toolkit for Teaching with Technology***
 - <http://www.udel.edu/learn/technology/index.html>
 - Offers formal training courses for faculty twice a year
 - Holds workshops and offers self-paced training

- **University of Georgia**
 - ***WebCT Team***
 - <http://webct.uga.edu>
 - Application support, instructional design support
 - In a two-year period, 1000 faculty receive training producing more than 1300 course selections

- **University of Florida**

- ***Technical Assistants Program***
 - <http://grove.ufl.edu/~ctrain/Tap/about.html>
 - Training of undergraduate students to assist faculty in developing web-based course materials and enhanced presentation materials.

- **University of Iowa**
 - ***Information Technology Services***
 - <http://www.its.uiowa.edu/its/>
 - Short courses on resources, integration, and curriculum development

- **University of Maryland**
 - ***Institute for Instructional Technology***
 - <http://www.inform.umd.edu/EdRes/FacRes/TeachTech/TeachTech/IIT/>
 - Learning modules for faculty development
 - Maintains archives of past learning series

- **University of Minnesota**
 - ***Digital Media Center***
 - <http://www1.umn.edu/dmc>
 - TA web certification program
 - Encourage TA's to learn the skills necessary to integrate
 - Bootstrap up to faculty

- **University of Notre Dame**
 - ***“Teaching Well Using Technology” Workshop***
 - <http://www.nd.edu/~kaneb/TWT.html>

- **University of Southern California**
 - ***Adventures in Information: Technology and Faculty Instruction***
 - <http://www.usc.edu/isd/publications/adventures>
 - Series of training workshops offered every semester

- ***University of Texas Austin***

- *Electronic Information Literacy Program*
 - <http://www.utexas.edu/academic/cte/teaching.html#instructional>
 - Mandatory on-line training for adjunct faculty
- *Center for Instructional Technologies*
 - <http://www.utexas.edu/cc/cit>
 - Arranges and provides customized training for any group of five or more faculty and their students
- **University of Virginia**
 - *Technology Support Partners*
 - <http://toolkit.virginia.edu>
 - Graduate students from discipline area trained for faculty support
 - \$400,000 budgeted over five years
 - Departments take over funding over a three-year period
 - 125 faculty contacted in first year
 - On-line Toolkit for faculty and students
 - Toolkit courses offered each semester
- **University of Washington**
 - *Catalyst Project*
 - <http://depts.washington.edu/catalyst/home.html>
 - Department-level orientation- Offer training modules to faculty which can be engaged from their own work station
 - *UWired*
 - <http://www.washington.edu/uwired>
 - Collaborative unit designed to find, develop, promote, and support effective uses of teaching and learning with technology
 - Plays a coordination role in bringing all relevant elements of the university to planning and implementation opportunities
- **Virginia Polytechnical Institute**
 - *Faculty Development Initiative*
 - <http://www.fdi.vt.edu>
 - Faculty course development workshops
 - 1,800 participants in a six-year period
 - Attendees receive a \$300 stipend

- Best feature: presentation by past faculty participants
- **Wake Forest University**
 - *Computer Enhanced Learning Initiative*
 - <http://www.wfu.edu/CELI/index.html>
 - Student Technology Advisor (STARS) Program
 - One-on-one partnerships with faculty for course enhancement
 - 50 students @ 10 hours/week
- **William Paterson University of New Jersey**
 - *Student Technology Assistant Clearinghouse*
 - <http://www.wpunj.edu/irt/stac/>
 - Nationwide information-sharing resource on how to use students in faculty training and support

Grants/Start-up Resources: Faculty at schools with poorly developed faculty/administration interactions (what Brown and Floyd refer to as a poorly developed “ethos”) respond more positively when administration demonstrates a commitment to transformation by offering support funds or buyouts. These practices also reflect the basic fact, as revealed by the experiences of the entrepreneurs, that course transformations demand considerable time and effort on the part of faculty. In addition to the characteristics of an “enabling environment” mentioned earlier, best practice institutions are also distinguished by their emphasis on the strategic investment of resources according to firm criteria for funding projects (as opposed to providing funding as a general “no-strings-attached” resource for all faculty and all courses.) Further, they “do not wait for, or depend on, external funding for their faculty instructional development initiatives.”¹⁵

- **Bowdoin College**
 - *Educational Technology Task Force*
 - <http://www.bowdoin.edu/dept/ettf>
 - Call for proposals for funding of technology enhanced courses.
- **Carleton College**
 - *Curricular Computing Grants*
 - <http://www.carleton.edu/campus/ACNS/faculty/grants/call.html>

¹⁵APQC Executive Summary *op. cit.*

- **Duquesne University**
 - *Award for Innovative Excellence in Teaching, Learning, and Technology*
 - <http://www.duq.edu/cte/grants.html>
- **Penn State University**
 - *Funding Sources for Innovation in Teaching*
 - <http://cac.psu.edu/ets/FacultyServices/fund.html>
- **Rensselaer Polytechnic Institute**
 - *The Pew Learning and Technology Program*
 - <http://www.center.rpi.edu/PewHome.html>
 - The Pew Grant Program in Course Redesign
 - The Pew Symposia on Learning and Technology
 - The Pew Learning and Technology Newsletter
- **University of Central Florida**
 - *Faculty Development and Web Services*
 - <http://reach.ucf.edu/~idl6543/>
 - “Start Up” Incentive Program
 - Faculty stipends and release time
 - New computers
 - Multimedia classroom development
 - Planning and production support
- **University of Delaware**
 - *Instructional Improvement Grants*
 - <http://www.udel.edu/cte/grants.htm>
- **University of Georgia**
 - *Learning Technology Grants*
 - <http://www.isd.uga.edu/instructdev/ltg.html>
- **University of Illinois**

- *Campus Award for Innovation in Undergraduate Instruction using Educational Technology*
 - <http://www.provost.uiuc.edu/awards/>
- **University of Notre Dame**
 - *Jump Start Program*
 - <http://www.nd.edu/~edtech/funding/index/html>
- **University of Oregon**
 - *Promotion and Tenure Memo*
 - <http://zebu.uoregon.edu/edtech/pt.html>
 - A memo that discusses ways that technology work is aligned with research.
- **University of Texas Austin**
 - *Innovation Use of Instructional Technology Awards Program*
 - <http://www.utexas.edu/cc/cit/iitap>
- **University of Virginia**
 - *Innovative Use of Technology Initiative Fellowships*
 - <http://tti.itc.virginia.edu/>
- **Virginia Polytechnical Institute**
 - *Center for Innovation in Learning*
 - <http://www.edtech.vt.edu/cil/default.html>
 - 77 courses transformation projects funded for more than 100 faculty
 - **XCaliber Award**
 - <http://www.edtech.vt.edu/cil/2000/XCaliber2000.html>
 - *Intellectual Property FAQ's*
 - <http://www.cddc.vt.edu/ipfaq/index.html>

Technical Support: This relates directly to the third concern of faculty. The programs which have demonstrated the greatest levels of faculty adoption are those which approach “just-in-time” status in their technical support. Institutions vary in the manner that this support is delivered, but generally use decentralized structures and funds for “just-in-time” status in their technical support, and centralized

structures and funds for developing and supporting overall organizational strategies¹⁶.

- **Carleton College**
 - *Academic Computing and Networking Services*
 - <http://www.carleton.edu/campus/ACNS/faculty/support2.html>
 - Discipline-based computing coordinators
 - Faculty advisor system

- **Duke University**
 - *Duke University Network Knowledge Base (DUNK)*
 - <http://www.dunk.duke.edu/>
 - Runner-up in 1998 *Help Desk Institute Team Excellence Award*

- **Penn State University**
 - *Center for Learning and Academic Technologies*
 - <http://cac.psu.edu/ets/FacultyServices/index.html>
 - Good example of integrated strategic, implementation, and assessment plans

- **Seton Hall University**
 - *Center for Academic Technology*
 - <http://www.cat.shu.edu/>
 - Faculty consultants with extensive classroom experience
 - *Student Technology Assistant Program*
 - Partnerships between student consultants and faculty
 - 1999 EDUCAUSE Award for Excellence in Campus Networking
 - <http://www.educause.edu/ir/library/html/cem9946.html>

- **University of California Davis**
 - Technology Support Program
 - <http://dcas.ucdavis.edu/docs/tsp.html>
 - Technology Support Coordinator
 - Unit based
 - Liaison between unit and IT

¹⁶APQC, Executive Summary, *op. cit.*

- Trained by Technology Support Program

- **University of Central Florida**

- *Faculty Development and Web Services*

- <http://reach.ucf.edu/~idl6543>
- Centralized IT produces leadership and coordination
- Organizational and technological infrastructure
 - Faculty development
 - Support Programs
 - Institutional resource commitment

- **University of Connecticut**

- *Instructional Resource Center*

- <http://www.sp.uconn.edu/~wwwfirl/main.html>
- On-Line help for presentation material, web page construction, and authoring tools
- Ted's Page of Teaching and Technology Resources

- **University of Delaware**

- *Teaching, Learning, and Technology Center*

- <http://www.udel.edu/learn/technology/index.html>
- Series of "toolkit" help sites with high levels of user-friendliness

- **University of Maryland**

- *Institute for Instructional Technology*

- <http://www.inform.umd.edu/TT/GeneralInfo/Support/Instructional.html>
- Good overview of support plan for faculty over the course of a semester

University of Michigan

- *Office of Instructional Technology*

- <http://www.oit.itd.umich.edu/oitweb/index.html> - Consulting
- Software development
- Strong on-line search/help resources

- **University of Minnesota**
 - <http://www1.umn.edu/dmc/contents/DMC-map.shtml>
 - Graphic site map which allows users to get to correct site by answering need-based questions

- **University of Notre Dame**
 - *Faculty Educational Development Center*
 - <http://www.nd.edu/~edtech/services/equipment.html>
 - Provides high-end equipment access for course development

- **Wake Forest University**
 - *International Center for Computer Enhanced Learning*
 - <http://www.wfu.edu/Organizations/winstonnet/backup/oldskool/runde/index.html>
 - Leadership Series (for administration)
 - Technology Implementation Series
 - Educational Principles Series
 - Best Practices Series

Assessment: This area addresses what we believe to be a vital element in a second-wave faculty member's decision to transform: Does it work? A finer tuning of that question is: Does it work for people like me? Several institutions, almost always through IT, provide feedback and assessment reports to adopters. Many report that this practice produces a "contagion effect": where faculty innovations spread on the basis of application success (measured by such things as withdrawal rates, grades, student satisfaction). There are also many instances where assessment results can, in turn, feed back into the reward structure of the institution. More and more assessment efforts are providing support for assessment reports which the faculty member can turn into a professional article for their profession's teaching arm. This can greatly reduce the perception of the "zero-sum" game that most faculty see between teaching innovation and research productivity.

- ***California State University System***
 - "Evaluating the benefits and costs of mediated instruction and distributed learning"
 - http://www.calstate.edu/special_projects/mediated_instr/
 - Case studies measuring the economic impact of distributed learning

- **IUPUI**
 - *Center for Teaching and Learning*
 - http://www.center.iupui.edu/eval_assess.html
 - Good resource link page for evaluation and assessment sites

- **Seton Hall University**
 - *Technology Assessment Project*
 - <http://www.shu.edu/depts/cat/assessment/initiative.html>
 - Offers guidance in assessing the institutional impact of instructional technology on teaching and learning
 - Collects data on assessment for a national repository

- **Tufts University**
 - *Center for Assessment*
 - <http://tufts.edu/tccs/at/tlr>
 - Good set of presentations on needs and practices in assessment

- **University of California, Berkeley**
 - *Courseware Developers and Users Group*
 - <http://www.itp.berkeley.edu:80/cdug>
 - Page has many general interest links in the field of instructional technology and courseware development

- **University of Central Florida**
 - *Faculty Development and Web Services*
 - <http://reach.ucf.edu/~coursdev/> - Conducts assessment data and produces reports for faculty

- **University of Notre Dame**
 - *Office of Information Technology*
 - <http://www.nd.edu/~edtech/services/index.htm>
 - Provides needs assessments and impact evaluation assistance

- **University of Southern California**
 - *Adventures in Information: Technology and Faculty Instruction*
 - <http://www.usc.edu/isd/publications/adventures/instruction.html>
 - Workshops in on-line assessment, feedback and evaluation

- **University of Texas**
 - *Faculty Trends*
 - <http://www.utexas.edu/cc/cit/facweb/index.html>
 - News items, recent developments, examples of innovative web sites, a forum for posting ideas, award-winning web sites, announcements of grants and competitions

- **Virginia Polytechnical Institute**
 - *Center for Innovation in Learning*
 - http://www.edtech.vt.edu/cil/2000/CIL2000_rfp.html
 - Conducts course assessment projects for faculty

- **Wake Forest University**
 - *International Center for Computer Enhanced Learning*
 - <http://www.wfu.edu/Organizations/winstonnet/backup/oldskool/runde/index.html>
 - Evaluation and Assessment Series

Communication: None of the first four best practice areas will have the desired impact unless this final area is managed. An institution could have the best possible training and technical support facilities and also have a strong cohort of entrepreneurs with a host of successful transformations and still not engage the second-wave faculty stratum. The most successful institutions pay particular attention to “getting the word out” about their support services and have established information exchange packages such as “swap and share” lunch meetings, “benchmarking” meetings with other units, and visitations to and from other institutions who are successfully accomplishing either transformation or struggling with the same problems.

- **Emory University**
 - *Center for Interactive Teaching*
 - <http://wcw.emory.edu/ECIT>

- Case study site of early adopters
- current course adoptions and course archives
- A “classroom cam”

- **Faculty Connection**
 - <http://www.facultyconnection.org>
 - Site which features opportunities for faculty to become familiar with issues, examples, and discussion topics associated with using emerging technologies in teaching and learning.

- **IUPUI**
 - *Center for Teaching and Learning*
 - <http://www.center.iupui.edu/conferences.html>
 - Good linking page to conferences, workshops, and symposia

- **MERLOT Project**
 - <http://merlot.org> - Building learning communities
 - Information base for learning packages
 - Evaluation of learning packages by field experts

- **Northern Arizona University**
 - *Office of Teaching and Learning Excellence*
 - <http://www.nau.edu/~otle/resources/>
 - Good site for multiple web topics sites.

- **Rensselaer Polytechnic Institute**
 - *Center for Academic Transformation*
 - <http://www.center.rpi.edu/> - Center resources
 - Articles, Monographs, Websites about how information technology is transforming higher education

- **Staffordshire University**
 - *Computers in Learning and Teaching*
 - <http://www.staffs.ac.uk/cital>
 - Directory of sites devoted to subject

- Good international sources
- **Tufts University**
 - *Teaching with Technology Faculty Feature*
 - <http://www.tufts.edu/tccs/at/faculty-feature>
 - Video/audio interviews with faculty adopters
- **University of California, San Diego**
 - *Sharecase99*
 - <http://webcast.ucsd.edu/>
 - Full day conference showcasing UCSD's technology for university staff
- **University of Connecticut**
 - *Teaching with Technology*
 - <http://www.sp.uconn.edu/~terry/TTFac/teachtech.html>
 - Short vignettes from faculty who have adopted new technologies
 - *Ted Mills' Hot Links*
 - <http://www.sp.uconn.edu/~wwwf1/teds/ted.html>
 - Very nice reference page for a variety of users.
- **University of Delaware**
 - *Teaching, Learning, and Technology Center*
 - <http://www.udel.edu/learn/technology/index.html>
 - Offers a "Presentation Tips" web site and a copyright information web site
- **University of Iowa**
 - *Instructional Technology Calendar*
 - <http://easel.its.uiowa.edu/acad/itcal.nsf>
 - Good example of an events calendar for Instructional Technology Training
- **University of Kansas**
 - *Center for Teaching Excellence*

- <http://eagle.cc.ukans.edu/~cte/EducationalSites.html>
- Links to on-line teaching resource centers in all fifty states.

- **University of Maryland**
 - *Caprina Project*
 - <http://www.inform.umd.edu/Caprina>
 - Provides high quality interactive access to large collections of digitized images

- **University of Minnesota**
 - *Portfolio Site*
 - <http://www1.umn.edu/dmc/portfolio/portfolio.shtml>
 - Contains teaching portfolios of enhanced courses already being offered

- **University of North Carolina**
 - *“New Chalk”*
 - <http://www.unc.edu/courses/newchalk>
 - Features instructors’ experiences with new technologies

- **University of Pittsburgh**
 - *Center for Instructional Development and Distributed Education*
 - <http://www.pitt.edu/~ciddeweb>
 - Offers seminars in teaching practices and copyright issues

- **University of Texas Austin**
 - *Faculty Trends*
 - <http://www.utexas.edu/cc/cit/facweb/index.html>
 - News items, recent developments, examples of innovative web sites, a forum for posting ideas, award-winning web sites, announcements of grants and competitions
 - *World Lecture Hall*
 - <http://www.utexas.edu/world/lecture/index.html>
 - Contains links to pages created by faculty worldwide who are using the web to deliver courses in any language.

- **University of Washington**

- *Catalyst Project*
 - <http://depts.washington.edu/catalyst/home.html>
 - Provides profiles of programs that provide a vehicle to share ideas and experience, humanize the technology, and hopefully diffuse innovations
 - “News and Reviews” information exchange site
- **Virginia Polytechnical Institute**
 - *Center for Innovation in Learning*
 - <http://www.edtech.vt.edu/cil>
 - Umbrella organization for communication between instructional innovators
- **Wake Forest University**
 - *Computer-Enhanced Learning Initiative*
 - <http://www.wfu.edu/CELI/>
 - New Center Director chosen each semester
 - New Director focuses on two or three different programs
 - Swap and share
 - Benchmarking with other Departments and Institutions
- **Western Michigan University**
 - *Center for Teaching and Learning*
 - <http://www.wmich.edu/teachlearn/about/who.html>
 - Supports serious discussions of teaching and learning
 - Makes information on these issues available to learning communities

Conclusion

Two very clear facts emerged from this first stage attempt to develop an inventory of best practices involved in the process of faculty engagement and support. First, instead of focusing on “best practices,” a more profitable emphasis should be placed on “best systems.” By and large, institutions who have demonstrated the highest levels of success in faculty adoption, excel in most of the practice areas listed above. These institutions offer a comprehensive and integrated package of support services and engagement practices. The next edition of this paper will be more oriented to case descriptions of these institutions. The second fact to emerge from this overview is that communication is vital to successful institutional transformation. Support centers must be able to publicize their services to the academic community and, perhaps more important, faculty exchanges regarding transformation must be

shared. As Dorothy Frayer, in her excellent article which argues that institutions should offer a comprehensive and integrated package of support services and engagement practices, observed:

Faculty are often able to make the conceptual leap required to see how a colleague's use of technology might apply in their own discipline... For this reason, it is quite helpful to create opportunities for faculty to learn about technology use by colleagues within their discipline at other institutions...¹⁷

We argue that the institutions which feature the "best practices" in faculty engagement and support are the ones which are making these opportunities a reality.

¹⁷Dorothy A. Frayer, "Creating a Campus Culture to Support a Teaching and Learning Revolution", Cause/Effect V.22, n.2, 1999

Table 1: University Culture and Methods of Faculty Engagement

| | HIGH TRUST | | LOW TRUST | |
|----------------------|---|---|--|---|
| | High Resource | Low Resource | High Resource | Low Resource |
| HIGH INNOVATE | <p>Centralized Support</p> <p>Self-starters</p> <p>Administration takes maintenance role</p> | <p>Centralized Grant Development</p> <p>Outside Funding Support</p> | <p>Decentralized support</p> <p>Faculty Directed Projects</p> <p>High Faculty Profile in Planning</p> | <p>Encourage Faculty Outside Support Activities</p> <p>Encourage unit-based rewards</p> |
| LOW INNOVATE | <p>Emphasis on technical support</p> <p>Centralized Training</p> | <p>Outside team Visits</p> <p>Benchmarks</p> <p>Swap & Share</p> <p>Contagion Effects</p> | <p>Decentralized unit-based support</p> <p>Training of unit support personnel</p> | <p>No Transformation Likely</p> <p>Change in one parameter necessary</p> |