# FACULTY ADVANCEMENT PROGRAM FOR A TECHNOLOGY-ENHANCED CURRICULUM

A UNCF FAPT PROPOSAL

### A. LETTER OF SUPPORT

March 4, 2002

UNCF

Attn: Vida Durant 8260 Willow Oaks Corporate Drive First Floor Fairfax, VA 22083

Dear Ms. Durant:

I am pleased to support the UNCF FAPT proposal from Xavier University. A positive response from UNCF would allow us to support faculty in developing technologically enhanced curricula and further enhance our technology infrastructure.

Our institutional commitment to the infusion of technology into teaching began in 1995 with the creation of our Center for the Advancement of Teaching. With grants from the W.K. Kellogg Foundation, the Andrew W. Mellon Foundation, and the Bush and William and Flora Hewlett foundations, we have been able to raise the level of faculty understanding of the potential uses of technology as well as provide software and hardware to a number of faculty. With the commitment of our president, Dr. Norman C. Francis, we have been able to network the campus and provide Internet access to all faculty, students, and staff. At present almost all of our faculty have network able computers. Appreciation for the potential of technology is one thing; the actual use is another. Incorporating technology is a steep learning curve that requires time, and careful and thoughtful planning If funded, the proposed technology initiative will give faculty *time* and expert staff support to plan carefully and thoughtfully, working in small groups for the development of technologically enhanced curricula, along with badly-needed equipment to replace outdated computers.

To adequately prepare our students for the 21<sup>st</sup> century, we must teach them to use computer technology. To that end, we believe that our faculty should use technology in teaching. We are grateful for the support that UNCF may provide our faculty to achieve technologically enhanced curricula.

If I can provide additional information, please feel free to contact me.

Sincerely,

Elizabeth A. Barron, Ph.D. Associate Vice President for Academic Affairs

Cc: Dr. Norman C. Francis, President Xavier University of Louisiana

### **B. STATEMENT OF NEED**

Technology use at Xavier University was assessed in survey form in 1998 and again in 2001. A detailed analysis of the results of the surveys is provided in Appendix A. Here, a summary of the results is presented.

- The level of faculty interest in using computer technology in classrooms was high in 1998, and has continued at a high level through 2001.
- Nearly 90% of Xavier's faculty do not consider themselves to be novices or beginners in the use of basic applications such as word processors, and drill and practice software.
- Most Xavier faculty use some form of technology and feel encouraged by the university to use technology.
- Barriers to using technology such as insufficient technical support and insufficient equipment have been significantly reduced; however, approximately one-half the faculty still consider these issues to be barriers.
- An insufficient technology infrastructure remains a barrier to using Web-based instruction in Xavier's classrooms.
- Word processors, research resources, spreadsheets, and presentation software are the most commonly used forms of technology by faculty.
- Regular integration of technology for collaboration, communication, and research into classroom instruction is practiced by at least 75% of faculty.
- Web-based instruction is used by less than one-half of the faculty; however, there has been an increase in its use since 1998.
- Most faculty never use automated mailing lists, chat rooms, or bulletin boards.
- The technologies that faculty require students to use the most are word processors, research resources (*e.g.*, CD-ROMS or online resources), and electronic mail. Since 1998, there has been a modest increase in student use of e-mail as part of classroom instruction.

The results clearly indicated that the University must continue to work at eliminating the barriers to technology use, since many Xavier faculty consider issues such as infrastructure, equipment, personal training, and technical support as being barriers to their use of information technology. There is also a need to incorporate a variety of technologies into the teaching and learning experience. And last, there is a gap between faculty and student use of technology.

In February 2002, the Center for the Advancement of Teaching conducted a survey specifically for the UNCF request for proposals. 79% of faculty responding the survey indicated an interest in "curriculum development with technology enhancement." The complete results of the poll are be found in Appendix D.

### C. NARRATIVE OF PROPOSED INITIATIVE

This initiative seeks to support a meaningful and effective infusion of technology into the curriculum at Xavier University. This will be accomplished through the formation of communities in which small groups of faculty will work together to develop technologyenhanced curricula. A structured, faculty-driven program with a distinct planning process and an intensive summer institute will encourage a thoughtful and considered approach. Technology will be deployed in a manner that is appropriate, effective, and sustainable, and faculty will assess and critically evaluate their work.

#### About the Center for the Advancement of Teaching

Since 1994, the Center for the Advancement of Teaching has provided support for faculty at Xavier University of Louisiana, coordinating faculty development initiatives and focusing the University's efforts aimed at advancing the art of teaching at all levels. The Center creates opportunities for Xavier faculty to develop new teaching strategies and to incorporate the use of technology in educationally effective ways. Many of the Center's initiatives have been funded by grants.

In addition to programmatic initiatives, the Center offers numerous seminars and workshops on a broad variety of topics. The Center also provides support to faculty through its facilities (electronic classrooms and computer labs) and one-on-one consultation services.

#### How Will the Proposed Initiative Advance Teaching and Learning?

Teachers have always used the full range of available tools and methods to help their students learn. Information technology is the latest tool to be added to the kit, and it represents a special challenge because it is new, complicated, sometimes expensive and always changing. This initiative will advance the art of teaching through a measured and thoughtful approach to technology. Faculty will learn to use tools they select in ways that are effective and appropriate. Through a critical examination of their own work, and by sharing their results with their colleagues, faculty will improve their own teaching.

As a historically black university, Xavier is a gateway through which many students cross the digital divide. Many Xavier students are moving from a less technically complicated milieu into a professional world which demands increased sophistication and technical savvy even in non-technical fields. Broadly speaking, the Information Age requires its citizens to be literate not only in the traditional sense, but in terms of information technology. (The term *IT literacy* will be used to refer to this concept.) By creating a technology-rich learning environment, this initiative will serve to increase Xavier students' familiarity and confidence with technology, as well as their technical competence and ability to critically evaluate information from a widening array of diverse sources.

### What Technology Professional Development and Other Activities Will Be Undertaken During the Grant Period?

The Center conducts an ongoing series of workshops and seminars relating to issues of teaching and technology. The Center is also administering a grant from the Andrew W. Mellon Foundation which promotes individual faculty technology projects. (It is worth noting that the projects funded by the Andrew W. Mellon Foundation are not group-based and do not include an intensive summer institute as this proposed initiative does.)

### How Will the Proposed Initiative Help Advance the Institution's Education and Instructional Technology Strategic Plan?

Xavier University does not have an Education and Instructional Technology strategic plan. However, the guiding precepts of the proposed initiative come from Xavier University's own faculty.

In November 1999, Xavier's Teaching, Learning, and Technology Roundtable (TLTR) issued a position paper that articulates a vision for the university.

In this paper, the TLTR stated that:

The greatest immediate obstacle to the incorporation of information technology into the curriculum is the lack of financial resources necessary to support continuous maintenance and upgrading of both hardware and software...

Although this obstacle remains significant, Xavier has made significant progress in this regard, as the survey results included in Appendix A indicate. The hardware and software budget of this initiative will provide for needs specific to the curriculum development promoted here.

The TLTR paper further noted that:

...In relation to the faculty who will bear the primary responsibility for infusing technology into the teaching and learning process, strong and active institutional support is indispensable...

Through the proposed initiative, the Center will provide exactly this strong and active institutional support.

TLTR also made the following recommendations:

Teachers contemplating the adoption of technology in their courses should have the personnel support, and where necessary the training, release time, or stipend support, to encourage them to devote their creative energies to the development of truly educational technology for their students. The time investment required of faculty incorporating new technologies is often daunting, and should not be underestimated by colleagues or administration... In light of this, the proposed initiative allocates resources for training and stipend support. We believe the proposed schedule of activities gives faculty adequate time to pursue the ambitious task of incorporating technology into the curriculum in meaningful ways.

# How Will the Proposed Activities Strengthen Faculty and Promote Faculty Retention?

Creating and sustaining an institutional culture and infrastructure that support and promote a vital faculty is an evolving and exciting, yet complex, endeavor. This endeavor has gained particular attention in recent years, as evidenced perhaps most profoundly by the intense discussions and scrutiny given to post-tenure review. Clearly, no single campus initiative will suffice in this endeavor. That being said, the UNCF *Faculty Assistance Technology Program* is an important component of this vital-faculty equation.

Perhaps two of the most common roadblocks that hinder faculty members from achieving their ambitions and professional goals are time and support. Similarly, these same roadblocks are often the reasons faculty members look for new employment opportunities at other academic and non-academic institutions. In order for an institution like Xavier University to have a vital faculty, it must find creative, meaningful, and substantive ways to support its faculty members in reaching their professional goals and ambitions. Clearly, having a vital faculty is essential to having a vital institution like Xavier that aims to promote of a more just and humane society, and prepares its students to assume roles of leadership and service in society.

The proposed initiative provides resources to reduce these roadblocks, while assisting faculty in planning, developing, implementing, and evaluating technology-enhanced learning opportunities and courses for students at Xavier University. This initiative provides time and support (both financial and staff) during the summer, and support (again, financial and staff) during two academic years for communities of faculty members.

#### Is This a New Initiative or an Expansion of an Existing One?

The Center has a history of fostering faculty collaboration through communities focused on research, teaching, or technology. These communities were funded through a grant from the Bush Foundation which is now over. The Center is pursuing further funding from the Bush Foundation for teaching and research communities only. The initiative here proposed to the UNCF would serve to address the area of group technology projects.

The proposed initiative is therefore an expansion of an existing initiative.

### D. PLAN AND TIMELINE OF PROJECT ACTIVITIES

#### **Description of the Proposed Technology Faculty Development Plan**

This initiative will support Xavier faculty members who work together in developing new curricula that incorporate new technology or revising existing curricula to the same end. The goal of this initiative is to improve the curriculum and hence, student learning, at Xavier University by integrating information technologies in appropriate and effective ways.

To this end, the initiative will promote the formation of small (3-5 member) faculty teams or communities. These may be disciplinary or cross-disciplinary, and will be established through a competitive request for proposals issued by the Center for the Advancement of Teaching.

Communities will proceed through five distinct phases.

- 1. Planning and Research
- 2. Preliminary Curriculum Development
- 3. Summer Institute: Intensive Training and Curriculum Development
- 4. Curriculum Implementation
- 5. Evaluation and Reflection

In the first phase, faculty will collaborate in planning their curriculum development, setting specific goals for the group and doing the basic research necessary to determine

what technological components they will integrate into the curriculum. Each community will focus particular attention on planning their own Summer Institute (see below). Each community will elect a leader during this phase who will be responsible for sundry management details. The community leader will be responsible for a short written report to the Center at the end of each phase.

In the second phase, faculty will prepare for their Summer Institute by doing all the necessary preliminary curriculum development. The Center will make necessary software and hardware purchases on behalf of the communities during this phase.

The Center will serve in an advisory capacity during the first two phases, meeting with the communities regularly, staying in touch with the community leaders, and making sure that things are "on track."

The Summer Institute will be the third phase for each community. This will be a oneor two-week period of intensive work with two goals: training and (re)design. During the first portion of the institute, the community will receive training necessary for the successful implementation of the planned curriculum. During the second portion, the community will do the actual work necessary to produce the new curriculum. It shall be the responsibility of the Center to arrange all necessary logistics for a successful Summer Institute according to the specifications of the community as developed in the initial phase.

In the fourth phase, the individual faculty members from each community will put the new curriculum into practice in the classroom.

In the fifth and final phase, the Center will work closely with the communities to evaluate the effectiveness of the project as a whole, with special attention to its impact on student learning.

It is anticipated that each community will accomplish these phases over the course of two academic years. The Center will sponsor two overlapping cycles of development over the three-year course of the initiative, involving approximately 24-36 faculty members in total.

If funding permits, the Center will host a conference in the summer of 2005 for the purpose of sharing the results of this initiative with other HBCUs.

### Timeline

Details of each phase may be found in the description above.

		CYCLE I	CYCLE II	
2	May	Request proposals from Xavier		
0		faculty		
0	Summer	Evaluate proposals		
2	Fall	Phase 1: Planning and Research		
	Spring	Phase 2: Preliminary		
		Development		
2	May		Request proposals from Xavier	
0			faculty	
3	Summer	Phase 3: Summer Institute	Evaluate proposals	
		First Annual Progress Report		
	Fall	Phase 4: Implementation	Phase 1: Planning and Research	
	Spring	Phase 5: Evaluation and	Phase 2: Preliminary Development	
2		Reflection		
0	Summer		Phase 3: Summer Institute	
4		Second Annual Progress Report		
	Fall		Phase 4: Implementation	
2	Spring		Phase 5: Evaluation and Reflection	
0	Summer	Conference Final Progress Report		
0 5				

#### **Performance Expectations**

It is expected that sponsored faculty will increase their use of course-related technology as a direct result of this initiative. However, a mere quantitative increase in time spent at a keyboard is no measure of success. Indeed, it is precisely the *quality* of faculty technology use which this initiative seeks, in part, to improve. It is expected that faculty will use technology in ways that are well-planned and thoughtful. Faculty should grow in their understanding of what new tools technology can offer teachers and students, and which tools are appropriate for which tasks. It is also expected that faculty will increase their ability to assess and evaluate the effectiveness of using technology in their teaching.

### **Desired Outcomes**

The initiative should increase student use of technology as measured in the survey data found in Appendix A. It is also hoped that students will increase their IT literacy, technical skill levels, and comprehension of course content.

It is hoped that all participating faculty will move up at least one level on the IT Professional Development Phase Identification and Evaluation Training chart (see Appendix C).

Position	Responsibility
Director (Center for the Advancement of	Reporting, oversight
Teaching)	
Technology Coordinator (CAT)	Facilities management, hardware consultation
Multimedia Specialist (CAT)	Software and design consultation
Instructional Specialist (CAT)	Assessment
Administrative Assistant (CAT)	Logistics, communications
Community Leader (Faculty)	Communication with CAT

#### **Organization Hierarchy Structure Chart**

### E. EVALUATION COMPONENT

As a participant in the UNCF's *Faculty Advancement Program in Technology*, Xavier's Center for the Advancement of Teaching will promote the organization of small communities of faculty to revise or create curricula to utilize information technology in the teaching and learning process. The Center will be working with an outside consultant during the grant period to assist in all our evaluation efforts. The Center will also monitor its own performance, as well as the success of the initiative by assembling the assessment information and comparing results with the consultant.

The evaluation plan follows a basic *Before* and *After* design strengthened by comparisons of teams using similar technologies. Data will be collected from faculty and students in courses that will be affected by the new or revised curricula. These non-equivalent groups will be compared to communities using similar technologies.

In the first phase, planning and research, an initial survey will provide the following:

- The types of technology a faculty member currently uses
- The level of faculty technology expertise as per Appendix C
- Student use of technology, usage frequency, methods, and courses requirements for student use of technology
- If revising an existing curriculum, students in the appropriate courses will be surveyed to provide baseline data on issues of IT literacy and technical skill levels
- Student course evaluations and course grades (where possible)

These data will serve as benchmarks for later comparison.

In phase two, completion of a draft curriculum will be the milestone.

In phase three, the milestones of progress will be the successful completion of the summer institute and the production of curriculum materials. Success will also be measured from evaluations of the summer institute. During the summer institute, faculty levels of technology expertise will be assessed. Also the phase of technology inclusion in the new or revised curricula will be self-assessed (see Appendix C).

In the fourth phase, implementation of the new or revised curriculum will be considered a milestone towards progress. Students will be surveyed at the beginning and end of the semester to measure the impact of the new or revised technology-enhanced curricula on IT literacy, technical skill levels, and comprehension of course content.

In phase five, the Center will assist faculty in analyzing the data collected throughout the previous four phases. Faculty will reflect upon and summarize their findings in a report to be published on the Center's website and possibly to be presented at a conference in summer 2005.

Overall, progress for this initiative will be measured by gains in criteria established with the *Before* and *After* surveys. We expect the impact on teaching and learning to be measurable in terms of percent increase in use of technology (for faculty and students), variety of technology types, evidence of faculty advancing in levels of technology expertise, and student IT literacy, technical skill levels, and comprehension of course content.

### F. BUDGET

The bulk of funds are allocated toward faculty stipends. Stipends are granted upon completion of each phase. If a faculty member does not complete the milestones for a phase in a timely fashion, his or her stipend will be reallocated.

Faculty Phase 1 Stipend	\$400
Faculty Phase 2 Stipend	\$400
Faculty Phase 3 Stipend (Summer	\$2,000
Institute)	
Faculty Phase 4 Stipend	\$400
Faculty Phase 5 Stipend	\$400
Total per Faculty	\$3,600

Each community will consist of three or more faculty members. For the purposes of this budget, we have allowed for four faculty members per community. A certain variance is permissible; the budget will still work with three or five members per community. Larger communities will be allowed in exceptional cases.

Faculty Stipends (four faculty at \$3,600	\$14,400
each)	
Faculty Fringe Benefits (16% of	\$2,304
stipends)	
Summer Institute Fees	\$2,500
Misc. Administrative Costs	\$500
Total per Community	\$19,704

For the purposes of this budget, we have allowed for four communities of four members each over the three-year course of this grant. Again, a certain variance is not only permissible but anticipated. Depending on faculty response, the Center might sponsor fewer communities with more members or more communities with fewer members.

Assuming four communities of four faculty each, a \$100,000 grant from UNCF would also allow for a modest technology budget which the Center will use to meet hardware and software requests from the communities.

Communities (four communities at	\$78,816
\$19,704 ea.)	
Technology budget	\$21,184
Grand Total	\$100,000

### G. SUSTAINABILITY

The University's commitment to faculty development and the Center for the Advancement of Teaching is exemplified by its support of Center staff salaries. During the proposed grant period (May 2002 through June 2005), the University will have primary responsibility for staff salaries.

Administrative and staff support					
(approximate percentage)					
Source of funding	May 2002 -	May 2003 -	May 2004 –		
	June 2003*	June 2004*	June 2005*		
	\$ 262,796	\$ 270,680	\$ 278,800		
Xavier University	(89%)	(100%)	(100%)		
Andrew W. Mellon	\$ 32,650	\$ -	-		
Foundation	(11%)				
TOTAL	\$ 295,446	\$ 270,680	\$ 278,800		
	(100%)	(100%)	(100%)		

Xavier University and foundation support of the Center's administrative and staff salaries, May 2002 through June 2005. \*Based on a 3% increase over the previous year's costs.

In addition to the support indicated above, the University also provides funds for programmatic (non-salary) activities (3% of the total 2000-2001 operating budget). Finally, it should be noted that the University provides for the Center's facilities, Internet connections, and information technology network and user technical support.

In the absence of any grant support, the University will continue to support Center staff salaries. In turn, Center staff members will continue their work at improving faculty and student scholarship, and teaching and student learning. They will, for example, continue to offer workshops, and consult with and assist faculty members. Through the diverse array of faculty development and information technology opportunities provided by the University and its Center for the Advancement of Teaching, the Center's initiatives will continue, albeit to a lesser degree. Xavier's faculty members are committed to deep student learning, and faculty and student scholarship by means of innovative and effective uses of information technology.

Xavier has implemented an ambitious plan to increase endowments for scholarships and faculty salaries, expand and renovate its facilities, construct new student housing, and upgrade information systems, network capability, and instructional technology. There are many faces to faculty development, which include support in pedagogy, technology, scholarship, and sustaining a supportive campus culture. Xavier's faculty members have a clear focus on its mission, due in great measure to the University's commitment to and support of faculty development.

Xavier's most focused and substantive experiences with faculty development and technology began in earnest 1994 with the founding of the Center for the Advancement of Teaching. As a result of generous faculty development and technology grants from the Andrew W. Mellon Foundation, Bell South Foundation, Apple Computer, Inc., and The Bush and William and Flora Hewlett foundations, Xavier has made progress toward integrating information technology into the fabric of the institution—both academically and administratively. What started as a faculty-led, grass-roots commitment to faculty development has since matured into a broad range of initiatives aimed at improving teaching and student learning, and supporting faculty and student research through innovative and effective uses of information technology. Xavier's administration has a deep commitment to faculty development and the Center, and Xavier's faculty members have a strong voice in directing the future of faculty development at the institution.

### H. BIOGRAPHY of PROJECT DIRECTOR

Dr. Todd Stanislav will direct this three-year project. Dr. Stanislav is an Associate Professor of Biology and the Director of Xavier University's Center for the Advancement of Teaching. While serving as the Center's Director, Dr. Stanislav continues to teach in the Biology Department and serve on departmental and university committees. As a member of the Biology Department, Dr. Stanislav has written several grants, the most recent funded by the Department of Defense's Army Office of Research to acquire teaching and research equipment for a campus greenhouse.

Since 1994, and prior to becoming the Center's Director, Dr. Stanislav actively participated as a full-time faculty member in the Biology Department in Center initiatives. In 1997, he served as one of the Center's Faculty-in-Residence with responsibilities for co-directing the day-to-day activities of Center staff, and leading a group of faculty members in the Course Portfolio Working Group. In 1998, Dr. Stanislav was appointed the Center's Director.

As Director of the Center for the Advancement of Teaching, Dr. Stanislav is responsible for the Center's budget and programmatic activities. Specific responsibilities include:

- Coordinate activities of the Center's staff and faculty
- Create opportunities for Xavier faculty members to pursue professional goals
- Seek external grant support for faculty development opportunities and infrastructure appropriate to the Center
- Prepare planning documents, budgets, and reports for the Center
- Report to the Vice President for Academic Affairs.

Since 1998, Dr. Stanislav has managed three grant initiatives in the Center for the Advancement of Teaching. These include:

- A three-year (1998-2001) \$450,000 grant from The Bush and William and Flora Hewlett foundations that aimed to improve student learning by fostering a campus culture where teaching and research are improved and made public. The Center promoted this aim through a continuous program of faculty development which encouraged and supported (a) faculty and student conversations that were focused on specific teaching and learning problems and opportunities, and (b) faculty and student research, including the scholarship of teaching.
- A three year (1998-2001) \$450,000 grant from The Andrew W. Mellon Foundation to engage faculty in faculty development and training activities that

will enable them to acquire, improve and advance their capabilities in using information technologies to transform the teaching and learning process. This project provided (a) training in the use of currently available information technologies and provide the experiences with these technologies necessary for faculty to develop applications to transform the teaching-learning environment, (b) expert support and consultation necessary for faculty to integrate information technologies into their courses, and (c) incentives for individual faculty to develop and implement Web-supported, Web-based courses, and other more innovative uses of information technology.

3. Beginning in September 2002, the Center implemented a three-year \$350,000 grant from the Andrew W. Mellon Foundation to support individual faculty uses of information technology in innovative, substantive, and educationally important ways.

### APPENDIX A: SEF Data Analysis

How do Xavier faculty use and think about technology? The following includes highlights from items on the Southern Education Foundation survey responses, which was administered in 1998 and again in 2001. Percentages have been rounded off.

#### Item I

I am just beginning to learn how to use basic applications such as word processors and drill and practice software.

Both surveys average a 90% disagreement with this statement. Nearly 10% of faculty consider themselves beginners in the use of basic applications (word processors and drill and practice software).

#### Item 2

I am familiar with a variety of applications and often require students to use technology to complete assignments.

There was no significant change in responses for faculty familiar with a variety of applications and requiring students to use technology to complete assignments. There was a rise from 63% in 1998 to 70% in 2001 on agreement with item 2.

#### Item 3

I regularly use technology for collaboration, communication, and research and integrate these processes into classroom instruction.

There was a significant change from 61% agreement in 1998 to 75% agreement in 2001. In 1998, 39% of faculty did not use technology for collaboration, communication, and research and to integrate those processes into instruction. In 2001, only 75% of faculty used technology for collaboration, communication, and research or integrate them into instruction.

#### Item 4

I use technology as a tool to craft curriculum and new teaching and learning techniques.

In 1998, 66% agreed and in 2001, 70% agreed. This 4% increase was not statistically significant.

#### Item 5

To what extent do you currently incorporate computer technology into classroom instruction?

In 1998, 25% of faculty frequently incorporated technology into classroom instruction; this number increased to 35% in 2001. There was a shift in responses for this item from 'seldom' (loosing 12 percentage points) to 'frequently' (gaining 10 percentage points). The option response 'occasionally' remained at approximately 40% for both survey years. These changes were not statistically significant.

Insufficient technical equipment infrastructure (*i.e.*, cables, routers, wiring) is a barrier to my incorporating computer technology into my classroom instruction (excluding Web-based instruction).

67% of responses agreed with this statement in 1998 and 55% agreed in 2001. Therefore, the perception of infrastructure as a barrier is decreasing, although not significantly.

#### Item 7

Insufficient equipment (*i.e.*, computers, servers) is a barrier to my incorporating computer technology into my classroom instruction (excluding Web-based instruction).

A significant change in responses occurred for this item. In 1998, 43% strongly agreed and 3% strongly disagreed; in 2001, 22% strongly agreed and 12% strongly disagreed. Therefore, insufficient equipment as a barrier to incorporating computer technology into classroom instruction (excluding Web-based instruction) has been significantly reduced.

#### Item 8

Insufficient technical support (*i.e.*, technology administrators, *etc.*) is a barrier to my incorporating computer technology into my classroom instruction (excluding Web-based instruction).

Significant changes occurred for this item. The changes occurred most among responses for strongly agree (36% in 1998 and 5% in 2001) and disagree (25% in 1998 and 44% in 2001). Therefore the notion of technical support as insufficient and a barrier have been significantly reduced. If the agree and strongly agree percentages are combined, then overall 70% has been reduced to 34% of faculty who feel that technical support was insufficient and a barrier.

#### Item 9

Insufficient personal training on computer technology (excluding Web-based instruction) is a barrier to my incorporating computer technology into my classroom.

The response percentages shifted towards disagreement with statement. Combining agree statements (strongly agree with disagree) highlights the shift in opinion with 44 % agree in 1998 to 27% for 2001. Therefore fewer faculty agree that insufficient personal training on computer technology (excluding Webbased instruction) is a barrier to their incorporating computer technology into the classroom.

#### Item 10

Do you currently incorporate Web-based instruction into your course work?

Frequent use of Web-based instruction into course work has significantly increased from 7% in 1998 to 21% in 2001

#### Item 11

Insufficient technical equipment infrastructure (*i.e.*, cables, routers, wiring) is a barrier to my incorporating Webbased instruction into my classroom.

Responses for this item have changed from 1998. Disagreement (strongly agree and agree combined) with this statement increased from 23% to 39%. Therefore more than half of the faculty agree in some form

that insufficient technical equipment infrastructure (*i.e.*, cables, routers, wiring) is a barrier to incorporating Web-based instruction into the classroom.

#### Item 12

Insufficient equipment (*i.e.*, computers, modems, servers) is a barrier to my incorporating Web-based instruction into my classroom."

A significant change occurred among responses for this item. Agreement (strongly agree and agree combined) with this statement shifted from 68% in 1998 to 40% in 2001. Therefore significantly fewer faculty agree that insufficient equipment (*i.e.*, computers, modems, servers) is a barrier to incorporating Web-based instruction into the classroom.

#### Item 13

Insufficient technical support (*i.e.*, technology administrators, webmasters, *etc.*) is a barrier to my incorporating Web-based instruction into my classroom.

Statistically significant changes occurred in response distribution for this item. Agreement (strongly agree and agree combined) shifted from 65% to 39% in 2001. Therefore less than half of the faculty agree that insufficient technical support (*i.e.*, technology administrators, webmasters, *etc.*) is a barrier to incorporating Web-based instruction into the classroom.

#### Item 14

Insufficient personal training on Web-based instruction is a barrier to my incorporating Web-based instruction into my classroom.

Agreement (strongly agree and agree combined) percentage points shifted from 59% in 1998 to 39% in 2001. Therefore significantly fewer faculty agree with this statement.

#### Item 15

To what extent do you use word processors?

Responses for this item remain relatively unchanged from 1998. Approximately 96% of faculty use word processors at least once a month.

#### Item 16

To what extent do you use spreadsheets?

A small increase has occurred in the use of spreadsheets. More faculty use spreadsheets at least once a month. Percentage points changed from 50% in 1998 to 58% in 2001.

#### Item 17

To what extent do you use presentation software?

The percentage of faculty to use presentation software at least once a month increased from 32% in 1998 to 41% in 2001.

To what extent do you use Web publishing software?

Faculty use of Web publishing software at least once a month has increased from 25% to 32%.

#### Item 19

To what extent do you use software for collaborative work (e.g., NetMeeting, C-U-See Me, Lotus Notes, etc.)?

The use of software for collaborative work, at least once a month, remains approximately 11% of faculty. However the percentage of faculty to who do not use collaborative software has decreased from 79% in 1998 to 68% in 2001.

#### Item 20

To what extent do you use research resources (e.g., CD-ROM or on-line resources)?

The use of research resources by faculty, at least once a month, has increased from 69% in1998 to 75% in 2001.

#### Item 21

To what extent do you require your students to use word processors?

53% of faculty in 1998 required students to use word processors at least once a month. An insignificant increase occurred in 2001 to 57%.

#### Item 22

To what extent do you require your students to use spreadsheets?

Approximately 70% of faculty never require students to use spreadsheets in 1998 and 2001.

#### Item 23

To what extent do you require your students to use presentation software?

Approximately 60% of faculty never require students to use presentation software both in 1998 and 2001.

#### Item 24

To what extent do you require your students to use Web publishing software?

Approximately 87% of faculty in1998 never required students to use Web publishing software and 89% never required students to use it in 2001.

#### Item 25

To what extent do you require your students to use software for collaborative work (*e.g.*, NetMeeting, C-U-See Me, Lotus Notes, etc.)?

Approximately 83% of faculty never used the software in 1998 and 82% never used it in 2001. However, 5% in 2001 up from 1% in 1998 use the software less than once a month, but at least once in three months.

To what extent do you require your students to use research resources (e.g., CD-ROM or on-line resources)?

In 1998, 37% of faculty required students to use research resources at least once a month and 41% required it in 2001. There was a slight decrease in faculty who never require students to use the resources, from 28% in 1998 to 19% in 2001.

#### Item 27

I \_\_\_\_\_\_ use e-mail as a part of classroom instruction.

In 1998, 25% of faculty frequently used e-mail as part of classroom instruction; that usage and increased to 32% in 2001. Faculty who never use e-mail as part of classroom instruction decreased from 38% in1998 to 23% in 2001.

#### Item 28

I \_\_\_\_\_\_ use bulletin boards as a part of classroom instruction.

In 1998, 6% of faculty frequently used bulletin boards as part of classroom instruction and that usage increased to 12% in 2001. Faculty who never use bulletin boards as part of classroom instruction decreased from 75% to 61%.

#### Item 29

I \_\_\_\_\_\_ use list servers as a part of classroom instruction.

More faculty never use list servers as part of classroom instruction, with 6% (to never use) in 1998 and 76% (to never use) in 2001. Frequent use of list servers was at 5% in1998 and 4% in 2001.

#### Item 30

I \_\_\_\_\_\_ use chat lines as a part of classroom instruction.

More faculty never use chat line as part of classroom instruction with 6% in 1998 and 81 % in 2001. Frequent use levels were at 1% in 1998 and 5% in 2001.

#### Item 31

What is your first preference for receiving training in the use of computer technology?

There has been little change in faculty preferences for receiving training. In decreasing order:

		In 1998	In 2001
1.	Workshops provided by		
	designated faculty/professional	53%	57%
	trainer		
2.	One-on-one instruction	27%	25%
3.	Self-paced tutorial	20%	19%

To what extent are you interested in incorporating computer technology in your classes?

Faculty interest at the level of 'very much' for incorporating computer technology into courses has decreased from 65% in 1998 to 57% in 2001. Interest at the 'not at all' level increased from 2% in 1998 to 4% in 2001.

#### Item 33

Do you receive encouragement from your institution to integrate computer technology into classroom instruction? A *yes* response in 1998 was given by approximately 90% of faculty and 84% in 2001.

Item 34

My gender is\_\_\_\_\_

In 1998 52% of survey responders were male and in 2001 46% were male. Therefore a slight shift in the sex of faculty completing the survey occurred in 2001.

Item 35

The number of years I have been teaching in college is \_\_\_\_\_

37% of faculty had taught in college for 0-5 years in 1998 and in 2001 the percentage was 23.

### **APPENDIX B: STaR Chart**

The survey was completed by Xavier's Vice President for the Office of Technology Administration, a faculty member in the Division of Education, and the staff of the Center for the Advancement of Teaching. The results are inconclusive as all three obtained different results. Of the eight measures the survey generates, there was not a single point upon which all three surveys agreed. However, two of the surveys did yield an overall ranking that places Xavier in the *Advanced Tech* level.

These responses are presented in the chart below.

Measure	Respondent 1	Respondent 2	Respondent 3
University	Advanced Tech	Advanced Tech	Developing Tech
Leadership			
University	Advanced Tech	Advanced Tech	Developing Tech
Infrastructure			
SCDE Leadership	Advanced Tech	Target Tech	Developing Tech
SCDE	Target Tech	Target Tech	Developing Tech
Infrastructure			
SCDE Curriculum	Advanced Tech	Target Tech	Early Tech
SCDE Faculty	Early Tech	Developing Tech	Early Tech
SCDE Students	Early Tech	Advanced Tech	Early Tech
SCDE Alumni	Early Tech	Developing Tech	Early Tech
Overall	Advanced Tech	Advanced Tech	Developing Tech

## APPENDIX C: IT Professional Development Phase Identification and Evaluation Training Chart

According to our estimation, most Xavier faculty are at Adoption-Adaptation levels.

	<u>Entry</u>
Ŧ	<b>Adoption</b>
Ŧ	Adaptation
	Appropriation
	<b>Invention</b>

The data upon which this conclusion is based may be found in Appendix A. A more rigorous assessment is planned as a part of this initiative's evaluation component.

### APPENDIX D: February 2002 Poll Results

To assist the Center for the Advancement of Teaching in its preparation of a proposal to the UNCF, we sought faculty guidance and input on two important questions. The results of the poll are shown below.

Total voters: 54

Are you more interested in group or individual funding?

Prefer groups:	14	
Prefer individual work:	21	
No preference:	19	

What topics interest you the most? Please check all that apply.

