

## Highlights of the Academic Computing Long-Range Planning Survey

Conducted for the Computing and Information Technologies Planning and Goals (CITPG) Committee at North Dakota State University (NDSU), November-December 2005

**Purpose of the Study:** The key objective of CITPG's survey was to provide insight into what faculty members see as the major academic computing concerns facing NDSU and how to prioritize topics relating to those concerns. NDSU's CITPG Committee meets regularly to discuss and formulate plans for campus computing activities. Their main directive is to explore ways to facilitate the use of computer technology in teaching and learning. The committee is composed of representatives from each college as well as Computer Science, Ag Communications, ITS, Library, Staff Senate, and Student Senate.

**Study Design:** The Deans of each NDSU college were asked to notify faculty of the academic computing survey for CITPG in advance and encourage faculty to complete the survey. After that, an invitation to participate in the survey was sent to all NDSU faculty via the faculty email listserv on November 21, 2005. Data collection continued through December, with an email reminder sent mid-December. The survey instrument was designed by staff at the North Dakota State Data Center under the direction of Dr. Richard Rathge and with input from CITPG committee members. Two definitions were provided to participants. "Information technology (IT) broadly speaking includes computers, ancillary equipment, software, procedures, and support services involved in the manipulation, management, movement, control, display, or exchange of data and information." "Academic computing can be defined as using information technologies to support effective teaching and learning. Faculty members see the impact of academic computing in different ways, including delivery of information, management of information, and creation or manipulation of information." A total of 218 faculty members completed the survey.

### Key Findings:

#### 1. General views regarding experiences with IT and academic computing (see Appendix Tables 1-5)

- ▶ 72% said they feel that IT is very useful to them in the classroom
- ▶ 49% said they were very confident with using IT in the classroom while 45% said they were somewhat confident
- ▶ 71% said they used IT in the classroom on a regular basis while 27% said they use it sometimes
- ▶ 50% said that IT is integrated very well in their academic discipline while 44% said it is integrated somewhat well
- ▶ 37% said that NDSU's academic computing infrastructure is very adequate for integrating IT in their academic discipline while 58% said it is somewhat adequate

#### 2. General levels of agreement regarding statements about IT in the classroom (see Appendix Table 6)

- ▶ Faculty were asked to respond to statements on a scale from 1 to 5, where 1 is "strongly disagree" and 5 is "strongly agree."
- ▶ Overall, faculty somewhat disagreed that they have had problems with the scheduling process for getting rooms that have the technology they need (mean=2.82). However, while 46% disagreed that they have had problems, 35% agreed.
- ▶ Overall, faculty agreed that equipment in the classroom works properly when they need it (mean=3.48). However, while 56% agreed that equipment works properly when they need it, 19% disagreed.

- ▶ Overall, faculty somewhat agreed that they are concerned about relying too heavily on technology (mean=3.15). However, while 42% agreed that they are concerned, 34% disagreed.
- ▶ Overall, faculty somewhat disagreed that they are frustrated with campus communication using IT (mean=2.70). However, while 44% disagreed that they are frustrated, 25% agreed.

### 3. Prioritizing topics relating to academic computing (see Table 1, Appendix Tables 7-11)

- ▶ Faculty were asked to help the committee decide where to place its resources by indicating what priority they give each topic in the following categories: Faculty training, Distance education, Partnerships, Knowledge management, and Mobile computing and wireless access. They were asked to respond on a scale from 1 to 5, where 1 is “not a priority” and 5 is “a high priority.”
- ▶ Faculty placed the highest priority on faculty training, with three of the five highest priorities falling in this category. Implementing campus-wide wireless access and supporting “any place, any time” information delivery were also part of the top five.
- ▶ The only topic faculty indicated was not much of a priority was extending access to IT activities to non-NDSU ID holders.
- ▶ See section #7 for a list of other high priority concerns related to academic computing that faculty believed the committee should consider.

**Table 1. Faculty ranking of topics according to overall priority**

Topic Category	Topic	Mean
Faculty training	Providing greater IT support within departments as programs rely more on technology	4.08
Mobile computing and wireless access	Implementing campus-wide wireless access	4.02
Faculty training	Providing proper training for faculty corresponding to implementation of information technologies	3.89
Faculty training	Helping faculty explore opportunities for using IT in the classroom	3.72
Distance education	Supporting “any place, any time” information delivery (e.g., web-based classes, Blackboard)	3.71
Knowledge management	Facilitating communication to leverage research and activities among various groups on campus	3.61
Knowledge management	Creating a university-wide Knowledge Management System that would enable processes and procedures to be captured, shared, and reused (e.g., for grant-writing, continuity of services)	3.54
Mobile computing and wireless access	Equipping all faculty with a mobile computing device (e.g., notebook, PDA, iPod) that has wireless connectivity	3.49
Partnerships	Using IT to facilitate on-campus collaboration (e.g., through virtual campus communities)	3.37
Partnerships	Creating partnerships between campus entities and outside companies through the use of IT	3.31
Faculty training	Focusing on a cultural change on campus that paves the way for using technology in innovative ways	3.27
Mobile computing and wireless access	Equipping all students with a mobile computing device (e.g., notebook, PDA, iPod) that has wireless connectivity thus making every classroom a computer classroom	3.14
Distance education	Supporting live, interactive information delivery (e.g., teleconferencing, IVN, webcams)	3.10
Distance education	Offering more online courses, programs, and degrees	3.09
Partnerships	Extending access to IT activities to non-NDSU ID holders (e.g., Blackboard, library resources) in the spirit of NDSU’s mission of partnerships and extension	2.89

### **3A. Prioritizing topics relating to FACULTY TRAINING** (*see Appendix Table 7*)

- ▶ Faculty were asked to indicate what priority they give each topic on a scale from 1 to 5, where 1 is “not a priority” and 5 is “a high priority.”
- ▶ Overall, faculty indicated that helping faculty explore opportunities for using IT in the classroom is a priority (mean=3.72); 28% indicated it is a high priority.
- ▶ Overall, faculty indicated that providing proper training for faculty corresponding to implementation of information technologies is a priority (mean=3.89); 37% indicated it is a high priority.
- ▶ Overall, faculty indicated that providing greater IT support within departments as programs rely more on technology is a high priority (mean=4.08).
- ▶ Overall, faculty indicated that focusing on a cultural change on campus that paves the way for using technology in innovative ways is somewhat of a priority (mean=3.27). However, while 41% indicated it is at least somewhat of a priority, 23% indicated it is not much of a priority.

### **3B. Prioritizing topics relating to DISTANCE EDUCATION** (*see Appendix Table 8*)

- ▶ Faculty were asked to indicate what priority they give each topic on a scale from 1 to 5, where 1 is “not a priority” and 5 is “a high priority.”
- ▶ Overall, faculty indicated that supporting live, interactive information delivery is somewhat of a priority (mean=3.10). However, while 36% indicated it is at least somewhat of a priority, 31% indicated it is not much of a priority.
- ▶ Overall, faculty indicated that supporting “any place, any time” information delivery is a priority (mean=3.71); 35% indicated it is a high priority.
- ▶ Overall, faculty indicated that offering more online courses, programs, and degrees is somewhat of a priority (mean=3.09). However, while 40% indicated it is at least somewhat of a priority, 32% indicated it is not much of a priority.

### **3C. Prioritizing topics relating to PARTNERSHIPS** (*see Appendix Table 9*)

- ▶ Faculty were asked to indicate what priority they give each topic on a scale from 1 to 5, where 1 is “not a priority” and 5 is “a high priority.”
- ▶ Overall, faculty indicated that extending access to IT activities to non-NDSU ID holders in the spirit of NDSU’s mission of partnerships and extension is not much of a priority (mean=2.89). However, while 40% indicated it is not much of a priority, 33% indicated it is at least somewhat of a priority.
- ▶ Overall, faculty indicated that creating partnerships between campus entities and outside companies through the use of IT is somewhat of a priority (mean=3.31). However, while 47% indicated it is at least somewhat of a priority, 23% indicated it is not much of a priority.
- ▶ Overall, faculty indicated that using IT to facilitate on-campus collaboration is somewhat of a priority (mean=3.37). However, while 49% indicated it is at least somewhat of a priority, 23% indicated it is not much of a priority.

### **3D. Prioritizing topics relating to KNOWLEDGE MANAGEMENT** (*see Appendix Table 10*)

- ▶ Faculty were asked to indicate what priority they give each topic on a scale from 1 to 5, where 1 is “not a priority” and 5 is “a high priority.”
- ▶ Overall, faculty indicated that creating a university-wide Knowledge Management System that would enable processes and procedures to be captured, shared, and reused is a priority (mean=3.54); 21% indicated it is a high priority.
- ▶ Overall, faculty indicated that facilitating communication to leverage research and activities among various groups on campus is a priority (mean=3.61); 23% indicated it is a high priority.

### **3E. Prioritizing topics relating to MOBILE COMPUTING AND WIRELESS ACCESS (see Appendix Table 11)**

- ▶ Faculty were asked to indicate what priority they give each topic on a scale from 1 to 5, where 1 is “not a priority” and 5 is “a high priority.”
- ▶ Overall, faculty indicated that implementing campus-wide wireless access is a high priority (mean=4.02).
- ▶ Overall, faculty indicated that equipping all faculty with a mobile computing device that has wireless connectivity is a priority (mean=3.49); 34% indicated it is a high priority.
- ▶ Overall, faculty indicated that equipping all students with a mobile computing device that has wireless connectivity thus making every classroom a computer classroom is somewhat of a priority (mean=3.14). However, while 43% indicated it is at least somewhat of a priority, 33% indicated it is not much of a priority.

### **4. What faculty need to effectively integrate academic computing in their discipline (see Appendix Table 12)**

- ▶ 70% said they need software
- ▶ 65% said they need computing hardware
- ▶ 60% said they need training
- ▶ 50% said they need networking infrastructure
- ▶ 45% said they need programming support
- ▶ 43% said they need peripheral devices
- ▶ 10% suggested other needs, including:
  1. Linux support
  2. Clerical support
  3. Research support!!
  4. Multiple resources available and distributed, i.e., camera and projector in every room vs overhead projectors (do away with transparencies!!!).
  5. Help with esoteric problems and needs on an intermittent basis (e.g., dedicated server).
  6. My level of proficiency is only moderate; hence, I do not know what I might actually need.
  7. Technical support within the department.
  8. Equipment, software, and classrooms available for the use of technology.
  9. See above concerning clusters and reservation procedures.
  10. Cross platform / cross OS support!!! Windows is not the only operating system out there and it is by far the least efficient for the end user. Please provide more and better support of other OS's.
  11. Campus wide wireless access (plug and play/open access) and an up-to-date bank of laptops available for check out and use in teaching groups of students.
  12. Full support on "Unix" boxes, such as SGI computers.
  13. Student access to server space – regular, reliable, well-supported on the front and back-end. Academic computing in my discipline means getting students - as much or more than faculty - to do work on the web, and NDSU has been very reluctant to give students good web services.
  14. Space.
  15. Support needed on projects like printing a poster, statistical help that should be available and a contact person should be available to faculty. Not come over to the help desk and we will find someone who may help. A poster took 4-5 trips over to ITS before the right help and support could be found.
  16. To "more effectively integrate."

17. A PDA with software that can communicate w/ my computer would be helpful. The new faculty computer budget only covers the computer itself (and not the software and few peripherals) if you use high memory software such as GIS, Photoshop, AutoCAD which require far faster and more expensive computers than are needed for folks who only use Word, Excel and the internet.
18. Right now, I feel like I have what I need. Does this question ask what needs are remaining to be met, or is it just a general question about what I currently use?
19. More in-house support -- within department -- a professional that is on-site.
20. All students should be able to access Blackboard with an NDSU account even if they are employees of another higher education institution. Also more access to save and/or download video streaming (i.e., iPods).
21. More instrumented classrooms that are small classrooms.
22. Better, more fully equipped classrooms. Also: much better office equipment for both faculty and lecturers. Some lecturers are far more computer-savvy and computer-reliant than faculty. (I know of faculty who have incredible office machines being used for nothing but email.)

##### **5. Distribution of respondents according to college (see Appendix Table 13)**

- ▶ 20% Science and Mathematics
  - ▶ 20% Arts, Humanities, and Social Sciences
  - ▶ 19% Agriculture, Food Systems, and Natural Resources
  - ▶ 15% Human Development and Education
  - ▶ 9% Engineering and Architecture
  - ▶ 8% Pharmacy
  - ▶ 7% Business Administration
  - ▶ 1% University Studies
  - ▶ 2% Belong to more than one college
- ▶ Significant differences did exist between the colleges with the four largest numbers of respondents (i.e., Science and Mathematics; Arts, Humanities, and Social Sciences; Agriculture, Food Systems, and Natural Resources; and Human Development and Education), using Chi Square significance tests at  $p < .05$ .
  - ▶ Regarding whether faculty said IT is very useful in the classroom or only somewhat useful: 93% of Human Development and Education and 78% of Agriculture, Food Systems, and Natural Resources faculty said IT is very useful to them, compared to 60% of Science and Mathematics and 57% of Arts, Humanities, and Social Sciences faculty who said IT is very useful to them.
  - ▶ Regarding whether faculty said they use IT in the classroom on a regular basis or only sometimes: 94% of Human Development and Education and 77% of Agriculture, Food Systems, and Natural Resources faculty use IT on a regular basis in the classroom, compared to 64% of Science and Mathematics and 51% of Arts, Humanities, and Social Sciences faculty who use IT on a regular basis in the classroom.
  - ▶ Regarding the degree to which supporting live, interactive information delivery was seen as a priority: 23% of Science and Mathematics faculty said it is not a priority, compared to 8% of Agriculture, Food Systems, and Natural Resources, 4% of Human Development and Education and 3% of Arts, Humanities, and Social Sciences. In contrast, 34% of Agriculture, Food Systems, and Natural Resources faculty said it is a high priority compared to 18% of Science and Mathematics, 14% of Human Development and Education, and 10% of Arts, Humanities, and Social Sciences.

## 6. Distribution of respondents according to faculty rank (*see Appendix Table 14*)

- ▶ 9% Lecturer/Instructor
  - ▶ 38% Assistant professor
  - ▶ 26% Associate professor
  - ▶ 25% Full professor
  - ▶ 2% Special appointment
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- ▶ Significant differences did exist between the four main faculty ranks (i.e., Lecturer/Instructor, Assistant professor, Associate professor, and Full professor), using Chi Square significance tests at  $p < .05$ .
  - ▶ Regarding whether faculty said IT is very useful in the classroom or only somewhat useful: 85% of Assistant professors and 80% of Lecturers/Instructors said IT is very useful in the classroom, compared to 69% of Associate professors and 56% of Full professors who said IT is very useful in the classroom.
  - ▶ Regarding whether faculty see programming support as something they need to effectively integrate academic computing in their discipline: 59% of Full professors and 49% of Associate professors said they need programming support, compared to 40% of Assistant professors and 25% of Lecturers/Instructors who need programming support.

## 7. Other high priority concerns related to academic computing the committee should consider

1. The relatively poor quality of service provided by ITS. Examples include e-mail threats to cancel accounts and staff violating faculty/staff privacy by entering offices and using computers without faculty/staff knowledge or permission.
2. Data backup for university records kept by faculty and departments. We are at risk as we continue to move toward electronic rather than print records because there is presently no systematic provision of assistance to ensure that the records are secure and will not be lost due to user error or equipment failure.
3. Need for larger clusters that accommodate larger classes.
4. Student access to software; Continuity of offering - backward compatibility as new systems are released.
5. My greatest concern is creating a better system for assigning instrumented classrooms. I have no major problems with the carts, but it takes up lots and lots of time cumulatively that could be saved if I could walk into my classroom every day and not have to set up, break down, and return equipment. I end up reserving carts for every day of the semester for most of my classes, because my teaching really substantially benefits from having the instrumentation. Still, I have only once received an instrumented classroom for my course because there is no mechanism for requesting this and my department does not receive many instrumented classrooms in its regular pool of rooms. This is also an issue of access, as those with physical limitations might not use the equipment because it is hard to maneuver up and down ramps, in and out of tight classrooms, because it involves bending to plug in cords, because it sometimes requires moving from building to building in snowy, icy weather. Carts and clusters are ok, but fully instrumented classrooms for those who would actually use them are substantially superior.
6. It would be great if the classrooms could be equipped with linux compatible resources, e.g. by installing cygwin-X (<http://x.cygwin.com/>). I would also appreciate linux compatible software to the management of PRS questions.
7. ITS needs to be a "silo", like student affairs or academic affairs so that they can help the rest of the campus integrate ITS into everything we do rather than sitting off in a corner not connected to the mainstream. How do the tech. fees get used? Shouldn't there be an institutional way for ITS to be funded rather than piecemeal here and there. Academic computing is only one part of what needs to be covered with ITS. How can all of technology work together for the whole campus rather than this mess of different groups w/ no group knowing about other groups and what's going on.
8. PeopleSoft -- ability to access needed data.

9. Supplying faculty with the same software that is available to the students.
10. Making planning more visible.
11. Research support!
12. Making more of the classrooms computer-equipped rather than requiring the mobile carts.
13. Get every reasonable classroom wired up as soon as possible.
14. Making all computer labs on campus instrumented. Providing permanent projectors in all classrooms.
15. Find ways to allow faculty to make ppt presentation in class even if the network is down. This simply requires a guest account that does not require network authentication. It is very frustrating to be unable to use ppt projection just because there is a network problem that stops me from logging in.
16. Ensuring security of wireless system.
17. Software Development / Programming Assistance for computer applications that provide management information to users via expert systems or some other type of management models, etc.
18. Consideration should be considered to the ergonomics of the screen /Video Projection Unit viewing height in classrooms. In FLC 122, students complain of neck soreness by the end of my 50 minute class.
19. Be sure to keep the site license for SPSS up-to-date so there are no gaps in service in the clusters or on faculty hardware.
20. How about a central, live, support "desk," staffed with people who know the main software programs we use, who could assist us when we have questions about how to do things with the software? A software support line.
21. 1) quality (e.g., continuity, training, attitude) of live technical support at service center; 2) multimedia reservation/software purchase system.
22. The workshops for faculty for upgrading their skills how to use technology in classrooms should be very well prepared. I attend a few such workshops last year (about using blackboard) which were poorly prepared and not very useful.
23. Wishlist: more MAC support and individualized one-on-one training.
24. The cart system is terrible. They are heavy, I am not big or strong, and I am bruised from lugging them between buildings. I use technology every class period and cannot seem to be scheduled into instrumented classrooms. In fact, I fill out those darn forms to get a classroom instrumented and once it is, I never am scheduled into that room again. Why can't PeopleSoft get us scheduled into the facilities we need?
25. Appropriate and timely and accurate support in software installation and maintenance. It is poor currently; e.g., GIS and other software.
26. Maintenance is always an issue.
27. Don't lose sight of the human dimension--the need to factor this in as you move forward.
28. We need more support for hardware and software problems that occur on a daily basis in our offices.
29. There is a wide variance among faculty in use of computers and other technology. It would be helpful to have one-to-one assistance for faculty members in specific areas of technology use.
30. I would use more technology in the classroom IF I were able to be sure I could get it when needed - many of the rooms I teach in are not "wired" and I need to reserve a cart - and often one class will reserve a cart for the entire semester at that time whether or not they are really using it on a specific day (to ensure it will be there) but unless I do that (which I feel is wrong) I often cannot get a cart when I want one, and therefore I do not use technology - a vicious circle.
31. High level research computing.
32. We, as a university, are behind "academically" other universities if we do not have instructors who know and use technology in teaching. These instructors, as myself, depend on the availability of the resource. Make more labs, and make sure you have the support staff to keep them working.
33. We really need to install permanent projection equipment in the clusters. The carts are a nuisance to reserve and to set up. Cluster reservation services have deteriorated in the past year or so.
34. Forget about all the extra buttons and whistles until you can be sure that all equipment in the lecture halls work correctly and has up-to-date software. ITS needs to provide quality support for UNIX, MAC OS, and WINDOWS, not just WINDOWS.

35. Faculty and the campus need to consider "who" the customer is. The current population of students entering Higher Education is at least a "Generation" ahead of most faculty and staff in their use of technology as a daily tool. If we want to catch up as a University, we need to re-think who our customer is and how we deliver educational services. This generation of student, if not satisfied with our services, will shop elsewhere, whether we like it or not.
36. Reinstate modem pool.
37. Increasing number of computerized classrooms that would allow faculty to project computer information without having to use carts.
38. Coordinating NDSU graduate offerings across the state using all means possible --- IVN, other live conferencing, and web based courses -- perhaps at designated centers such as BSC, NDSCS, etc.
39. Less of a lag time between reporting a computer problem and its resolution; more staff available.
40. Will Higher Ed survive PeopleSoft?
41. Making sure that students off campus are able to access all available resources. I have a DEd student this semester that still (it is end of NOV) has NOT been able to log on to the library system. I think this is a terrible injustice to our distance learners.
42. The University should provide web space for students (outside of Blackboard) - especially graduate students. Undergraduate students also need web space for class projects, etc.
43. Allow faculty and students to access specialized literature data banks like WinSpirs from off campus locations using web connection. Equip more classrooms throughout campus with videoconferencing capabilities.
44. Laptop use.
45. Server space for students and faculty, with appropriate support for developing a professional web-presence. Students develop electronic portfolios, faculty maintain teaching portfolios, ITS / Web development provide a repository of CSS files to help professionalize and standardize look and feel of sites. Expand relevant available software – Macromedia Studio. Expand relevant workshops: CSS, php.
46. It is important to remove as many barriers as possible to access technology and resources. Also critical is the need to have all services be truly cross-platform. The university should move away from windows-centric systems and utilize applications and services that will work among all computer platforms.
47. If the wireless advantage doesn't get approved, then we need more computer clusters made available for our computer-based classes.
48. Making Blackboard more understandable and easier to use. Increase the documentation regarding how instructors can use Blackboard to add documents with figures.
49. Focus on restriction of junk mail - spam and how PC become servers for it.
50. More comprehensive ITS support is needed with quicker response. ITS does a great job, but I get the impression it is somewhat understaffed and underfunded.
51. ITS should have a live person to troubleshoot problems.
52. Getting new faculty onto to the system with a reasonable amount of time. There is so much concern with password security and lack of help on the on-ramp stage that it took 2 weeks before I could use the NDSU e-mail and Novell system. My wife taught an accounting course as a part-time instructor without access to the computer projection system until the 5th week of the semester. This is a serious problem at NDSU that I did not experience at two other universities.
53. Department-specific needs rather than general-purpose needs.
54. More instrumented classrooms - preferably all - possibly including wireless projectors for the wireless computers we will all have.
55. If personal laptops are not feasible, create more computer clusters and classrooms with media carts.
56. Status of faculty work conducted and stored on university computers. Off-campus internet access should be part of students' technology fees. They should not have to pay for internet access if they live off campus, especially if more and more campus services are on-line.
57. How to implement classroom technology use without creating an environment where cheating is even easier.



58. Non student access to a few technology pieces... i.e., taking the placement test or visiting the resources of our library before they are a student.
59. Too many new programs requiring yet more time and energy to learn and use. Distracts from teaching and research.
60. Support to modeling and simulation studies for class and research use.
61. Availability of popular software. Popular software, such as Photoshop, should have more than 30 licences available for a campus this size.
62. Individualized instruction for faculty. Mac Support.
63. Maintain up-to-date software licenses for discipline-specific packages.
64. More REALLY qualified people should be hired for the Center for High Performance Computing (CHPC) and not just some grad students with no experience in advanced scientific computing. At the moment it's just a mess. There is no real support.
65. Using IVN, Blackboard, video streaming combined with a course is high priority while using all computer aided online devices (email attachments, PowerPoint, etc.).
66. Keep access to computer services available to retired faculty, especially those active with current programs and research efforts.
67. Some of these questions are difficult to answer without context. Technology can be a very useful tool in the education process, if the instructor knows how to use it in an effective manner. What we really need on our campus is a greater discussion of technology and pedagogy, how can IT help us present material effectively? Are there circumstances where IT is particularly effective? Are there things we shouldn't try at all? How do we design effective distance education courses? How do we create community in a distance program? All of the items you have asked about above might be useful, but they might also be a complete misuse of resources if applied in an ineffective manner.
68. There still are many heavily used classrooms (e.g., in Minard Hall--second floor) that do not have built-in computer equipment. They are accessible by carts, but carts are not always there when they have been scheduled back-to-back. I use PowerPoint every class period in one class I teach in the Minard Annex, but I've learned not to even consider it (other than for special events) in a second class I have on the second floor in the main part of Minard.
69. We need more instrumented classrooms--especially small classrooms. "Mobile" multimedia carts are often not very mobile. Some buildings on campus do not have an ITS multimedia cart and it's a real pain to haul a multimedia cart from a different building on a regular basis.
70. Higher faculty pay for distance delivery courses.
71. Please fully equip MORE CLASSROOMS with multi-media hardware and software.

## **8. Comments and suggestions to help CITPG in strategic planning regarding the use of IT for academic computing**

1. Success needs to be assessed actively by service ratings provided from customers faculty/staff/students. Not by empty technical goals. ITS exists solely to support the other functions of the university and should not have a separate agenda that distracts from the service provided to the university community.
2. Dump windows - too much upkeep. Go 100% Mac.
3. Keep things simple for those of us that are lecturers and provide a service to the students on a limited basis. I have trouble enough with the 7 computer systems and 4 unique sign-ons required on my day job.
4. We hope ITS is able to coordinate plans to bring all the different groups together so ITS can speak with one voice to everyone.
5. Research support!!!
6. Up-to-date software and computers in faculty offices that we can connect to from home and the classroom.
7. Very important to me to have quick and reliable support for Blackboard and PRS, yet this is not readily available at the crunch times when new semesters start because too few people are trying to do all the work.

8. Campus IT activity should explicitly contain a position of support for the teaching/research activity and not a position of teaching & research having to "do it IT's way". After all who is servicing whom??? Having said that, IT needs to have the capability to allow the application of technology as appropriate in each discipline. IT to improve productivity or depth of thought on topics should be the objective. Any where any way should be the operating mantra.
9. Don't just jump on the bandwagon of what sounds cool and new... make sure it will REALLY be useful to faculty and students and help them better fulfill their roles. The students, at least, seem to feel that PRS is more about making them spend \$ on something else they don't need. Avoid technology like that.
10. Please remember that face-to-face interaction is the foundation of education.
11. Equipping the students with personal computers, etc., is absolutely not a priority for me. This should be a personal expense and choice for students. I do NOT want a laptop campus. I have seen how ineffective and damaging to the classroom learning environment this is on other campuses.
12. 1) Get faculty in classrooms that meet their teaching needs. 2) I would love a cart with just 5 laptops so that small groups could research problems. (I use a problem-based approach to research in my class. 3) The scheduling system does not work well for clusters; I typically have 25 students, few clusters work for that number of students. (And I don't get confirmation of requests, etc.)
13. Provide support in terms of space and timely response when there are problems with software installation or hardware does not work.
14. I appreciate the classes you offer.
15. See above - easier access in all the classrooms, more even distribution of the carts or regulation (i.e., limiting the number of classes one can reserve a cart for especially at peak times)
16. Remember to be flexible, technology changes fast.
17. Generally the staff does a good job.
18. ITS should not support distance education AT ALL. It's a giant waste of money and personnel time. Make sure the student staff are properly trained. Most of the students who are supposed to be helping me -- know less about the hardware and software than I do!
19. Train all IACC staff to recognize the need to plan for and think about future tech needs of student and campus and not just the present - much of the response from IACC admin. and team leaders is not very visionary or cutting edge. Example: we are a Land-Grant that serves a regional student base, our office has been refused service support on grant funded programs for High School students who reside outside ND. I do believe about 50% of our student population comes from outside the boundaries of ND. Every High School or college student I work with is making a connection to NDSU but support from IACC has been restricted in the past based on residency and not the capability of technology.
20. Haven't thought about many of these questions enough to provide a meaningful answer. Also, implementing technology changes may result in losses in other areas, so it is hard to judge what faculty want without knowing what they will have to give up in order to get it.
21. CITPG needs to get back to its historical role, engaging with and overseeing ITS. ITS likes to dictate, rather than listen to its constituents. ITS needs to remember that its primary mission is academic computing - everything else they do is just in a support role.
22. ITS should be considerate of faculty's needs and urgency both at instructional as well as research levels.
23. Read Richard Selfe's Sustainable Computing Environments, Brown and Duguid's The Social Life of Information. Invest in people first, pedagogy second, technology third (see Selfe).
24. Please maintain ABACUS and make it easier to connect to via a desktop icon, not thru PUTTY.
25. Take my comments and others seriously. Some aspects of ITS at NDSU are great and others need a lot of work.
26. Thanks!
27. Both Blackboard and PRS are necessary to the class room. I thank you for their support.
28. I am hopeful that the majority of the classrooms will have computer projectors in the near future. That would make it a lot easier for faculty members to exploit computer-based audiovisual resources in their lectures before having to make reservations over six months in advance.

29. Better, more easily usable, or intelligent literature searching software should be a priority especially as a service to the research activities on campus.
  30. Faculty needs to be informed how to use technology. An example would be receiving instructions to download SROI's and it taking 2 1/2-3 1/2 hours for each faculty member to figure it out unless helped by other faculty members. The directions should be current and work.
  31. Academic support IT systems need to become more user-friendly for faculty -- current system for accessing students and class records is overly cumbersome -- many of the elements are inconsistent with how faculty actually work (expecting the users to adapt to what the IT system will permit, rather than constructing the IT system to serve its customers).
  32. Provide information as to whether not allowing video streaming access for a Mac user was for cost efficiencies (funds or time), bias, or whatever. Was able to access our nation-wide online conferences with Mac, but not our academic program courses. Also provide information as to whether IVN fees are supplementing or supplanting other IVN enterprises.
  33. Growth of distance education could profit greatly with a close working relationship with the Division of Independent Study housed on this campus. Close ties with K-12 video conference interactive studios are most helpful with outreach classes. Compatibility of equipment should be considered with upgrades.
  34. A follow-up on my above comments about computer equipment in Minard: I've tried to bring my own, wireless laptop into Minard and access the web for my class second-floor, Minard classroom (215), but the signal is too weak. It failed on me three times. There is a data jack, so this is not critical, but it sure would make set-up easier and there would be one less thing to forget (i.e., the data cord).
  35. Information technology needs to be ubiquitous, seamless, and nonintrusive. Having to go to labs is none of these. Wireless connectivity is essential. More web accessibility for all classes is, also.
  36. More instrumented classrooms that are small classrooms.
  37. We're moving in the right direction.
- 
-

**Appendix Table 1. How useful IT is in the classroom**

Response	Number	Percent
Very useful	156	71.6
Somewhat useful	58	26.6
Not at all useful	4	1.8
Total	218	100.0

**Appendix Table 2. How confident faculty are using IT in the classroom**

Response	Number	Percent
Very confident	107	49.1
Somewhat confident	98	45.0
Not at all confident	13	6.0
Total	218	100.1

**Appendix Table 3. How often faculty use IT in the classroom**

Response	Number	Percent
On a regular basis	154	71.0
Sometimes	58	26.7
Never	5	2.3
Total	217	100.0
<i>Did not answer</i>	<i>1</i>	—
<i>Respondent total</i>	<i>218</i>	—

**Appendix Table 4. How well IT is integrated in academic discipline**

Response	Number	Percent
Very well	109	50.0
Somewhat well	96	44.0
Not well at all	13	6.0
Total	218	100.0

**Appendix Table 5. How adequate NDSU's academic computing infrastructure is for integrating IT in academic discipline**

Response	Number	Percent
Very adequate	79	37.1
Somewhat adequate	124	58.2
Not at all adequate	10	4.7
Total	213	100.0
<i>Did not answer</i>	<i>5</i>	—
<i>Respondent total</i>	<i>218</i>	—

**Appendix Table 6. General levels of agreement regarding statements about IT in the classroom**

Response	Have had problems with scheduling process (mean=2.82)		Equipment in classroom works properly (mean=3.48)		Concerned about relying on technology (mean=3.15)		Frustrated w/ campus communication using IT (mean=2.70)	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1 “strongly disagree”	42	25.6	8	4.0	26	12.7	40	19.4
2	33	20.1	30	14.9	43	21.1	51	24.8
3	31	18.9	50	24.9	49	24.0	63	30.6
4	29	17.7	84	41.8	47	23.0	34	16.5
5 “strongly agree”	29	17.7	29	14.4	39	19.1	18	8.7
Total	164	100.0	201	100.0	204	99.9	206	100.0
<i>Don't know</i>	17	—	4	—	3	—	3	—
<i>Did not answer</i>	37	—	13	—	11	—	9	—
<i>Respondent total</i>	218	—	218	—	218	—	218	—

**Appendix Table 7. Prioritizing topics relating to FACULTY TRAINING**

Response	Helping faculty explore opportunities for using IT (mean=3.72)		Providing proper training for faculty (mean=3.89)		Providing greater IT support within depts. (mean=4.08)		Focusing on a cultural change on campus (mean=3.27)	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1 “not a priority”	12	5.7	9	4.3	8	3.9	18	9.5
2	18	8.5	20	9.6	9	4.4	26	13.8
3	46	21.8	33	15.8	34	16.5	68	36.0
4	76	36.0	70	33.5	62	30.1	41	21.7
5 “a high priority”	59	28.0	77	36.8	93	45.1	36	19.0
Total	211	100.0	209	100.0	206	100.0	189	100.0
<i>Don't know</i>	4	—	3	—	5	—	16	—
<i>Did not answer</i>	3	—	6	—	7	—	13	—
<i>Respondent total</i>	218	—	218	—	218	—	218	—

**Appendix Table 8. Prioritizing topics relating to DISTANCE EDUCATION**

Response	Supporting live, interactive information delivery (mean=3.10)		Supporting “any place, any time” information delivery (mean=3.71)		Offering more online courses, programs, and degrees (mean=3.09)	
	Number	Percent	Number	Percent	Number	Percent
1 “not a priority”	24	12.7	14	7.4	32	17.2
2	34	18.0	18	9.5	28	15.1
3	63	33.3	44	23.2	52	28.0
4	35	18.5	47	24.7	40	21.5
5 “a high priority”	33	17.5	67	35.3	34	18.3
Total	189	100.0	190	100.1	186	100.1
<i>Don’t know</i>	15	—	6	—	7	—
<i>Did not answer</i>	14	—	22	—	25	—
<i>Respondent total</i>	218	—	218	—	218	—

**Appendix Table 9. Prioritizing topics relating to PARTNERSHIPS**

Response	Extending access to IT activities to non-NDSU ID holders (mean=2.89)		Creating partnerships between campus entities and outside companies thru IT (mean=3.31)		Using IT to facilitate on-campus collaboration (mean=3.37)	
	Number	Percent	Number	Percent	Number	Percent
1 “not a priority”	28	14.8	18	10.0	11	6.2
2	47	24.9	23	12.8	29	16.3
3	52	27.5	54	30.0	51	28.7
4	41	21.7	55	30.6	57	32.0
5 “a high priority”	21	11.1	30	16.7	30	16.9
Total	189	100.0	180	100.1	178	100.1
<i>Don’t know</i>	14	—	18	—	16	—
<i>Did not answer</i>	15	—	20	—	24	—
<i>Respondent total</i>	218	—	218	—	218	—

**Appendix Table 10. Prioritizing topics relating to KNOWLEDGE MANAGEMENT**

Response	Creating a university-wide Knowledge Management System that would enable processes and procedures to be captured, shared, and reused (mean=3.54)		Facilitating communication to leverage research and activities among various groups on campus (mean=3.61)	
	Number	Percent	Number	Percent
1 “not a priority”	9	5.2	8	4.5
2	22	12.8	18	10.2
3	44	25.6	49	27.7
4	61	35.5	62	35.0
5 “a high priority”	36	20.9	40	22.6
Total	172	100.0	177	100.0
<i>Don't know</i>	28	—	22	—
<i>Did not answer</i>	18	—	19	—
<i>Respondent total</i>	218	—	218	—

**Appendix Table 11. Prioritizing topics relating to MOBILE COMPUTING AND WIRELESS ACCESS**

Response	Implementing campus-wide wireless access (mean=4.02)		Equipping all faculty with a mobile computing device that has wireless connectivity (mean=3.49)		Equipping all students with a mobile computing device that has wireless connectivity (mean=3.14)	
	Number	Percent	Number	Percent	Number	Percent
1 “not a priority”	11	5.2	27	13.3	33	16.0
2	16	7.6	24	11.8	35	17.0
3	31	14.7	42	20.7	50	24.3
4	53	25.1	42	20.7	47	22.8
5 “a high priority”	100	47.4	68	33.5	41	19.9
Total	211	100.0	203	100.0	206	100.0
<i>Don't know</i>	2	—	5	—	2	—
<i>Did not answer</i>	5	—	10	—	10	—
<i>Respondent total</i>	218	—	218	—	218	—

**Appendix Table 12. What faculty need to effectively integrate academic computing in their discipline**

Response	Number	Percent
Software	153	70.2
Computing hardware	141	64.7
Training	130	59.6
Networking infrastructure	109	50.0
Programming support	99	45.4
Peripheral devices	94	43.1
Other	22	10.1

Note: total N=218; percents do not total 100.0 due to multiple responses.

**Appendix Table 13. Distribution of respondents according to college**

Response	Number	Percent
Science and Mathematics	43	20.0
Arts, Humanities, and Social Sciences	42	19.5
Agriculture, Food Systems, and Natural Resources	41	19.1
Human Development and Education	32	14.9
Engineering and Architecture	20	9.3
Pharmacy	18	8.4
Business Administration	14	6.5
University Studies	1	0.5
Belong to more than one college	4	1.9
Total	215	100.1
<i>Did not answer</i>	3	—
<i>Respondent total</i>	218	—

**Appendix Table 14. Distribution of respondents according to faculty rank**

Response	Number	Percent
Lecturer/Instructor	20	9.4
Assistant professor	80	37.7
Associate professor	55	25.9
Full professor	53	25.0
Special appointment	4	1.9
Total	212	99.9
<i>Did not answer</i>	6	—
<i>Respondent total</i>	218	—



**Computing and Information Technologies Planning and Goals (CITPG) Committee  
Survey Instrument  
Hosted as a web survey by the Group Decision Center at North Dakota State University,  
November-December 2005**



## Academic Computing Long-Range Planning Survey

Before beginning the survey, it is important to provide a general definition of the concepts that underlie campus computing activities. *Information technology* broadly speaking includes computers, ancillary equipment, software, procedures, and support services involved in the manipulation, management, movement, control, display, or exchange of data and information. *Academic computing* can be defined as using information technologies to support effective teaching and learning. Faculty members see the impact of academic computing in different ways, including delivery of information, management of information, and creation or manipulation of information.

**First, we would like to learn about your experiences with information technology and academic computing.**

**1. Generally speaking, how useful do you feel information technology is to you in the classroom?**

*Please choose one*

Mark up to 1

a. Very useful

b. Somewhat useful

c. Not at all useful

**2. Generally speaking, how confident are you with using information technology in the classroom?**

*Please choose one*

Mark up to 1

a. Very confident

b. Somewhat confident

c. Not at all confident

**3. Generally speaking, how often do you use information technology in the classroom?**

Please choose one

Mark up to 1

- a. On a regular basis
- b. Sometimes
- c. Never

**4. Generally speaking, how well would you say information technology is integrated in your academic discipline?**

Please choose one

Mark up to 1

- a. Very well
- b. Somewhat well
- c. Not well at all

**5. Generally speaking, how adequate would you say NDSU's academic computing infrastructure is for integrating information technology in your academic discipline?**

Please choose one

Mark up to 1

- a. Very adequate
- b. Somewhat adequate
- c. Not at all adequate

**Using a scale from 1 to 5, where 1 is "strongly disagree" and 5 is "strongly agree," please indicate your level of agreement with each of the following statements about information technology in the classroom. If you do not know enough about a topic to answer, please respond "don't know." If the question does not apply or you do not want to answer, please select "bypass."**

**6. I have had problems with the scheduling process for getting rooms that have the technology I need (e.g., the reservation is lost, the room is double-booked).**

1 = Strongly disagree, 5 = Strongly agree, DK = Don't know


**7. Equipment in the classroom works properly when I need it.**

1 = Strongly disagree, 5 = Strongly agree, DK = Don't know


**8. I am concerned about relying too heavily on technology (e.g., I don't want to be helpless if that technology fails; I don't want students cheating; I have concerns about changes when software updates occur).**

1 = Strongly disagree, 5 = Strongly agree, DK = Don't know

Bypass 

**9. I am frustrated with campus communication using information technology (e.g., too many announcements via email).**

1 = Strongly disagree, 5 = Strongly agree, DK = Don't know


Bypass 

**Next, we have a list of five areas of concern. Within each area of concern, please help the committee decide where to place its resources by indicating what priority you give each topic. You will use a scale from 1 to 5, where 1 is "not a priority" and 5 is "a high priority." If you do not know enough about a topic to answer, please respond "don't know." If you do not want to answer a question, select "bypass."**

### **How would you prioritize topics relating to FACULTY TRAINING?**


**10. Helping faculty explore opportunities for using information technology in the classroom**

1 = Not a priority, 5 = A high priority, DK = Don't know

Bypass 


**11. Providing proper training for faculty corresponding to implementation of information technologies**

1 = Not a priority, 5 = A high priority, DK = Don't know

Bypass 


**12. Providing greater IT Support within departments as programs rely more on technology**

1 = Not a priority, 5 = A high priority, DK = Don't know

Bypass 

**13. Focusing on a cultural change on campus that paves the way for using technology in innovative ways**


1 = Not a priority, 5 = A high priority, DK = Don't know

Bypass 

### **How would you prioritize topics relating to DISTANCE EDUCATION?**


**14. Supporting live, interactive information delivery (e.g., teleconferencing, IVN, webcams)**

1 = Not a priority, 5 = A high priority, DK = Don't know

Bypass 


**15. Supporting "any place, any time" information delivery (e.g., web-based classes, Blackboard)**

1 = Not a priority, 5 = A high priority, DK = Don't know

Bypass 

**16. Offering more online courses, programs, and degrees**


1 = Not a priority, 5 = A high priority, DK = Don't know

Bypass 

### **How would you prioritize topics relating to PARTNERSHIPS?**


**17. Extending access to information technology activities to non-NDSU ID holders (e.g., Blackboard, library resources) in the spirit of NDSU's mission of partnerships and extension**

*1 = Not a priority, 5 = A high priority, DK = Don't know*

Bypass 


**18. Creating partnerships between campus entities and outside companies through the use of information technology**

*1 = Not a priority, 5 = A high priority, DK = Don't know*

Bypass 

**19. Using information technology to facilitate on-campus collaboration (e.g., through virtual campus communities)**


*1 = Not a priority, 5 = A high priority, DK = Don't know*

Bypass 

### **How would you prioritize topics relating to KNOWLEDGE MANAGEMENT?**


**20. Creating a university-wide Knowledge Management System that would enable processes and procedures to be captured, shared, and reused (e.g., for grant-writing, continuity of services)**

*1 = Not a priority, 5 = A high priority, DK = Don't know*

Bypass 

**21. Facilitating communication to leverage research and activities among various groups on campus**


*1 = Not a priority, 5 = A high priority, DK = Don't know*

Bypass 

### **How would you prioritize topics relating to MOBILE COMPUTING AND WIRELESS ACCESS?**


**22. Implementing campus-wide wireless access**

*1 = Not a priority, 5 = A high priority, DK = Don't know*

Bypass 


**23. Equipping all faculty with a mobile computing device (e.g., notebook, PDA, iPod.) that has wireless connectivity**

*1 = Not a priority, 5 = A high priority, DK = Don't know*

Bypass 

**24. Equipping all students with a mobile computing device (e.g., notebook, PDA, iPod) that has wireless connectivity thus making every classroom a computer classroom**

*1 = Not a priority, 5 = A high priority, DK = Don't know*

Bypass 

### **Please offer additional insight into areas of concern.**

**25. What other high-priority concerns related to academic computing should the committee consider?**

Enter your response

**Just a few more questions and we are done.**

**26. What do you need to effectively integrate academic computing in your discipline?**

*Please choose all that apply*

Mark up to 7

- a. Computing hardware
- b. Software
- c. Peripheral devices
- d. Networking infrastructure
- e. Training
- f. Programming support
- g. Other (Please specify)

**27. What is your college?**

*Please choose one*

Mark up to 1

- a. Agriculture, Food Systems, and Natural Resources
- b. Arts, Humanities, and Social Sciences
- c. Business Administration
- d. Engineering and Architecture
- e. Human Development and Education
- f. Pharmacy
- g. Science and Mathematics
- h. University Studies

i. I belong to more than one college

**28. What is your faculty rank?**

*Please choose one*

Mark up to 1

a. Lecturer/Instructor

b. Assistant professor

c. Associate professor

d. Full professor

e. Special appointment

**29. Finally, please offer any comments or suggestions that may help us in our strategic planning regarding the use of information technology for academic computing:**

Enter your response

Submit Survey