GLENDALE COLLEGE

PLANNING 2001

INTERNAL ASSESSMENT

5. Information System

(Note: Most of the answers to this section were provided by the Dean of Information Technology Services (ITS) or other users as identified, and reviewed by the Campus Computer Coordinating Committee (CCCC). Some answers came through surveys and are indicated by the sign "➤". The faculty and staff (F/S) survey rated each item on a scale of -2 to +2; certificated management was tabulated with faculty while classified management went with staff. The student (St) survey used a scale of poor, fair, good, excellent and no opinion; the results given reflect only the percentages of students who expressed an opinion. Also included in this category are comparisons with the national Campus Computing Survey (CCS) conducted by K. C. Green for the year 2000)

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1. INFRASTRUCTURE (NETWORK, EQUIPMENT, MAJOR SOFTWARE).

1.1 How up-to-date and adequate is our present infrastructure? How well integrated is it?

Equipment: The computer infrastructure at GCC is outdated and poorly integrated. Many add-on systems have been purchased over time, and this has resulted in the following composition of computers:

2 VAX mainframe processor
2 Alpha mini-computer processors
34 Other servers each typically running one application

These 38 computers are running 8 different operating systems including DOS, Linux, MPE, Novell, Windows NT, Sun, VMS and Windows 2000. GCC also has approximately 2,000 personal computers running Windows 95, Windows 98, Windows 2000, Windows ME and 12 versions of the Macintosh operating system.

Network: GCC's network infrastructure is composed of a 10-megabit Ethernet campus network with T1 technology to the outside world. We have recently added two more T1 lines to support increased demands for external services. The network is well integrated and adequate for current needs, but it will need major upgrades to handle new technologies such as wireless, live video, Internet2, the merging of the telephone and the computer networks, and/or significant usage of peer-to-peer computing such as Napster type applications.

Software/Data: Software is fragmented and poorly integrated. Our legacy system is over 20 years old. Software acquisition has been predominantly through packages that we then integrated on a data level to existing systems. Software development has focused primarily on patching or enhancing the legacy system or sharing data from one system to another. Data is at times duplicated and consequently over time has become inconsistent from system to system. Data and systems are therefore fragmented and not well integrated. (ITS)

1.2 What is the infrastructure's capacity and how close is it to operating at full capacity? What is the potential for expansion?

Equipment: The capacity of our large computer equipment exceeds the average demand, although during peak periods, such as Fall or Spring registration, certain components operate near full capacity. As for personal computers, their capacity far exceeds usage, but over half of them are 3 years old or older and are in need of replacement. Most cannot be upgraded.

Network: Average network utilization is below 5% with our current set of applications. However, capacity will not be sufficient to support projected utilization increases coming from three directions: from instruction, through the growing use of WebCT, student e-mail, etc., from administration, through the implementation of the proposed new Enterprise Resource Planning (ERP) system, and from new technologies such as the ones mentioned in section 1.1 above.

Software/Data: GCC's current legacy software should not be modified any longer without a major overhaul or complete replacement effort. It has been kept up through the use of short-term fixes and add-ons for approximately 10 years. Consequently, the systems and data are fragmented, costly to maintain, and require significant labor to integrate. (ITS)

1.3 How reliable is our system (intervals between and duration of down times)? Do we have adequate back-up capability and recovery procedures?

Uptime on the servers has been 99.9%. Any new servers are equipped with RAID technology to avoid downtime. Uptime on the network has been 99.9% with the exception of the T1 line connection to the Garfield campus which has experienced some downtime recently due to Pacific Bell error. The VAX and the Alphas are rarely down.

During the recent power outage the reliability of the system was tested. We were able to keep our services to the outside world working, such as our web site and phone registration. We shut down all internal systems because staff could not use them anyway. The emergency power system (UPS) unit worked well; we found a few vulnerabilities and corrected them.

Backup is done regularly on all computers in the computer room. Backups are stored offsite and transported once a week and more frequently if needed.

Of great concern is the backup of desktop computers dispersed throughout the institution. Backup is left to the user and often is not done. Currently, the Instructional Technology Committee (ITC) is preparing a list of backup alternatives that may be used. ITS is identifying mission critical systems and will require a backup strategy, with purchase or retrofit, for all their computers. (ITS)

1.4 How secure is the system against viruses, unauthorized access and internal fraud, and against equipment theft?

No system is 100% secure. GCC uses several strategies to implement security. We use a firewall solution as well as software to prevent, detect and eliminate viruses and unauthorized access. We equip all desktop computers with anti-virus software, but leave the maintenance of the software and execution to the individual users. This presents a security risk. Most vulnerable to computer viruses are the machines with the Microsoft operating system.

Theft is an ongoing problem left to the office occupants and lab staff to address. Some student labs use bolt down solutions but many more rely on "lock the door when the technicians are gone" mentality. Individual office occupants are responsible for their individual computers and usually a "lock the door when I am gone" mentality prevails.

Internal fraud is dealt with by careful design of processes to separate creation and approvals. Logging of transactions is done using individual login and password information. Login and password issuance is handled by systems administrators and we encourage users to change passwords regularly. The extent to which our advice is followed is questionable.

A great deal of autonomy is afforded the employees of GCC to protect their individual computer as they deem necessary. A complete audit should be done. (ITS)

➤ In the survey, faculty expressed modest satisfaction (.5) on this item; staff rated it more positively at 0.8. (F/S survey)

1.5 How efficient and effective is the system? Does it provide the right services to the right users?

The GCC information system handles student records, financial transactions, instructional management and personnel records, but not always in the most efficient and effective way possible. Much of it is old and expensive to maintain, modify and operate. When newer components are added, they are bolted on to the existing ones and a tremendous effort goes into interfacing all of these components to share data.

Users get what they need over time, but usually at great expense and at a frustratingly slow rate. Because of the bolt-on method of growth, data is often not at the right place at the right time for users needs. ITS provides basic services but is not in a position to be very responsive because of the complexity and age of the base systems. Any change in the systems has a tremendous ripple effect, and therefore work to adapt new requirements is greater than it should be. (ITS)

➤ This question was not asked directly in the F/S survey. However, if one looks at the overall opinions expressed about IT, faculty satisfaction is modest at about 0.5 while staff evaluation is more positive at about 0.7. One major exception is the part-time faculty who usually responded more positively to the survey questions but came out significantly more negatively on the IT questions, particularly on the availability of computer equipment which they rated near 0. (F/S survey)

The student survey did not ask this question either, but had four items on satisfaction with various aspects of technology at the college. The answers were consistent: on average, 23% rated the college excellent, 45% good, 25% fair, and 7% poor. (St survey)

1.6 What is the basic cost of our IT operations? How does it compare with the cost at similar institutions? Can we reduce this cost?

The cost of ITS is 6.56% of the total college budget including the student instructional labs. Excluding the instructional labs ITS is 4.99% of the total college budget. According to Gartner research 5-7% of total budget is comparable to other institutions. 82% of the budget is personnel costs, 1% is maintenance agreement and 1% is committed to equipment for student labs. This leaves 16% discretionary monies. Outsourcing and layoffs are always an option. Reductions would severely impair service levels. (ITS)

2. ADMINISTRATIVE INFORMATION SYSTEM.

2.1 Do we need to change our management information system, and if so why and how soon?

From a technical point of view, our current system is not satisfactory. It is a 20 year-old system that was built over time and adapted to respond to needs as they arose. It is not well integrated and it is becoming more and more cumbersome to use and risky to modify. In addition, it has some major basic flaws that limit its value and are beginning to have a serious effect on the overall performance of the college.

One of these flaws is that the data is fragmented: the system does not have a well-designed, integrated database. Personnel data, for instance, are stored on 4 different databases, not all of which communicate with each other. As a result, users often find that the data they need are not directly accessible to them: they have to request special programming. They cannot use modern standard query and reporting tools to work with this data. This costs the college in a variety of direct ways, such as continuing programming costs and missing or erroneous information that results in financial losses.

Another flaw is that the system's design has been heavily influenced by the reporting needs of the state and federal governments. These needs are not the same as those of the college management. Combined with the lack of database integration, this design flaw limits the ability of the college to become a truly data-driven institution.

This is a system that has reached the end of its useful life. It can continue at its present level for a while longer but it cannot do what modern systems do, nor can it be transformed into one. Compared to these systems, its performance is declining each year. It needs to be replaced. Given that installing a new system can easily take an 18 to 24 month period, the sooner this replacement task is started the better. (ITS)

➤ The only survey question pertaining to this subject dealt with whether the employee had adequate information to do his/her job. The answers were generally positive, about 1 overall, with managers being even more positive than the rest. (F/S survey)

2.2 If change is needed, do we have a procedure in place, with appropriate and competent personnel, to select a new system? Do we have alliances or partnerships that would help us minimize our costs?

The selection of the new system is handled through the CCCC. The procedure is the standard one recommended by our Gartner consultants and used by colleges and universities. Among the major steps are the determination of needs and selection criteria, a request for proposals, site visits to institutions with implemented systems, and evaluation of the proposals in consultation with Gartner experts. We are also working with the Foundation for California Community Colleges (FCCC) to obtain discounted prices. The FCCC is currently negotiating standard contracts with the big vendors of ERP systems: hopefully these contracts will provide us with substantial savings. (ITS)

2.3 What will be our implementation strategy? Who will be in charge? Where do we start? Do we need external consultants and/or staff training?

The implementation strategy is based on the following components:

a) Customization of the system will be made only through business rules and workflow. The college will use the work of its Process Engineering Program (PEP) and select the vendor with the software best suited for its needs. Then it will implement the "vanilla" version of that software, i.e. without customization other than indicated above. This will require additional training of the entire college staff but will save millions of dollars in immediate and ongoing customization costs.
b) The Dean of Information Services will be in charge of the implementation process and will use key ITS and user department personnel as project managers for the different components of the system.
c) It has not yet been decided which module will be implemented first: the standard procedure is to start with the financial and the human resources (HR) packages, but given the need we will try to begin with the student package if possible.
d) Training will be extensive and will be negotiated with the vendor at the time of purchase. For the college staff it will be learning to do things in a different way; for the ITS staff it will be converting from coders and developers into implementers and managers of the new system. We will retain the services of external training consultants only if and when needed. (ITS)

2.4 How close are we to completing the process engineering program and implementing it?

The work of the Process Engineering Program (PEP) includes two major efforts: redesign of work processes and implementation of the new designs. Implementation of new designs also has two major components: organizational implementation and system implementation. The implementation of many new processes is dependent on the purchase and installation of an Enterprise Resource Planning (ERP) system which has not yet occurred. The work of PEP will facilitate the implementation of the ERP system by greatly reducing the time and cost of that effort. New process designs are being implemented as completed if the processes do not depend directly on the ERP system, are supported by a new or existing technology system, or do not require technology support. Final implementation of PEP process work will be completed during the installation of the ERP system.

GCC processes were placed in three major groups: Instruct, Counsel and Support Students; Course and Program Development; and Enabling Processes. Processes in the first group, Instruct, Counsel and Support Students, are currently under redesign and will be implemented in the new ERP system. Some Processes in Course and Program Development such as Scheduling have been redesigned and portions of the new processes that are not dependent on a new system have been implemented. Other processes in this group are awaiting redesign.

The final group, Enabling Processes, includes the majority of GCC's administrative and support processes. Financial processes are redesigned and awaiting the ERP system. Human Resource processes dealing with hiring have been redesigned. Those portions not dependent on the ERP system are being implemented, and the remainder are awaiting the ERP system. Human Resource processes in other areas are awaiting redesign. Information Technology processes have been redesigned and are being implemented. Support services processes for facilities are currently being redesigned.

Some process work at GCC has focused on organizational issues alone. Instructional Services processes were redesigned and the organization restructured during process implementation. Several processes that cross the boundaries between Instruction, Human Resources, and Finance have been redesigned to improve workflow between the organizations. A similar effort was also undertaken for scheduling processes that cross Instructional Services and College Services and several processes were redesigned and implemented. (PEP)

3. ITS OPERATIONS.

3.1 Are ITS responsibilities well defined and do we have a clear and well functioning decision-making process?

The CCCC, which is the governance committee working with ITS, has been completely reorganized this year to make it representative of the users of information services at the college. Its mission is to decide on the major policies and directions of ITS. It is yet too early to tell if this arrangement will function well, but it is promising so far. There are 12 policy areas which the CCCC will study, as recommended by our Gartner consultants: outsourcing, security, data privacy, quality of service, operations, hiring, procurement, electronic communication (network), desktop, behavioral values, training, and virus handling. The ITS staff is currently preparing a first draft of these policies; they will be ready by January '02 and sent to the CCCC for discussion and approval. They will then be forwarded to the Executive committee of the college to which the CCCC reports.

The Information Services department is itself organized internally into five areas each with its own manager reporting to the ITS Dean. These include Administrative Information System, Network Services and System Administration, IT Operations, Student Labs, and Process Engineering.

Responsibilities and decision making in the interactions between ITS and the campus at large they are handled through a series of on-going service level agreements (SLA) negotiated between ITS and the various users of its services. These SLAs specify the rights and responsibilities of each party. When finished and implemented they will clarify greatly how and by whom all technology matters are handled at the college. Currently five SLAs are already in place and two more are in progress. In the future, SLAs will be used systematically with each new software and/or hardware system.

The development and implementation of new systems, if they require more than 40 hours of work, will in turn be the object of project agreements (PA) that are somewhat similar to the SLAs. PAs serve the same purposes of clarifying responsibilities and setting expectations, but last only for the duration of the project. Currently ITS has 13 such agreements in place, with the projects themselves in various states of completion. (ITS)

3.2 How are ITS priorities and budget determined? How well is the process integrated in the general college planning and budgeting operation?

ITS priorities are determined by the ITS Dean and her managers based on the lists of requests presented by the college vice-presidents. Eventually this determination process will include the CCCC. The priorities are then forwarded to the budget committee and to Cabinet where they are integrated into the college budget process. This process, however is not tied to planning, so the ITS priorities and budget stand on their own and do not necessarily respond to a general college plan. (ITS)

3.3 How adequate is the IT purchasing and equipment/software replacement process? Are decisions timely and well made? Are changes and implementations carried out smoothly? Do we cascade down used equipment in a satisfactory manner? Are we cost effective?

The process is only fair at this time. All purchases have to be approved by the Instructional Technology Committee (ITC) to make sure that the hardware or software meets the basic requirements of the college system and can be supported by ITS staff. The replacement process, however, has not been systematic, mostly on a first come first served basis, and has been limited by insufficient funding. As a result, half of the 2000 campus computers are over 3 years old. Ideally the 3-year life-cycle should apply everywhere; in reality some of the equipment, especially for light users, can be adequate for longer periods. Software, on the other hand, should be upgraded more uniformly to ensure compatibility.

ITS is currently working on a migration/replacement plan and process to bring everyone on campus to Windows 2000 within 2 years, and to upgrade and cascade down all hardware systematically, within the limits imposed by the available funding. This plan will be ready by January '02.

The college makes most of its software purchases, which represent 60% of its procurement budget, through the Foundation for California Community Colleges (FCCC), and so obtains excellent prices that make the process very cost effective. The only major exceptions at present are for virus and Adobe software on which the Foundation is currently negotiating. All purchases outside FCCC, such as hardware in particular, are handled through competitive bidding. (ITS)

➤ Both faculty and staff seemed reasonably satisfied with the hardware and software that they had (rated 1) but were less happy with replacement and maintenance which they rated at 0.3. (F/S survey)

3.4 Do we make efficient and productive use of outsourcing possibilities? Are contracts with outside firms well written and effectively managed?

The college uses outsourcing for some of its IT work but on a limited basis: the institutional culture will not allow outsourcing that would result in employees being laid off. The procedure is used in a number of peripheral areas, particularly for software and hardware maintenance. It is used effectively, but more could be done.

There is a real problem at present with the contracts that the college have with outside firms, some 50 of them. They are insufficiently reviewed, if at all, and many of them are handled outside ITS without ITS supervision. This has resulted in errors and inefficiencies, some of them costly, as well as ineffective management. To remedy the situation, the ITS Dean and the contract analyst are reviewing all current contracts and are putting in place a procedure for ITS to be able to oversee all IT contracts at the college, both in their writing and negotiation phase and in their management. This work should be complete within the next academic year. All contracts found deficient will be renegotiated. (ITS)

3.5 What is the quality of our user support operations such as maintenance and help desk? Are we able to respond to needs in an efficient and timely manner (average response time)? How cost effective are we?

User support is a problem at GCC as it is in most colleges and universities. Part of the problem is that the help desk is undermanned and under equipped because of limited funding, and part is that it is expected to provide services, such as "just-in-time" learning, which it is not meant to do. ITS is fully aware of the situation and is working to find solutions. It has purchased software to assist the help desk in its task, and it will clarify a referral list for specific problems. It has also expanded the desk's hours of operation to 8-7 M-F and 8-5 Sat. It will also try to generate more realistic expectations on the part of the faculty and staff

users. The help desk has been able to assist fairly satisfactorily with hardware problems and will continue to do so. Software and learning support may remain inadequate unless additional funding is provided. ITS is looking at all possible options. (ITS)

➤ The survey contained two questions on this topic: one about support and the other about the help desk. Support was judged somewhat adequate (0.4) by faculty, better (0.7) by staff. The help desk, however, got a 0 from faculty and a 0.5 from staff indicating substantially less satisfaction. Altogether, the maintenance, support, and help desk questions elicited some of the most negative responses in the IT section, pointing to a potential problem in that area. (F/S survey)

The CCS gives a ratio of 1 help desk/technical support person for 518 students (headcount) in community colleges. Almost 70% of all institutions nationwide, and 63% of community colleges have a technology resource center focusing on IT use in instruction. (CCS)

4. PERSONNEL ISSUES.

4.1 Do we have an adequate ITS staff to handle the work that needs to be done, particularly in terms of number, skills, and learning capacity?

This question is very difficult and is one of the major reasons why ITS has requested a technical audit of its organization. This audit will be done in the fall by outside consultants. A rough estimate at this point is that the staff numbers may be adequate but that their skills will need considerable enhancement especially for the new ERP which will transform ITS from a custom development shop into an integration and management one. (ITS)

4.2 Are the members of this staff satisfied with their jobs?

This will be answered through the technical audit mentioned above. (ITS)

4.3 Do we provide enough IT training, and of high enough quality, for our faculty and staff?

The ITS staff gets approximately a week of high quality training each year on the average, which is considered fairly reasonable according to the national norms. The audit will look at possible improvements. (ITS)

Title V offers training in various formats: workshops, one-on-one training, and personal assistance. There is enough for our needs, and it is of excellent quality. Acquiring the skills is a question of motivation rather than training availability. (Title V)

➤ Training was rated 0.5 by both faculty and staff, indicating limited satisfaction. (F/S survey)

4.4 What is the capacity of college faculty and staff (ITS and other) for technological innovation and change?

The college seems to be fairly typical in this area in having its share of stars and change averse people, and in having the capacity for change better distributed than the will. This appears to be true for the ITS staff as well. (ITS)

➤ Faculty and staff were asked if they agreed that they "keep up easily with technology development". Their answers indicated limited confidence in their ability in this area, with faculty less confident (0.3) than staff (0.6). (F/S survey)

5. WEB ISSUES.

5.1 Is our approach toward the Web clear and well understood throughout campus? Do we have well established goals and objectives?

The college goals and objectives in this area are neither well-defined nor well-publicized. There is a web policy that affects the content of the college's web page: it is of recent vintage and not yet very well known. (ITS)

➤ Both faculty and staff expressed reasonable assurance (0.6 and 0.8) that they knew and understood these goals and objectives. (Note: given what is said above, one suspects that if they had been asked to actually name the goals and objectives their responses might not have supported their survey answers.) (F/S survey)

5.2 How much access do we want to provide to students and personnel? Do we want a wireless system with access from any point on campus?

The CCCC will study this question and make recommendations. Among the issues it will have to deal with are security, authenticity, privacy, speed, and mobility. (ITS)

5.3 Do we want to expand our campus community to provide access to others such as former students, future ones, K-12 faculty, etc.?

This question has also been referred to the CCCC for study and recommendations. (ITS)

5.4 How much distance learning do we want to make available? What are the costs, the implementation and delivery strategies, and the general policies in this area? Do we have the infrastructure to support our distance learning goals?

(The college does not have well established policies or strategies in this area. The Senate is studying the issue of distance education; the CCCC will do so as well and consult with the Senate and the division chairs before forwarding its recommendations to the college. The infrastructure will have to be developed according to the policies and strategies adopted by the college.)

➤ When asked if they wanted to put their class on the web and teach it entirely as a distance learning class most faculty responded negatively (-1). Certainly there is no great enthusiasm on their part. Adjuncts were somewhat less negative (-0.5). On the other hand, faculty expressed some satisfaction with the support available for web-based material (0.7) (F/S survey)

5.5 How much do we want to use the Web to reach out to other institutions, to suppliers, to student and civic groups?

(This question has been referred to the CCCC for study and recommendations.)

6. ACADEMIC ISSUES.

6.1 What percentage of campus courses use electronic information to enhance the course (WebCT, in-class demonstrations, etc)?

At present, only about three dozen full-time faculty, including four counselors, and an equal number of adjuncts use WebCT; their number is slowly growing. The extent of this use varies a great deal, with the majority of the users being at the "light" end of the spectrum (posting material on the web) and a few taking full advantage of the interactive capabilities of the software. (Title V)

➤ The survey confirms that only a minority of faculty members consider themselves WebCT users. However, in-class technology is used fairly often, and so is e-mail to communicate with students. Faculty occasionally train students in using technology to search for information. (F/S survey)

Nationally the percentage of classes using course management tools such as WebCT is around 15%, somewhat less (13%) in community colleges. The percentages are larger for other uses of technology, with e-mail (60%, 41%), Internet resources (43%, 33%), and in-class presentations (43%, 41%) leading the way. (CCS)

6.2 Are technology resources available, used effectively to enhance the learning experience, and designed to prepare graduates for successful technology use in their careers?

Individual faculty are doing very interesting things with technology, WebCT in particular, but the use of IT is not as systematic as it should be. Much more could be done. (Title V)

6.3 What library resources are available online (catalog, databases, special collections)?

The library's catalog is available as well as 20 other databases: Academic Universe - Lexis-Nexis, Access UN, Biography Resource Center, Books in Print, CINAHL, Country Watch, CQ Press Electronic Reference Library, EBSCOhost Health, Encyclopedia Britannica Online, Encyclopedia of Astronomy and Astrophysics, Grove Dictionary of Art, Grove Dictionary of Music & Musicians, Literature Resource Center, A Matter of Fact, NewsBank Newspapers, Project Muse, ProQuest, Rand California, The Reference Suite@FACTS.com, and SIRS Knowledge Source.

In addition, the library recently acquired a joint netLibrary eBook (electronic books) Collection (600 copyrighted and 3500 public domain titles) with Pasadena City College. (Library)

➤ Library catalogs are available via the web site in 85% of institutions and reference materials in 73%; for community colleges these ratios are 68% and 54%. (CCS)

6.4 What electronic reference materials are licensed and how accessible are they from outside the library (for example off-campus)?

Eighteen of the 20 online databases available through the GCC library are licensed and accessible to students, faculty, and staff from home. The netLibrary eBook Collection is also available from home and the online catalog is available to anyone via the World Wide Web. (Library)

6.5 How does the campus help students develop computer and information access skills?

Librarians teach workshops to students on how to search the online catalog, the ProQuest database and the Internet, how to locate government information, and how to approach a research project. They also offer Library 191, a one-unit course focused on information competency skills. At the reference desk, librarians teach students how to locate, use, and evaluate information whether in print or electronic format, on a one-to-one basis. Lab technicians are available to assist students with use of the library computers and databases. Students are also provided with the opportunity to ask questions electronically via the library's web page and they have access to handouts in the form of database guides and pathfinders. Links to online tutorials are also available via the library's web page. (Library)

Title V offers several short workshops for students each semester to help them with basic computer skills. Attendance is low, probably due to students' increasing familiarity with computers. (Title V)

6.6 Does the campus allow students to receive credit for courses taken electronically from other sources?

Yes, as long as it is an accredited institution. Most of the time the college does not even know that the course was taken online. In some cases, however, an online course may not be recognized, at its own institution, as equivalent to a regular one for transfer or other purposes. Some online courses from other districts, for instance, are not accepted by the California State Universities for IGETC or breadth requirements because of their designs. Such courses get the same recognition here that they have at their own institution. (Registrar)

6.7 Does the campus have a specific computer competency requirement for all undergraduates?

There is such a requirement: it was passed by the Senate three years ago but has not been implemented. (Title V)

➤ About 40% of all institutions and of all community colleges have such a requirement. (CCS)

6.8 Are course reserves and other materials available online/via the Web site?

No, course reserves themselves are not available online, but students can search the online catalog to determine what items are available on reserve in the library. Beginning in Fall 2001, instructors will have the ability to place links from their web syllabi directly to ProQuest database articles or to books in the library's eBook collection. (Library)

WebCT classes put a variety of material on line, such as syllabi, assignments, etc., but no course reserves: there is no need for that. (Title V)

➤ Nationwide, 35% of all institutions, and 13% of community colleges provide such reserves on the Web site. (CCS)

6.9 What percentage of faculty has a networked computer available to them?

All full-time faculty have a networked computer. Adjunct faculty have 33 computers specifically earmarked for them in various areas of campus, as well as 12 laptops that they can borrow for overnight or weekend use. In addition, adjuncts have priority access to the 200 computers in the open labs during their hours of operation i.e. 7-10 M-F and 8-5 Sat. (ITS)

6.10 What percentage of faculty use e-mail regularly?

ITS does not monitor E-mail use except to flag, and close, accounts that have been dormant for 6 months, which usually occur when a part-time faculty ceases teaching at the college. However, it is probably safe to say that most full-time faculty and a majority of adjuncts use e-mail on a regular basis. (ITS)

7. STUDENT SERVICES

7.1 What information about admission and financial aid is available online, and can necessary forms be submitted electronically?

The Admissions and Records Office has a well developed web page offering comprehensive general information on admission and registration including FAQ sheets covering a wide array of topics. The page is linked to the Financial Aid web page which offers general financial aid information. Students can also find online their own grades in transcript form and their registration and financial aid status by use of their student and PIN numbers.

The only form which can be submitted electronically at this time is the online application form. The Financial Aid Office will soon have downloadable forms available on its web site, and it has links to other agencies where application forms can be submitted online. An online application for international students is currently being developed. Students can also register by phone using the STARS system and the information to do so is available on the Admissions and Records web page. (College Services)

➤ Admission applications and financial aid applications are available online in 76% and 48% of institutions respectively, 58% and 45% of community colleges. (CCS)

7.2 Is the college catalogue, including important campus policies, available on the Web?

Yes it is available in Adobe Acrobat format. (College Services)

7.3 Can a student access her personal student information/data online?

Yes, students can access their class schedule, book costs, assessment scores, tuition payment statement, grade report (transcript) and financial aid status online and at Student Information Kiosks. (College Services)

➤ Student transcripts are available online in 32% of institutions and 22% of community colleges. (CCS)

7.4 Can a student find out his grades online or by phone at the end of a semester?

Yes, grades can be accessed online, at Student Information Kiosks and through the STARS registration phone system. (College Services)

7.5 Is registration, including dropping and adding courses, processed electronically?

Registration and dropping and adding classes can only be processed in person or through the STARS telephone registration system. ITS plans to make online registration available next year, perhaps as early as Spring 2002. (College Services)

➤ Registration can be processed online in 43% of institutions and 28% of community colleges. (CCS)

7.6 Can students pay bills, receive loans, make campus bookstore purchases using online procedures?

Bookstore purchases can be done using online procedures. Fees payment and loan transactions cannot. (College Services)

The telephone registration system does allow for fees payment via credit card. (ITS)

➤ Only 8% of students queried reported buying books online from GCC. (St survey)

Nationwide, e-commerce is still limited to 19% of all institutions and 15% of community colleges. (CCS)

7.7 What campus and community services are covered by "smart cards" or "debit cards"?

The library's copier/printer vendor utilizes a copycard system for payment of printing and copying charges. (Library)

We do not currently use smart cards and have no plans to do so in the near future. (College Services)

7.8 What student information does the campus provide routinely to parents?

Due to legal restrictions, only general college information is provided to parents. We are in the planning stages of developing specific orientation-type information for parents. (College Services)

8. STUDENT USE

8.1 What percentage of students on this campus has full-time use of personal computers?

➤ 88% of the students answering the student survey said that they had a computer at home; 79% had web access at home and 40% at work. (St survey)

The CCS asked a similar question but phrased as students who "owned" a computer: the community college average was 40%. The response of our students may indicate greater computer literacy or greater wealth, or it may be that not all of the 88% actually own their computer. (CCS)

8.2 What is the ratio of public access computers to undergraduate enrollment?

The college has over 1200 computers for student use and an FTES of 12,800, which gives a ratio of 1 computer per 10.5 student well above the recommended 1 per 20 ratio. (ITS)

➤ For community colleges, the CCS results indicate an average total of 1819 computers for an average headcount enrollment of 7563. Assuming that about half of these machines are for student use, this would give an average ratio of 1/8, still lower if one was to use FTES instead of headcount. (CCS)

8.3 What percentage of students uses e-mail and other software applications on a regular basis?

➤ The question was not asked directly in the student survey, but given that 79% of the survey students had Internet access, it is safe to say that the vast majority use e-mail or at least can if they want to. (St survey)

8.4 Does the campus allow personal Web pages?

Personal web pages are allowed only to faculty and staff, not students. These pages are not monitored. The college personnel is expected to follow the general code of behavior to which everyone has to agree as a condition of employment. (ITS)

➤ Only 8% of community colleges (35% of all institutions) offer personal student web pages. (CCS)

8.5 Is contact information for students, faculty, and staff readily accessible electronically?

College office and phone numbers for all faculty and staff are available on the web. E-mail addresses are posted only if authorized by the owners. Because of legal restrictions no such information is made available about students. (ITS)

➤ Faculty and staff directories are available online in 85% of community colleges. (CCS)

8.6 Is there a campus code of behavior for use of computing and information resources?

Yes, the code exists and is published in each schedule of classes. At the time of registration, all students must agree in writing to respect it. All employees must do the same as a condition of employment. A new code is in development by the CCCC and should be ready this coming academic year. (ITS)

8.7 What social activities and services are available over the Web?

Student services and activities are advertised on the college web page, but the only ones offered directly online are the ones mentioned above for admission and registration. Some instructors also offer chat rooms and e-mail services to their students but usually in connection with their classes. (ITS)

8.8 Are there Web sites for student organizations and clubs, and are these linked to the campus home page?

The Associated Student Body (ASB) has an extensive web site linked to the college page. On it students can find a variety of information about students organizations and activities. (ITS)

9. REQUIREMENTS, COSTS & SERVICES

9.1 What, if any, technology fee is charged by the campus and what does it cover?

The college charges a $10/semester fee ($20 annually) for the use of open computer labs outside of classes. This helps pay for hardware, software and staff but does not comes close to covering these costs. Printing is usually charged separately through debit cards at the rate of 9 cents a copy. Payment of the fee is checked through scanners at the doors of the labs. Some small labs do not require the fee and do not receive any of the funds collected through the fee. Overall approximately 40% of students pay the fee. Many students do their work at home and do not need the open labs.

In the case of classes requiring the use of computers, the computers and unlimited printing are available for free during class times. (ITS)

➤ 50% of all institutions and 48% of community colleges charge a fee for computer use: for community colleges the average is $136/year. (CCS)

9.2 Are students required to purchase their own computer?

No, and there is no movement to impose such a requirement within the foreseeable future. (ITS)

➤ There is no such requirement yet in community colleges, and in only a few cases is such ownership strongly recommended. (CCS)

9.3 How does the campus make computing and network access financially available to all students?

The Computer Assisted Instruction (CAI) lab, across from the Learning Center, is free to all students. (ITS)

9.4 Does the campus assess extra fees for off-campus access?

The college does not provide off-campus Internet access to students: this is limited to faculty and staff. However, students who have their own Internet service can access college information through the web. The college does not intend to become the Internet service provider for students in the future, but it is evaluating the possibility of providing them with individual e-mail addresses when the student portal is implemented, i.e. probably next spring. (ITS)

➤ Only 13% of community colleges provide Internet access to their students, two thirds of them for a fee. Almost all of them provide it for faculty, one quarter of them for a fee. (CCS)

9.5 If students bring their own computer equipment to school, what kind of support can they expect from the campus?

There is very little support for student laptops on campus. No classroom or lab has the proper hookups for them. Several classrooms and labs will have such hookups in the new Science Center under construction, but this will not be ready until fall '03. Students can bring their own software on campus and use it if they make the proper arrangements with instructors or lab assistants. (ITS)

9.6 What hardware and software standards, if any, does the campus require, recommend, and/or support?

The list of hardware and software available to students in labs is printed in the schedule of classes. It contains a wide variety of programs on both Macs and PCs. The college does not impose requirements on student's personal hardware or software since it supports neither except on an individual basis. (ITS)

9.7 What kinds of services (help desk, training, troubleshooting) are provided by the campus, and during what hours of operation?

The GCC library is a teaching library and librarians are at the Reference Desk every hour that the library is open, teaching students the information competency skills of how to find, evaluate, and use information. In addition, during most of the hours that the library is open an Assistant Instructional Lab Technician is on duty in the library and available to assist students with searching databases, locating materials, and troubleshooting computers and printers. The library is open 8-9 M-F and 10-2 Sat. (Library)

There is no help-desk service for students at present. (ITS)

(This question has been referred to division chairs and Title V for comments.)

9.8 Does the campus have a plan for keeping the hardware current, and, if so, what is the replacement cycle?

The replacement cycle is 3 to 4 years at the present time, but ITS is developing a comprehensive plan to bring everyone on a 3-year cycle. (ITS)

➤ The national trend is to replace student computers on a 3 or a 4 year cycle, 59% and 24% of all institutions, 52% and 30% in community colleges. (CCS)

9.9 How does the campus support printing for the students, and is there a charge for this?

The library's copier/printer vendor utilizes a copycard system for payment of printing and copying charges. The cost of the card itself is 50 cents and students can add value to it as many times as they want. Copies and printouts are charged to the card at 9 cents per page. (Library)

Open labs have similar arrangements. In the smaller labs, divisions often charge a flat printing fee per class. As indicated above, classes requiring the use of a computer offer unlimited free printing during class time. (ITS)