

# **SOUTHWESTERN COMMUNITY COLLEGE**

## **College Technology Plan Update**

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Division of Information Technology and Telecommunications  
Institutional Research & Planning Office

# College Technology Plan Update

## **Introduction**

Initiatives related to the on-going college commitment to, and focus on distance learning educational offerings dominate technology related activities at the college during the 2007-08 year. In addition, these initiatives are expected to be key elements of technology related enterprises at the college for the foreseeable future.

There are four components to this year's plan: (1) major accomplishments related to information technology related programs, resources and services at the college during 2007-08, (2) short-term (one to two years) information technology initiatives planned for Southwestern, (3) long-term information technology initiatives (two to five years) and (4) an assessment of information technology resources and services at the college. This plan does not focus on highly specific technical details. The college has come to the realization that technology is changing so rapidly that some of the technical details contained in previous plans were obsolete almost as soon as the plans were published. Instead, this plan provides a more general portrait of the direction of technology at the college. The end result of this approach is a document which accurately and effectively addresses technology planning at the college.

## **Major Accomplishments for 2007-08**

- The college continued to expand its distance learning course offerings during the 2007-08 year. Much of the growth was in Hybrid, Web-centered and Web-enhanced offerings. This growth is evidenced by the 167 percent enrollment increase in these courses from Spring Semester 2004 to Spring Semester 2008. This increase is particularly pronounced for Hybrid courses, which experienced a 418 percent enrollment increase from Spring Semester 2005 to Spring Semester 2008.
- Recognizing that many aspects of the college phone system are outdated, a priority was given to upgrading this system. This includes a total conversion to Voice IP phones. However, the college is also addressing other needed upgrades, such as switches, etc. in order to ensure the overall system is current and reliable. This transition will result in lower telecommunication costs for the college and will also increase overall productivity. It is anticipated that this phase of upgrades to the system will be completed in Fall 2008.
- In an effort to provide improved access to college-related information and services, the Technology Services Department has collaborated with other areas of the college to create a college web portal. The resulting web portal known as MySCC, provides single sign on access and serves as a single entry point for users. Examples of services which can be accessed via MySCC include- BlackBoard (for online classes), GroupWise (email), Webmail, and current news and events at the college. Additional services will be added to MySCC during 2008-09.

- The college continues to expand the width and breadth of information available for students on the college webpage, as well as for faculty and staff.
- In 2007 the college selected the Enterprise Version of BlackBoard as the course management software associated with online classes. At this point the college has completed the first year of a three year contract with BlackBoard. The consensus is that this was a good decision and resulted in high-quality and largely trouble-free delivery of online classes. Also, as an ASP client, the college has been provided with the latest software updates.
- The college continued to the conversion from the Unix to the Colleague computing system. In Summer 2007, the college successfully converted to the student record component of the Colleague System. This concluded the conversion phase- the focus during much of 2007-08 involved various adaptations to the new system.
- The network at the Jackson Campus was overhauled during 2007-08. This upgrade enabled the network to provide gigabit speed to desktop computers. The overhaul also enhanced the services available to faculty, staff and student users.
- Finally, 2007-08 was characterized by the general growth of technology (hardware, software and services) at Southwestern to meet the educational needs of the college.

## **Short-Term Information Technology Initiatives**

Initiatives addressed in this section are those which the college plans to implement within the next one to two years. This includes those projects which will be fully underway/completed within this time frame as well as those which will be initiated but not completed as well.

- The regional education wide area network will be implemented. Gigabit Ethernet connectivity will be available to all of the educational institutions in the region to permanently eliminate recurring transport costs, increase capacity and reliability, and to deliver many educational applications. At this point, connectivity has been completed. The focus is now on the provision of services/classes for students and teachers.
- The college will continue to give priority to the Tandberg platform for the CommunityLink interactive television sites. This will include the Tandberg Video Conferencing Units, and some Tandberg Educator Series comprehensive distance learning classroom equipment. The college will continue to address compatibility issues with those public schools which opted for the Polycom Solution System.
- SCC will continue serving in its capacity of Community Interest Partner for BalsamWest FiberNET, LLC, the fiber-optic telecommunications company created by Drake Enterprises and the Eastern Band. In that role, SCC will pay particular attention to the strands of fiber reserved for philanthropic community and economic development in western North Carolina.
- Continue the upgrade of the college's phone system, including the related core electronic system.
- Continue to address remaining issues as a result of the migration of the college's administrative computing system to the Colleague System (referred to as the Information System for the Future in prior reports). The main focus over the next couple of years will likely be in the category of maintaining the system- including upgrades and providing any necessary troubleshooting as the college adapts to this new system. In addition, there will likely be some additional training for users. Some of the training may be in-house while other training session will be coordinated by the North Carolina Community College System.
- Pursue the necessary funding to enable the implementation of the document imaging capability at the college. Part of the cost is associated with the need to install an archive server. The hardware and software utilized for this initiative will facilitate the storage of many of the college's key reports and documents.
- Implement the college web portal. This project is designed to provide improved access to college related information and services for students, faculty and staff. The resulting portal, known at the college as MySCC, provides students, faculty and staff with single sign-on access to numerous application portals. The overall intent of this concept is to facilitate the ability of students to access any of their personal records or to acquire any information they may need concerning the college via a single springboard with only one log-in requirement. For example, students access their

student e-mail, access their student record, access any on-line course they may be taking, etc. through this process. In addition to the benefits this offers to students, it also has benefits to the college due to the security features it provides.

- As part of an on-going effort to consolidate college servers and personal computer workstations, the Information Services Department will begin a multi-year virtualization project. Virtualization of college servers and computer workstations will allow students, faculty and staff to have access to a desktop and any necessary software from any computer station. This consolidation will allow for a more efficient use of software licenses and improve technical support.
- The growth of the new Macon Campus will result in a number of challenges and opportunities in the area of information technology. The proposed new building (the second classroom building at this campus) will require information technology infrastructure/hardware. As a result, the Information Technology area will be required to dedicate significant staff resources to this effort. In addition, Information Technology staff will also have the responsibility for maintaining features and services (as well as upgrades) at the original building on this campus. Finally, the college will periodically evaluate the need for additional technical staff resources to support the technology requirements of the new campus.
- It is expected that the Distance Learning Committee will continue to make important contributions to technology-related areas at the college. For example, during 2007-08, this group developed and deployed a new Student Opinion Survey for students taking distance learning classes. The new format roughly doubled the response rate for this survey, resulting in better data for assessment purposes.

## **Long-Term Information Technology Initiatives**

Initiatives addressed in this section are those which the college plans to implement within the next two to five years.

- The schools served by the regional education wide area network will be focusing on the deployment of various applications to improve the learning opportunities for students throughout the region. Some examples of applications that the schools may choose to deploy include:
  - Access to HDTV
  - Real-Time Course Sharing via Interactive Television Systems
  - Virtual Field Trips
  - On-line Teacher Training
  - Wider Distribution of Educational Resources such as the Adventures of the American Mind, NovaNet, etc.
  - Access to Educational Activities for Homebound Students
  - On-line Mentoring and Tutoring
  - Shared Software Applications
  - Digital Literacy Training
  - Basic Skills, GED, ESL via Technology
  - Public Access Spaces
  - Shared Computing, Printing, and Other Electronic Devices
  - Increased Security
  - Interactive Among Sites

The Schools will also begin to explore the development of their own unique applications that could be beta-tested and shared with other regions of the State and across the Nation. In addition, the schools will begin “telling their story” across the State and Nation—as a best practice.

- SCC will continue serving in its capacity of Community Interest Partner for BalsamWest FiberNET, LLC. In that role, SCC will continue to pay particular attention to the strands of fiber reserved for philanthropic community and economic development in western North Carolina. SCC will also seek to share this model with other communities across North Carolina and the nation.
- Although listed under short-term initiatives, the conversion of the college administrative computing system to the Information System for the Future (Colleague) also has long-term implications as well. This conversion is currently being implemented at institutions within the North Carolina Community College System. The final phase of this project was the conversion of all student records to this new system. This has proven to be a very time consuming transition, as a result it will likely be several more years before all phases of this project are fully operational.
- While also addressed under short-term initiatives, the development of a new campus in Macon County will likely include long-term technology-related initiatives and challenges.

- It is anticipated that the regional telecommunication initiative will result in the availability of greater Internet bandwidth at more affordable prices. This project will enhance communication with public schools and other users (more video-conferencing, file sharing, etc.). In addition, this will enable the college to remove servers from the off-campus centers and centralize them at a location on the Sylva Campus.
- The college anticipates continued growth of its on-line course offerings (with increases in both the number of students enrolled and the number of faculty teaching via this instructional method).
- The college recognizes that the expected increase in the number of servers, users and applications will require additional technology support personnel in the future. It is projected that at least two new support staff will be required over the next five years in order to meet the increased demands on the college's information technology system.
- The college will continue its plans for establishing a disaster recovery site at the Macon Campus. This will ensure the security of college records and other key information in the event of a major disaster at the Jackson Campus.
- The college will continue its plans to provide customized desktops for all students, based upon their individual needs. The desktop will be based upon the student's program of study and the requirements associated with that program.

### **Assessment of Information Technology Resources and Services at the College**

The college acknowledges that a critical component of technology planning is an assessment of the effectiveness of that technology. Southwestern conducts several surveys which include questions designed to assess the overall level of satisfaction (by both students and faculty/staff) with those resources and services related to information technology. These surveys include the Faculty/Staff Evaluation of College Services and the Student Climate Survey. Both of these are administered annually. In addition, the college has developed the Distance Learning Survey which is designed to assess the level of satisfaction of those students who are enrolled in classes utilizing the various distance learning mediums employed by the college. This survey is administered in Spring Semester of each year. Tables 1 - 3 provide the results from the most recent surveys for those questions relating to information technology. As the tables indicate, students as well as faculty and staff are highly satisfied with most aspects of information technology at the college.

Table1. Results of Faculty/Staff Evaluation of College Services Survey, 2005 - 2008

		% Don't Know	% Strongly Disagreeing	% Disagreeing	% Agreeing	% Strongly Agreeing	Mean
The e-mail system is effective and enables better communication.	2005	0.0%	3.0%	8.9%	47.5%	40.6%	3.26
	2006	0.0%	0.9%	7.5%	56.1%	35.5%	3.26
	2007	2.6%	0.9%	5.2%	57.8%	33.6%	3.27
	2008	2.5%	1.7%	5.0%	62.8%	28.1%	3.20
The speed of accessing external networks such as the Internet is adequate.	2005	1.0%	7.9%	14.9%	48.5%	27.7%	2.97
	2006	0.9%	6.5%	9.3%	56.1%	27.1%	3.05
	2007	3.4%	2.6%	12.1%	51.7%	30.2%	3.13
	2008	3.3%	4.1%	6.6%	62.3%	23.8%	3.09
The college's internal data network is sufficiently reliable.	2005	5.9%	1.0%	10.9%	53.5%	28.7%	3.17
	2006	1.9%	2.8%	12.1%	57.9%	25.2%	3.08
	2007	9.5%	0.9%	4.3%	62.1%	23.3%	3.19
	2008	9.8%	1.6%	9.0%	60.7%	18.9%	3.07
I am aware of procedures for requesting technological support/reporting problems.	2005	4.0%	0.0%	2.0%	55.4%	38.6%	3.38
	2006	0.9%	0.0%	3.7%	59.8%	35.5%	3.32
	2007	6.1%	0.9%	6.1%	54.8%	32.2%	3.26
	2008	8.2%	0.0%	4.9%	53.3%	33.6%	3.31
I feel adequately trained to use the college information system (Colleague).	2005						
	2006						
	2007						
	2008	13.3%	4.2%	9.2%	51.7%	21.7%	3.05
The college webpage is a convenient resource for accessing current and accurate college information.	2005	3.0%	2.0%	5.0%	44.0%	46.0%	3.38
	2006	0.9%	0.0%	1.9%	49.5%	47.7%	3.46
	2007	5.2%	0.0%	2.6%	49.1%	43.1%	3.43
	2008	4.1%	0.0%	2.5%	52.1%	41.3%	3.41
Computer/technology support staff respond to my requests for help in a timely, professional and courteous manner.	2005	4.0%	1.0%	7.0%	52.0%	36.0%	3.28
	2006	0.0%	0.0%	6.5%	51.4%	41.1%	3.33
	2007	6.1%	3.5%	3.5%	45.2%	41.7%	3.33
	2008	6.6%	7.4%	3.3%	41.3%	41.3%	3.25
Overall, I am satisfied with Information Technology resources.	2005	3.0%	1.0%	5.9%	55.4%	34.7%	3.28
	2006	1.0%	0.0%	4.8%	58.1%	36.2%	3.32
	2007	4.3%	0.9%	4.3%	58.6%	31.9%	3.27
	2008	2.5%	0.8%	5.0%	62.8%	28.9%	3.23

Table1. Results of Faculty/Staff Evaluation of College Services Survey, 2005 – 2008 (Cont.)

		% Don't Know	% Strongly Disagreeing	% Disagreeing	% Agreeing	% Strongly Agreeing	Mean
Distance Learning facilities are adequate.	2005	30.6%	3.1%	4.1%	38.8%	23.5%	3.19
	2006	30.2%	1.9%	8.5%	30.2%	25.5%	3.18
	2007	31.0%	0.0%	3.4%	42.2%	23.3%	3.29
	2008	44.6%	0.0%	3.3%	30.6%	21.5%	3.33
Distance Learning resources are adequate.	2005	30.6%	2.0%	9.2%	37.8%	20.4%	3.10
	2006	28.3%	1.9%	14.2%	30.2%	25.5%	3.11
	2007	31.0%	0.0%	2.6%	45.7%	20.7%	3.26
	2008	42.1%	0.0%	4.1%	31.4%	22.3%	3.31
Distance Learning staff respond to requests promptly.	2005	31.3%	3.0%	4.0%	33.3%	28.3%	3.26
	2006	31.1%	1.9%	3.8%	21.7%	41.5%	3.49
	2007	30.2%	0.0%	0.9%	37.1%	31.9%	3.44
	2008	40.5%	0.0%	1.7%	28.1%	29.8%	3.47
Distance Learning staff are helpful and knowledgeable.	2005	30.0%	8.0%	2.0%	33.0%	27.0%	3.13
	2006	28.3%	1.9%	5.7%	22.6%	41.5%	3.45
	2007	27.6%	0.9%	0.0%	40.5%	31.0%	3.40
	2008	40.0%	0.0%	1.7%	28.3%	30.0%	3.47
The Distance Learning program is effective in meeting the educational needs of students who take distance learning courses.	2005	32.0%	6.0%	8.0%	34.0%	20.0%	3.00
	2006	29.2%	0.9%	9.4%	31.1%	29.2%	3.25
	2007	32.8%	0.0%	2.6%	41.4%	23.3%	3.31
	2008	44.5%	0.0%	5.0%	26.1%	24.4%	3.35

Table 2. Results of Student Climate Survey, 2004-2007

		% Strongly Disagreeing	% Disagreeing	% Agreeing	% Strongly Agreeing	Mean
I am satisfied with the quality of computer hardware and software at SCC.	2004	6.6%	11.2%	53.9%	28.4%	3.04
	2005	6.0%	10.7%	50.0%	33.3%	3.11
	2006	4.0%	9.9%	53.5%	32.7%	3.15
	2007	7.7%	15.9%	51.5%	24.9%	2.94
Appropriate technology is effectively incorporated into classroom instruction.	2004	3.3%	9.1%	63.4%	24.2%	3.09
	2005	1.5%	6.5%	62.8%	29.1%	3.20
	2006	4.2%	4.2%	60.5%	31.2%	3.19
	2007	2.1%	13.9%	62.2%	21.8%	3.04
I am satisfied with my ability to access my course grades on-line.	2004	6.2%	6.8%	56.8%	30.2%	3.11
	2005	1.2%	7.4%	49.2%	42.2%	3.32
	2006	4.9%	4.2%	50.3%	40.6%	3.27
	2007	3.4%	8.3%	58.5%	29.8%	3.15
I am satisfied with the performance of the Internet on the campus.	2004	NA	NA	NA	NA	NA
	2005	4.1%	7.0%	57.0%	32.0%	3.17
	2006	5.0%	8.0%	57.2%	29.8%	3.12
	2007	4.4%	10.9%	59.0%	25.8%	3.06
I am satisfied with the variety of distance learning course offerings.	2004	NA	NA	NA	NA	NA
	2005	5.9%	17.1%	52.4%	24.6%	2.96
	2006	6.0%	15.5%	57.1%	21.5%	2.94
	2007	6.7%	12.8%	67.2%	13.3%	2.87
I am satisfied with my ability to enroll in distance learning classes.	2004	NA	NA	NA	NA	NA
	2005	4.2%	5.3%	60.3%	30.2%	3.16
	2006	3.0%	9.1%	61.0%	26.8%	3.12
	2007	3.5%	11.2%	61.8%	23.5%	3.05

Table 2. Results of Student Climate Survey, 2004-2007 (Cont.)

		% Strongly Disagreeing	% Disagreeing	% Agreeing	% Strongly Agreeing	Mean
I am satisfied with the on-line student orientation process at SCC.	2004	NA	NA	NA	NA	NA
	2005	4.7%	7.6%	57.1%	30.6%	3.14
	2006	2.6%	9.5%	63.2%	24.7%	3.10
	2007	5.7%	10.8%	65.0%	18.5%	2.96
The quality of my distance learning classes is equal to that of my traditional classes.	2004	NA	NA	NA	NA	NA
	2005	7.6%	11.0%	51.7%	29.7%	3.03
	2006	5.0%	14.5%	54.0%	26.5%	3.02
	2007	8.4%	17.5%	57.3%	16.8%	2.83
The SCC student e-mail system is an effective mechanism for communicating with the college.	2004	7.6%	8.9%	57.3%	26.3%	3.02
	2005	5.8%	5.8%	51.9%	36.5%	3.19
	2006	7.3%	9.7%	53.8%	29.2%	3.05
	2007	7.6%	10.1%	62.1%	20.2%	2.95

Table 3a. Results of Distance Learning Survey, Spring Semester (Part I)

		% Strongly Disagree	% Disagree	% Agree	% Strongly Agree
SCC provided adequate technical support for using the course delivery software.	2008	2.9%	2.5%	38.4%	56.2%
I was satisfied with my access to resources provided by the SCC Library.	2008	3.2%	3.2%	39.9%	53.6%
I was satisfied with the services and assistance provided by the Library staff and the Library web page.	2008	3.5%	1.7%	43.5%	51.3%
Overall, I was satisfied with this course.	2008	5.3%	10.4%	28.6%	55.7%

Table 3b. Results of Distance Learning Survey, Spring Semester (Part II)

		% Yes	% No
I would be interested in taking another distance learning course at SCC.	2008	92.4%	7.6%

As in previous years, analysis of the survey results indicates high levels of satisfaction in technology resources and services at the college by both students and employees. That being said, survey results have been monitored for a number of years for some areas where the data suggest a close scrutiny is warranted. For example, the college has been monitoring the response of faculty and staff to the question of “the college’s information system meets my needs for accessing student records and other college information” (Table 1). The mean for this question on the 2003 Survey was 2.96, with just over 18 percent of respondents expressing dissatisfaction with the information system. In 2004, the mean for this question declined to 2.86, with again just over 18 percent of respondents expressing dissatisfaction. In 2005, the mean for this question remained steady at 2.86. The percentage of respondents expressing dissatisfaction increased somewhat to 23 percent. Satisfaction levels increased markedly in 2006 however, with the mean rising to 3.21, and the percentage of respondents indicating dissatisfaction decreasing to less than 8 percent. In 2007, the mean was 3.10 and the percentage of respondents indicating dissatisfaction increased somewhat to 17 percent. Previous levels of dissatisfaction, as expressed in this survey, were not surprising,

as the college acknowledged the shortcomings of this system. However, no action was taken on this issue, as the college was in the process of converting from the older Unix system to the new Colleague System. This conversion is well underway, as both the financial and human resources areas at Southwestern have converted to the new system. Student records will go live with this system effective Fall Semester 2007. All 58 institutions in the North Carolina Community College System are converting to this new system.

Another issue which has been monitored for a number of years emerged from the Student Climate Survey (Table 2) concerning student satisfaction with the quality of computer hardware and software at SCC. The level of satisfaction on this question improved slightly in 2005 (although almost 17 percent of respondents still expressed some degree of dissatisfaction. Further improvement was registered in 2006 as the mean increased to 3.15 and the percentage of respondents indicating dissatisfaction declined to just under 14 percent. However, in 2007 the mean declined to 2.94 and the percentage of respondents indicating dissatisfaction rose to over 23 percent. To help address this issue, the college expended over \$350,000 from the Title III program for technology-related equipment in programs and laboratories. While this expenditure has helped, the college recognizes that many of its students possess the latest in computer hardware and software at home. As a result, students' expectations for the availability of cutting-edge technology resources at the college remain very high. The college strives to equip its computer labs with current hardware and software. However, it is a financial challenge to always provide the very latest in computer hardware. The college will continue to monitor the results to this question to ensure the college is meeting the expectations of its students in this regard.

The college is also closely monitoring the results to another question from the Student Climate Survey concerning the satisfaction with the variety of distance learning course offerings. In 2005 and 2006 the mean scores for this question were 2.96 and 2.94 respectively. Also, the percentage of respondents indicating dissatisfaction with this area was 23.0 and 21.5 percent, respectively. In 2007 the mean score declined to 2.87 (on a positive note, the percentage of respondents indicating dissatisfaction decreased somewhat over prior years to 19.5 percent). The college recognizes this is an area of high demand for students. However, meeting this growing demand is a challenge to the college's financial, human and technical resources. In an effort to meet this demand, the number of distance learning course offerings at the college has grown exponentially over the past four to five years.

Also, the college has created a relatively new Distance Learning Specialist position. This individual works with faculty, assisting their efforts to develop and enhance distance learning classes. The college will continue to monitor the results to this question, as well as its efforts to meet the growing demand for these course offerings.

Finally, the results of the survey administered each year to those students taking distance learning classes are included in Tables 3a and 3b. This survey was largely redesigned for 2008, so it is not directly comparable to prior years. The results of this survey for 2008 indicate a high degree of satisfaction with all aspects of the college's distance learning effort. This is consistent with the high satisfaction levels achieved in the earlier version of this survey.