Innovation in Student Services:
Best Practices and Process
Innovation Models and Trends

Darlene J. Burnett

IBM began researching best practices and innovations in student services in 1995 and created the IBM Best Practice Partner group in 1996. The charter members of this group are Babson College, Ball State University, Boston College, Brigham Young University, University of Delaware, University of Minnesota, University of Pennsylvania, and the Western Interstate Commission on Higher Education (WICHE). The group has grown and now represents 23 institutions, each sharing one or more leading innovations in student services.

Since it was formed, the IBM Best Practice Partner group has held an annual Student Services Forum to provide an opportunity for collaboration and information exchange with leaders in the field. The forum creates an environment that provides a holistic, horizontal view of student services. Each of the partner institutions has undergone a culture shift, moving to provide services from a student perspective rather than an internal institutional perspective.

One of the first steps in creating any innovation in student services is to invert the view of services. This innovation not only requires a shift in the view of how and why services are provided, but also a shift in how the services are delivered. The institutional perspective shift puts the student at the center of every interaction. This perspective helps identify which processes are no longer needed, which organizations require restructuring, which policies no longer relate, and what information the staff need to conduct their interactions with the student. The focus of student-centered services is to ensure that each student’s “touch point” with the institution provides the quality, accuracy, and responsiveness expected by today’s students, whom many think of as customers.

Sharing their experiences with other institutions, the Best Practice Partners compiled Planning for Student Services: Best Practices for the 21st Century (Beede and Burnett 1999). This book follows up those experiences with examples of how institutions have sustained the changes, updates on current innovations, and the lessons learned over the past three years. In addition, new partners present their best practice models, innovations, and trends for student services (see Figure 1.1).

Observations and Trends

George Fisher, the former CEO of Motorola, summed up the existing perspective of most organizations and the obstacles facing colleges and universities as they redesign their services for students:

Organizations are not built to serve customers—they are built to preserve

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**Student Services Trends**

- Channel/Organizational Management
- Customer-Service Center
- Redesign/Process
- Cross-functional teams
- Measurable outcomes
- Web Portal
- Personalized
- Customized
- Community oriented
- Process oriented
- Service Support Center (Call center)
- Customer Management
- Course Management
- Back Office Process Redesign
- Reorganization
- Implementation
- Planning
- Not intended
- Charter Partner

![Innovation in Student Services: Planning for Models Blending High Touch/High Tech](image.png)
internal order. To customers, the internal structure may not only mean very little, it may serve as a barrier. Organization charts are vertical, and serving the customer is horizontal.

How, then, do institutions change the existing models for delivery of student services, and what do they do to achieve a best practice in student services?

The experiences of the leading colleges and universities in this book illustrate a variety of considerations. New themes have emerged that are critical to differentiating an institution from the competition and meeting the expectations of today's service-oriented students. What has become apparent as each institution discusses its innovations are the following key trends:

- Service perspectives are shifted 180 degrees when the institution views all services from the external perspective of the student/customer instead of the internal perspective of the institution.
- Processes are redesigned from the student's/customer's perspective.
- Technology is applied to improve processes only after they have been redesigned.
- Enterprise Resource Planning systems are implemented to gain the greatest benefit for staff and students and reap the best return on investment after processes have been redesigned.
- Barriers to information are removed by providing integrated information access to disparate databases and systems for both staff and students.
- Networks and Internet access are designed to scale as the volume of traffic increases with new Web services.
- The Internet can provide a foundation for strategic change within the institution and should be considered in all aspects of interactions with students, staff, and faculty.
- A consistent institutional brand image is presented in all printed material and on the institution's Web site.
- Consistency and excellence of the service experience are developed at each touch point (in person or via e-mail, telephone, or Web services).
- As the institution learns more about the expectations of its students and the needs of staff, an evolving student service model is planned to provide those services.
- Services are true to the culture and values of the institution.
- The focus of services shifts from transactional to experiential.
- Organizations recognize that significant changes to delivery of services must be strategic to the institution and have the full support of and participation by the executive team.

Brand and image. Perhaps the most important trend is brand identity. Brand and image are an institution's currency; the brand must be consistent regardless of how the student/customer interacts with the institution. In the past, an institution's brand image was defined by the written material sent to students or by the student's first visit to the campus. Today, students/customers are more likely to form their first impression of an institution after visiting its Web site.

Yet regardless of the first point of contact, every interaction with a student/customer must deliver the same quality of service and focus on experience and added value. The majority of institutions have no clear Web strategy, consistency of navigation, or brand image presented from page to page. Furthermore, Web usage is not often integrated with the institution's strategic plan, information technology plan, strategic enrollment management plan, or marketing and public relations plan. All of these plans must be considered to create a consistent brand image.

In chapter 2, Cindy Wheatley discusses how the Walt Disney Company has built a consistent brand image into all of its ventures, whether at Disneyland, Walt Disney World, the Disney stores, or the Disney Web site. It's possible to glean ideas from consumer-oriented Web sites, particularly those with online shopping capabilities, which can be excellent examples of trends in Web features and design. For example, online merchandiser Amazon.com has excelled in developing personalization tools for its customers, including recommendations based on previous purchases and e-mail communications for promotions and other programs. Cataloger Lands' End has also developed a state-of-the-art Web site, with features like "Lands' End Live," which allows users to participate in a live Web chat or phone chat. Because so many students and prospective students are intimately familiar with the
Web these days, it's easy to imagine that they would expect the same levels of service at their college or university's Web site that they receive at consumer sites. Many of the features could be modified to apply to an institutional setting online: the Lands' End "Shop with a Friend" service might be "Register with a Friend." Likewise, "My Personal Shopper" could become "My Personal Advisor."

Creating and sustaining change. A second key trend involves creating and sustaining the changes that have improved services and then providing a means of continuous improvement. This often requires a change in the culture of the institution. The perspective of services must shift from the internal focus of institution-based rules and policy enforcement to the external view of providing success-based interactions with the student/customer.

This type of change involves a two-pronged effort: the first is to provide services from the student's perspective (process redesign), and the second is to train and support staff in providing those services. The staff must view their roles differently and have the support of the institution in delivering services. They must also participate in the initial development of the new services and be accountable for their continual improvement. To sustain the changes created from process redesign, new technology, and/or new organizations, the institution must develop staff support and a learning environment.

James Madison University, for example, has created the Neighborhood, an integrated, experiential action learning framework. It is a competency-based model that uses a participatory process. The University of North Carolina at Greensboro, with its belief that human capital is its most precious resource, is focusing on three levels—individual learning, team learning, and campus learning—and has created a learning organization at the core of its Enrollment Services project. Another institution, Purdue University Calumet, believes that organizational change starts by changing mental models. Mental models reflect how the staff sees the world, their jobs, or any process. Purdue University Calumet has designed a competency-based learning model with modular certifications and continuous training. Its service teams meet monthly and continue to identify ways to improve service delivery.

In chapter 23, Earl Potter discusses the three phases that employees must pass through from the introduction of a proposed change to institutionalization of that change: preparation, acceptance, and commitment. Employee participation and buy-in at each stage is critical to institutionalizing and sustaining change.

Lifelong relationships. A third trend is the movement to build lifelong relationships with students. Colleges and universities often initiate their relationship with prospective students and their parents, teachers, and counselors as early as middle school. Studies indicate that building relationships early with prospective students improves the institution's chances of admitting, registering, and retaining them. In fact, the earlier the relationship is established, the greater the odds of admitting and retaining.

The Internet is proving to be an excellent channel for initiating relationships with students and continuing them after graduation. For example, the University of California's UC Gateways project, discussed in chapter 21, allows middle and high school students to track their progress online toward eligibility for admission. Students can build a college-going portfolio and interact with their personal university counselors and advisors. The portfolio emulates an electronic file cabinet with individual file folders. The student's file cabinet, called My Backpack, contains the following electronic folders: My Classes/Grades, My Plan, My Test Scores, My Information, My Activities, My Messages, and My Success Team. The portfolio creates a prescollegiate support system and set of interactive tools. Another electronic file cabinet contained in the portfolio is success teams, which contains electronic folders of success stories targeted to the specific environment and characteristics of the student. In addition, students may take a series of online surveys that help them understand their learning styles, career interests, and personalities. UC Gateways empowers high school students to assess their own college-going status and to plan accordingly. By establishing these early relationships, the University of California is better able to accomplish its goal of attracting and retaining targeted cohorts of students.

Other universities have used the Internet to establish and improve their relationships with students as well. Louisiana State University, the University of Texas at Austin, and the University of Minnesota are among several institutions that have created personalized Web portals that not only enhance the institution's relationship with its students, but also provide for
communities of users that improve student/customer satisfaction and loyalty.

In chapter 22, Diana Ohlinger discusses the benefits and importance of institutions creating customer relationship management (CRM) systems, particularly by capitalizing on connections and developing lasting relationships. It is becoming increasingly important for institutions to move away from transactions with many discrete information systems and business processes and toward a CRM process that initiates a relationship with every student/customer, with a view to maintaining a mutually rewarding connection for the long term.

Technology to support and improve the student/customer experience. A fourth key trend concerns technology. In the past, new technology has been installed over existing processes. While this may improve the speed, accuracy, and efficiency of existing processes, it typically has little significant impact on the end result of services with customers or staff. Technology systems are still in unconnected islands; each person continues to conduct his or her business in the same manner. In addition, there is often an absence of integration with other plans and strategies at the institution.

This is a bit like some of the roads found in older cities. Many roadways were originally animal paths named for their purpose or landmarks (deer pond, rush creek, mountaintop, frog leap). Over the years, cities and towns have paved those paths into roads and highways and retained the names. These roads meander. There is no logical reason for the direction they take or the names attached to them. For newcomers, navigating the area is more difficult because the original names for the paths no longer apply.

The same is true of student services. We have hardened the paths and processes of services by overlaying technology without significantly changing the processes for their delivery. Student services have evolved over the past 50 to 100 years at each institution. Originally, the available technology was limited, and processes were typically completed manually. As a result, vertical silos of function developed. But what made sense then may no longer work now. Today, colleges and universities can create or update processes that best fit their students' needs and meet expectations that are consistent with their institutional culture and values. Automating or Web-enabling processes can dramatically improve services for students and the delivery of those services for staff.

Don't pave your institution's cow path; instead, create a new, logical, planned path for services and select technology to complement the end objectives. Web service isn't about the technology; Web service is about what can be accomplished with the technology. Applying modern technology in new ways can provide unprecedented levels of customer service.

The Shift in Student Services

A best practice model focuses on the following:

- Customer/student satisfaction and success
- Service processes from the student's perspective
- Added value with each person-to-person transaction
- Choice (time, place, and service contact)
- Variety of models for one-stop centers
- Variety of models for Web portals
- Self-service, generalists, specialists (70 percent self-service, 20 percent generalists, 10 percent specialists)
- Empowered, skilled frontline staff
- Cross-functional teams
- Service model seen as strategic to the institution
- Executive support and participation
- Shift from transactions to relationship

The criteria used to identify innovation in student service models and to select the IBM Best Practice Partners follows the categories established by the Baldridge National Quality Program for the 2000 Education Criteria for Performance Excellence. Seven categories are considered: leadership, strategic planning, student and stakeholder focus, information and analysis, faculty and staff focus, educational and support process management, and organization performance results.

One-Stop Student Centers

There are a variety of one-stop service center models, each one reflecting the culture, values, and mission of its institution. According to David E. Hollowell, executive vice president of the University of Delaware, the primary reason for creating a one-stop center was to address students' concerns about university services. These concerns included the impression that they were being given the run-around and the perception of an uncaring
staff, a lack of teamwork among offices, and a lack of tools to get the job done.

"Improving the way the University of Delaware serves its students has been an institutional priority since 1988," says Hollowell. The university designed one of the first one-stop service centers within higher education and has served as a model for many of the centers created since then.

One-stop centers are about helping students make decisions in a number of areas. They provide a combination of paper information, Web services, and personal support from generalists and specialists. To say that an institution offers admission, registration, financial aid, and bursar functions in a one-stop center would under-represent what really takes place. Each of the Best Practice Partners that provides one-stop services has a combination of services that best fit its objectives, its students' needs, and its institutional culture. Some examples of the services offered appear in Figure 1.2.

Students typically want to choose the method by which they interact with their institution. Those who choose to have a face-to-face interaction expect more than a transaction—they expect added value and a positive experience. They expect the staff person with whom they interact to be knowledgeable and caring and to have the correct information. They want the interaction to result in complete problem resolution in a single meeting.

To meet these students' expectations, the staff member must have a breadth of knowledge spanning multiple areas, such as admissions, registration, and financial aid. Many models call this person a generalist. The generalist must have the technology at his or her fingertips to access the information needed to resolve the question or request. The technology must integrate all of the disparate databases and systems that house student information. Typically, the generalist doesn't answer phone calls or do other work that would distract from attending to the immediate needs of the students. Most one-stop models assume that 70 percent of student interactions will take place with self-service, 20 percent with a generalist, and 10 percent with specialists.

Many institutions are developing the generalist position into a new career path and are promoting individuals from specialist jobs in other areas. As part of the generalist's ongoing training, many institutions rotate them through each of the specialist job areas. In addition to possessing so many different skills and areas of expertise, the generalist also must enjoy meeting and serving the public. Jim Black, associate provost for enrollment services at University of North Carolina at Greensboro, calls it the "service heart."

Among the trends of one-stop centers are the following:

- Generalists (20 percent), specialists (10 percent), and self-service (70 percent)
- Redesigned service processes
- Added value with each interaction (move from transaction to relationship)
- Consistent, positive brand experience
- Cross-functional teams
- Technology to support information access of student and university data
- Flexible space
- Measurements of effectiveness and success
- Back office process redesign, document management and workflow

Again, one can look outside education for other models to help define our future directions. Companies such as Nordstrom, Walt Disney, Southwest Airlines, and the Four Seasons Hotels have all focused on the customer experience with every personal interaction. They are noted for providing excellence in service and for creating a positive, memorable experience.

It is very important when designing a one-stop center to create flexible space. One of the lessons learned by some of the first institutions to implement one-stop centers (including Boston College, Seton Hall University, and Southern Alberta Institute of Technology) was that, as more services are offered over the Web, the volume of business at the one-stop center decreases. As a result, other needs have become apparent. One of those needs is the call/e-mail center. Students with questions about services want to interact with staff either by e-mail or phone. Thus, some of the space allocated within the one-stop center has been repurposed to support the call center. In some cases, the generalists are rotated from the front counter to the call/e-mail centers. The goal is to provide the same level of excellence in service and experience if the student chooses to contact the call center for help. Like one-stop centers that have expanded hours to accommodate in-person requests, the hours of...
| Recruiting functions | • Recruiting information, both printed and electronic  
| | • Displays of general college or university brochures  
| | • Pre-admissions counseling  
| | • Acceptance of admissions applications  
| | • Origination of campus tours  
| | • Explanation of "virtual tours"  
| Admissions functions | • Acceptance of admissions applications  
| | • Pre-admissions counseling  
| | • Transfer student counseling  
| | • International student counseling  
| Financial aid functions | • Displays of scholarship and financial aid information  
| | • Evaluation of financial need and determination of eligibility  
| | • Access to and help with electronic scholarship  
| | • Free Application for Federal Student Aid (FAFSA) displays and help completing FAFSA  
| | • General financial aid assistance  
| | • Financial aid counseling  
| | • Work-study placement  
| | • Information on the cost of attending college  
| | • Loan counseling  
| Registration functions | • Assistance in scheduling classes  
| | • Enrollment verification  
| | • Request for change of majors and other records functions  
| | • Receipt of official and unofficial transcripts  
| | • Information on classes, class schedules  
| | • Information on add-drop  
| | • Information on degree audit  
| Academic advising functions | • Scheduling courses  
| | • Guidance on coursework  
| | • Referral to other university services  
| | • Career assistance  
| | • Information on degree audit  
| | • Information on study abroad  
| | • Information on tutoring  
| Counseling functions | • Personal counseling  
| | • Career counseling  
| Bursar (student accounts) functions | • Fee payments  
| | • Review of student accounts  
| | • Review and assistance with all financing options  
| | • Installment payments  
| | • Loan counseling  
| | • Financial aid and support  
| Career services functions | • Information on placement of graduates  
| | • Career counseling  
| | • Job search assistance in person and on the Web  
| | • Resume help  
| | • Interviewing assistance  
| | • Job listings  
| | • Recruitment activities  
| | • Information on internships and co-op experiences  
| Other service functions | • Student ID card production  
| | • Information on meal plan  
| | • Information on telephone services  
| | • Information on parking  
| | • Information on online services  
| | • Information on technology services  

Figure 1.2 Examples of One-Stop Center Services

the call/e-mail center have to be flexible as well, as much of the business transacted on the Web occurs outside normal business hours.

Seton Hall implemented a Customer Response Team (CRT), which recognizes that students come to the institution for service interactions in a variety of ways—on the phone, in person, via the Web, and by mail. The CRT is integrated and equipped to respond through all of these avenues and offer the same level of attention to each.
The University of Minnesota began providing a new venue for services when it introduced one-stop Web services. At that time, creating one-stop centers on campus wasn’t anticipated. But even with the integrated Web services, students still needed to visit several locations in person to complete various processes with the university. Transcript requests, tuition and fee information, payment, financial aid, and registration were all handled in different offices, even different buildings. For example, a student who wanted to register had to visit at least four different buildings on campus at least once. The solution for the University of Minnesota was to add one-stop service centers (there are three) to the array of options for interaction. Now, students can visit an advisor either in person or via e-mail and then register on the Web or go to a one-stop service center.

Boston College was among the first institutions to offer both a one-stop center and Web services, and it continues to look for practices to improve services for students and parents. Recently, it has been focusing on the back office processes of student services and is redesigning those processes, working with FolderWave to radically change the way financial aid requests are processed and technology applications are developed and deployed. FolderWave, a document management system piloted in spring 2001, was fully implemented in the 2001–2002 academic year. Its elimination of the paper process should result in improved financial aid decision making as well as exceptional service to parents and students. For Boston College, this project has brought together new Web technologies and integration tools as well as the use of an application service provider model and business outsourcing.

Web Portals

Web portals are becoming strategic to the institution. In a report titled *Higher Education Enterprise Portals: Profiles of an Emerging Provider Class*, Gartner (1999) projects that by fall 2003, 80 percent of U.S. colleges and universities with enrollments of more than 1,000 FTE students will have implemented Web portals.

Under the leadership of Robert Kavvik, professor and associate vice president and executive officer, the University of Minnesota has been a leader in providing student services via the Web. According to Kavvik:

Portals and e-business are first and foremost about improving service to ensure enduring relationships with students, staff, and faculty. They give each user a unique, personal, and preferred perspective of the university. Portals and e-business are about community building, and especially the development and nurturing of learning communities. Portals and e-business afford us the opportunity to transform key business processes through the use of Internet technologies to improve service to customers.

When trying to define or describe the criteria for a portal, a commonly used description is one suggested by Gartner, that is, it must include the following four Cs:

- Connection to the resources of the Internet through search engines, shopping engines, and other utilities
- Content in the form of appropriate news, entertainment, and instruction for interested users
- Commerce involving access to electronic shopping and other commercial activities
- Community involving ground rules and tools that define a community of interest and enable participants to interact.

In general, a portal provides a Web environment that is organized, customized, and personalized so that each individual has access to communities of interest and personalized resources.

When describing the path institutions have taken, the typical development of Web services has four generations. These generations advance from the internal view of the institution, which mirrors the physical organization of services, to a situation in which the Web is used to create an experience and a relationship between the institution and the student. The beginning of a true Web portal is created in the third generation.

Generation 1: Content (Organized from the internal institutional view, terminology and organization mirror the physical organization and processes of the institution.) Most college and university Web services began and still reside in Generation 1. While there are valid reasons for the physical silos (admissions, registration, financial aid, bursar, academic support services, and student support services) within institutions, those silos have been mimicked and represented on the Web, although the physical boundaries don't apply. The information (content) resides on the institution's Web site in silos,
and students are expected to navigate the site in the same manner that they were asked to move around the physical campus.

Typically, institutions have no cohesive Web strategy and little or no collaboration among departments. Web pages have no consistent look and feel. Navigation changes from information silo to information silo. The students/customers using the Web site must find information and services based on the internal organization—they have to know the makeup of the institution and follow that organizational flow online.

A typical home page of an institution using Generation 1 Web services includes many of the following categories: Admissions, Academic Programs, Colleges and Departments, Administration, Athletics, Library Services, Campus Services, Registration, Financial Aid, Scholarships, Calendars, Directions, Directories, Campus Life, Resources and Services, About the University, and Letter from the President. While the student now has access to information via the Internet, the process of providing services to the student has not changed—there is no integrated view.

Generation 2: Content in Context (Organized by internal processes and organization within customer segments.) Generation 2 Web sites are organized by customer segment (prospective students, current students, visitors, faculty and staff, alumni). Beyond the first page of a Generation 2 Web site, however, content continues to be defined by internal terminology and organization. For current students, for example, the topics that might be on the second page (the first page after Current Students) include Academic Calendar, Announcements, Bookstore, Campus Events, Campus Maps, Catalogs and Handbooks, Colleges and Programs, Courses Search, Dining Services, Final Exam Schedule, Forms, Library Services, and Student Organizations.

Channeling information appropriate for current students into one page can help users navigate the Web site. But beyond the second page, there is generally no consistent look or feel or consistent navigation. The information is still organized from the institution's perspective with the institution's terms. Information is geared toward a generic student.

Generation 3: Customization, Personalization, and Community (Organized from a student-centered view and transaction-based). Generation 3 Web sites deliver the true promise of Internet technology and redesigned services to the student. To accomplish this level of service, institutions must commit to Web services being strategic to the college or university. Four excellent examples of customized, personalized Web sites are Personal Access Web Services (PAWS) at Louisiana State University, UT Direct at the University of Texas at Austin, MyUB at the University at Buffalo, and MyOneStop at the University of Minnesota. These institutions have created the equivalent of the physical one-stop service center on the Web. The sites are branded, have a cohesive look and feel, have consistent navigation, and are considered strategic to their institutions. The virtual one-stop centers go well beyond what a physical center can offer and integrate the services and functions from many silo organizations. Students can create their own personalized and customized Web portal within their university’s Web site, designating certain information and functions as important to them. This “my” utility provides students with the opportunity to manage their information, interactions, and transactions with the institution.

The University at Buffalo describes MyUB as providing a personalized portal service that makes the university as big as a student needs and as small as a student wants. Previously, the resources were either not available or available in silos of niche Web sites, each with a different look and feel, navigational scheme, organization, nomenclature, and search capabilities. MyUB serves as an online coaching and mentoring system to make sure that UB students have access to the resources they need when they need them. It complements what the human advisor can provide by bringing the wide resources of the university to the student's fingertips at any time of the day or night. Rather than providing a set of passive, fixed links for all students, MyUB provides customizable information and links that make sense, depending on the student's needs at that time.

Generation 3 Web sites deliver transaction-based services. The institutions designing these services use customer-centered design criteria, test the intuitiveness of the design, and continually add services and improve usage. Generation 3 Web services for students will help distinguish an institution and will be the norm and expectation of entering freshmen by 2005.

Generation 4: High Tech/High Touch (Organized to create a positive experience and
relationship with the institution.) Generation 4 Web services deliver the brand experience of the institution. They also provide an opportunity for the institution to create a long-term relationship with the student/customer. Generation 4 goes beyond transaction-based services and focuses on generating a positive experience. The combination of high tech and high touch delivered via the Web has the ability to create lifelong customer loyalty.

The characteristics of Generation 4 Web services are as follows:

- **Process orientation**: processes that have been redesigned from the students' customers' perspective. The University of Delaware has done an excellent job of redesigning the processes for prospective students on its Web site. Carl Jacobson, director of management information systems, is leading the way in creating step-by-step redesigned process guides to assist prospective students and their parents through the rigorous, and the sometimes unfamiliar requirements, of admission to the university. In the same way that processes have been redesigned for physical one-stop centers, Web sites are changing as well. The University of Delaware site presents prospective students with information about the university and the application process (including making plans to visit the campus in person or via a virtual tour), planning their academic program, choosing a major, and so on. The redesigned processes of the Web site go well beyond the transactions required of the prospective student by initiating interaction with the university. This extends the brand experience whether the student goes to the physical one-stop center or accesses the Web site.

- **Decision-making guide**: based on a series of questions and feedback from students, the list of options for a student that is distilled into those that meet the specific individual's criteria. With the sheer volume of information available from an institution's Web site, it becomes very important to provide filters so users can sort out information that isn't of interest. The University of Texas at Austin provides an excellent example. It has created the UT Austin Job Search, a decision-making guide that offers users the option of choosing the number of hours a week they want to work, job interests, keyword searches, salary, days of the week, job titles, or specific department.

Once again, the system assesses the volume of information and only the information meeting the student user's needs is funneled onto his or her Web screen. With each generation of Web services, a filter is applied to the mass of information to narrow what the student sees and interacts with. Each successive generation of Web services applies additional filters to eliminate unnecessary information.

- **Personalized recommendations**: based on knowledge and information about the individual. As discussed earlier, the University of California has created UC Gateways, a Web-based portfolio based on knowledge and information about the individual. As early as middle school, students can set up and maintain their personal information. Each student's personal portfolio, My Backpack, allows them to track and report classes and grades, create an education plan, report test scores, list their strengths, communicate with their success team, and list their activities (see Figure 1.3). One of the most important components of UC Gateways is personal interaction and recommendations. UC Gateways provides students, parents, school counselors, and the personal university success team with the means to communicate and interact over a number of years. Each student is assigned a team of individuals, a success team, from the university. This team calls, e-mails, and keeps track of their students. UC Gateways promotes a dialogue between the student, his or her school counselor, and the success team. The success team has a list of students with whom it communicates on a regular basis. Not only does UC Gateways provide for personalized recommendations, it also demonstrates decision-making guides, step-by-step process flow, enhanced community, and proactive communications. It truly brings high touch to delivering services via the Web. For additional information about UC Gateways, see chapter 21 by Michael Thompson, Margaret Heisel, and Lisa Caras.

- **Proactive communications**: an online coaching and mentoring system that ensures students have access to the resources they need when they need them. MyUB, the University at Buffalo Web portal, not only allows students to personalize and customize their portals, it also initiates

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communications to the students based on time-sensitive and life events. E-mail and other communications are sent to students based on personal events, such as gaining enough hours to qualify for graduation, becoming eligible for a class with a waiting list, time to register, and financial aid dates.

- Enhanced community: services to support a specific cohort of students. Brigham Young University’s Web-based Student Planning Systems offers significant help to freshmen. It includes a separate registration for freshmen and a Virtual New Student Orientation program. Unlike many other systems, the system at BYU is holistic and based on a horizontal or flat infrastructure rather than a hierarchical or vertical infrastructure. By placing the student at the head of the organizational chart, the model resembles technologically what most institutions attempt but have difficulty implementing: a seamless system of educational services dedicated to first-year students.

- Real-time interaction with the institution: live chats and help lines. With so many services to students being delivered via the Web, new issues have arisen. Students now choose to use the Web for the majority of their service interactions with their institution. How do they communicate on the Web with service providers to ask for help or assistance? One way is to incorporate real-time online chat sessions. At the University of North Carolina at Greensboro, live chat sessions began in July 2001 using Groopz, a Web chat software that allows visitors to the university’s Web site to interact in real time. Groopz allows the university to catalog and push the answer to frequently asked questions to students and take Web site visitors to a URL rather than simply give them the URL. Groopz also notifies the UNCG services personnel when a guest has been on a Web page for an extended time, giving UNCG the option of “reaching out and touching them” or waiting until they click on a help button. Communication with Web site visitors is recorded in a history log and can be retrieved to track responses from visitors or see what information was provided.

To go beyond Generation 3 Web portal service, high-touch mechanisms need to be added. With live chat sessions, students can be on the Web, open a live chat, and communicate with a real person to help with their questions. Other institutions, including Boston College, Seton Hall University, and Southern Alberta Institute of Technology, have call centers staffed by generalists who can answer questions while the student is on the Web.

Important Web trends. Over the next three years, we will see the majority of colleges and universities offer “my” portals for personalized, customized information. What will distinguish a university from their competition will be the level of high touch they can integrate. With more services being delivered via the Web, it becomes increasingly important to be able to have real-time interaction (e.g., live chats) with generalists, advisors, and counselors. In addition, it is important that call centers be established with the same quality of skills and expertise as the generalists in the one-stop centers. It will be critical that service processes be updated and integrated to respond to e-mails, phone calls, or live chat sessions. Once the mechanisms are in place to deliver service transactions over the Web, the next critical step is to provide experiences and relationships that deliver a consistent brand of services. What is very apparent is that creating a Web portal is only the beginning of how
an institution will interact with its students in providing Internet services.

Conclusion

Creating best practices and innovation in student services isn't a one-time project. It requires an ongoing commitment from the executive cabinet of the institution. As the experiences presented in this book demonstrate, institutions must be willing to adapt and experiment. There must be an expectation that changes will occur each year, as lessons are learned about the services provided and the new expectations of students.

Historically, colleges and universities have had a strong commitment to service. Today and tomorrow's challenge is to ensure that this service culture puts students first.

References
