

7 While students are updating their most recent social networking sites, faculty, staff, and administrators are using the latest technology to do everything from managing preenrollment student contacts to increasing collaboration among academic and student affairs colleagues.

Technology for Institutional Enrollment, Communication, and Student Success

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Regardless of whether your institution is a reluctant passenger on the racing technology train or itching to throw another shovel of coal on the fire, continuing advancements in technology make it a formidable factor in life on college campuses today. It may seem that once you have researched, planned, purchased, implemented, and evaluated one new product or process, you are again researching the next big thing to make life easier. Using technology to achieve institutional goals allows student services professionals to streamline administrative processes while providing student centered services. Florida International University (FIU), a public four-year university in Miami, Florida, uses Web-based resources in its enrollment processes, to communicate in real time with potential students, and to assess the effectiveness of its Web site content. Throughout this chapter, we use examples from FIU and other higher education institutions to illustrate the possibilities of using technology to meet institutional needs.

The New Recruitment Frontier

The Internet, no longer a novelty, is fast becoming the center of institutional communication plans. According to a survey conducted by the Pew Internet and American Life Project, 42 percent of respondents said the Internet played a significant role in their search for a school or a college for themselves or

their children to attend (April 2006). Students look to institutions' Web sites to gather information they need to make decisions about everything from how to finance their education to which intramural sport they wish to play. This has led to an increase in student inquiries, an extra weight in terms of workload for admissions representatives, financial aid offices, student life, housing, and other units that work directly with new students. Finding efficient solutions to deal with these demands without increasing staffing is a challenge. Colleges and universities today are stepping up to the challenge of expediently providing accurate information in a friendly manner to prospective students and families through a variety of Web-based technologies.

Institutional Web Sites

College students are calling for more personalization that brings them into the campus's virtual community (Noel-Levitz, 2007). Institutional Web sites come in many varieties and levels of complexity, but ultimately imagination and creativity are the only limits. Because Web sites serve multiple populations—current students, potential students and families, faculty, staff, and alumni—evaluation efforts are necessary to understand user activity.

FIU Enrollment Services professionals track each Web page and, using statistical measurements, evaluate the extent to which specific pages are providing useful information to the target audience. The number of page views and page visits determines the effectiveness of current Web site content (Figure 7.1). The number of pages viewed indicates how many times a page was accessed, and the number of visits indicates how many single instances a page was accessed. These figures present details that are important in determining the average number of pages a single visitor typically views. A small average number of pages viewed per visit may indicate that visitors are leaving before finding what they need, while a high average may indicate a problem with site content because a visitor has to view a large number of pages before finding needed information (Jackson, 2007).

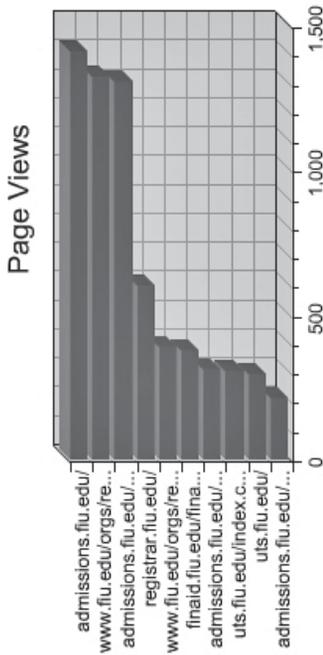
Numerous types of Web-based analytical software are available to fit a wide range of institutional needs. Google Analytics, StatCounter, and Histats are examples of providers that offer basic Web-tracking tools free of cost.

Real-Time Communication

Multitasking is an art refined to perfection by today's college student and one of their most valued multitasking tools is instant messaging.

Instant Messaging. Recent data collected in a Net generation survey indicate that 75.5 percent of the participating college students use instant messaging (Junco and Mastrodicasa, 2007). Instant messaging (IM) technology allows real-time responses that might otherwise take hours or days

Figure 7.1. Analysis of Page Report from Liveperson application



Group By: Titles

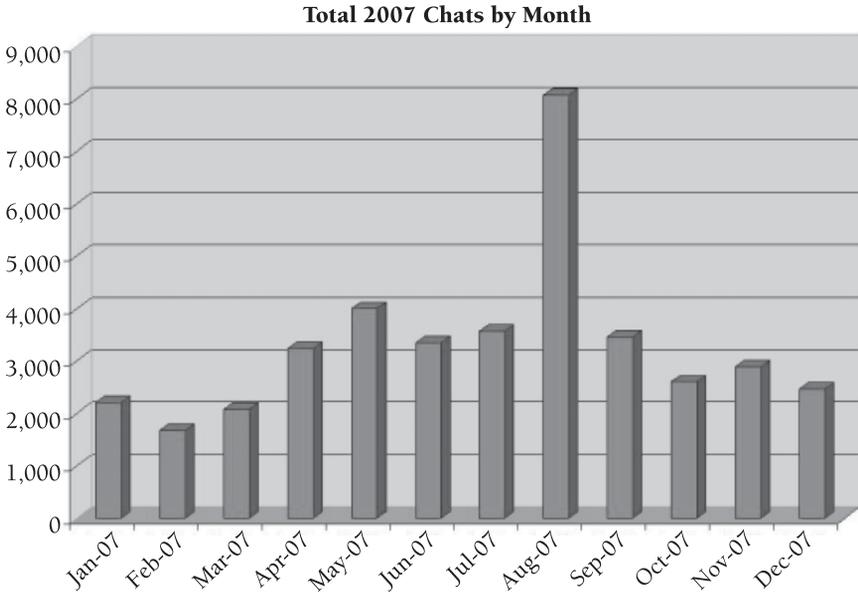
Page Title	Page Views	Page Views %	Visits	Visits %
admissions.fiu.edu/	1,413	16.15	1,224	17.41
www.fiu.edu/orgs/registrat...	1,324	15.14	1,207	17.17
admissions.fiu.edu/application.htm	1,307	14.94	1,011	14.38
registrat.fiu.edu/	603	6.89	340	4.84
www.fiu.edu/orgs/registrat...	386	4.41	346	4.92
finalid.fiu.edu/finaid/index2.html	375	4.29	283	4.03
admissions.fiu.edu/uts.fiu.edu/...	244	2.82	247	3.50

if sent by e-mail. Chatting online provides students the opportunity to stay connected with their friends and family and collaborate with classmates (Lenhart, Madden, and Hitlin, 2005). However, students are not the only ones using IM technology. Student services professionals are also using IM programs as a more efficient communication tool because, like all other e-mail users, professionals at institutions of higher education deal with electronic spam, or unsolicited bulk messages, diminishing the institution's ability to efficiently communicate by e-mail. Spam can overload university systems and consume its resources (EDUCAUSE Evolving Technologies Committee, 2004). At Penn State University, academic advisers use IM to communicate with each other as well as to reach out to other administrators (Lipschultz and Musser, 2007). The enrollment services staff at FIU use OMNIPOD, a Web-based professional desktop solution that allows staff members to chat with each other in a secure virtual environment without losing the convenience of file sharing common to e-mail.

To communicate with students, the enrollment services unit implemented Panther Chat, a new IM service that allows students to use their preferred method of communication to connect with the offices of admissions, financial aid, and registration. Students report interest in using IM as a mode of communication with university staff and faculty (Noel-Levitz, 2007); however, the implementation of an IM system at a campus requires a solution with administrative capabilities beyond what is offered in popular applications such as AOL, Yahoo, and MSN.

The Panther Chat online functionality was made available to FIU students in October 2006 through LivePerson, a provider of hosted solutions for managing online customer interactions. This communication platform works much like IM technology. Students click an icon and can immediately chat with a representative in the Financial Aid Office, Admissions Office, or Office of the Registrar. At the end of the chat session, students have the option to receive a transcript of the conversation and are presented with a postchat survey. At FIU this service is available to students weekdays from 8:30 A.M. to 5:00 P.M.; however, the chat application functionality allows operators to respond to chats from virtually anywhere to deliver service around the clock. Two staff members per office rotate to participate in student-initiated chat sessions during regular business hours. When staff are unavailable, students can still leave a message with their question, and a representative will respond to the question by e-mail. One of the most remarkable and beneficial aspects of this technology is that it does not require an army of operators dedicated to making this communication tool available to students. Unlike phone calls, chat representatives can engage in conversations with several students at the same time. During September 2007, over twenty-six hundred students used the Panther Chat service (see Figure 7.2). This represents a 500 percent increase in use since the service was implemented in October 2006. A consistent 30 percent of student users respond to the postchat survey, and 90 percent have rated the service as good or excellent.

Figure 7.2. Total 2007 Chats, by Month



Another advantage to this form of contact is that students can engage in other tasks at the same time (Lenhart, Madden, and Hitlin 2005) and are comfortable waiting a few minutes while a representative finishes other chat sessions. Although calls and chats at FIU are handled on average in the same amount of time (under three minutes), when students were asked how long they are willing to wait for a chat representative, the students' response was, on average, about ten minutes while the average time for abandoned phone calls was less than four minutes. The Panther Chat service allows staff members to handle the increased inquiry volume and meet and exceed student expectations.

Message Boards. Discouraged by the lack of responsiveness to e-mails sent by institutional departments, FIU looked for better ways to communicate important information to students. A unique messaging system, termed Panther Notices, was developed to post important messages for students on the university portal. Over ten thousand students visit FIU's portal Web page (my.fiu.edu) a day. Students access my.fiu.edu to see the status of their admissions application, check their financial aid awards, and make payments, among many other transactions, which makes the portal the optimal place to display panther notices. Because the Web portal requires students to authenticate themselves with a unique password, staff members can post messages that are confidential and relevant to individual students. Students

do not have to check their campus e-mail to view these messages and can log on to the portal anytime to access these personalized communications.

Student Engagement and Success

Student engagement pedagogies change with the changing needs of college students. In order to increase the level of meaningful interaction in and out of the classroom, institutions have an opportunity to use technology to enhance the student experience.

iTunes U. Meeting students where they are takes on a whole new meaning with the invention of iTunes U, a new multimedia service offered by Apple. Institutions can develop their own iTunes U site, where faculty and staff can add content for students to download anytime, anywhere. iTunes U works just like the traditional iTunes store, the widely used site where students purchase music to play on digital music players. Launched in 2006, over five hundred of the nation's top institutions are using iTunes U to distribute digital content to their students (Apple, 2007). Students can subscribe to a course podcast, and iTunes automatically downloads new lectures as they become available.

Among the early adopters supplying digital content by iTunes U are the University of California-Berkeley, Stanford University, Duke University, and the Massachusetts Institute of Technology. Anything from full courses, to faculty lectures, to highlights of a football game, to a student event can be uploaded to the institution's iTunes U site. It is important to note that unlike social networking sites such as YouTube, iTunes U allows students to download materials but does not allow them to upload their own. Participating institution case studies hosted by Apple note iTunes U objectives, such as stimulating creative uses of digital technology in academic and student affairs; engaging students with technologies that fit their learning styles; creating a centralized, branded repository of all content; and making content easily available to students, faculty, alumni, and the public.

Providing tech-savvy students with easy access to course content while enhancing the student experience by making available performances, visiting speakers, sporting events, and so on is an obvious advantage in today's educational environment.

Classroom Response Systems. Have you ever wished you could peer into the minds of your students, hoping to find that they are absorbing the material as they listen to a lecture or participate in an activity? That might be a bit of a stretch, but classroom response systems such as iClicker, Qwizdom, and Turning Point are making it easier to know just how much is getting through to students. Students use a remote device that allows them to respond to questions posed by their instructors. The remote software transmits the response to a receiver attached to the instructor's computer. This is particularly useful in large classroom settings where instructors can display student responses in real time, providing an instant report on student comprehension.

Wikis. Wikis are Web sites that can be directly edited by anyone with access to them. Wikipedia is an increasingly well-known example of a wiki site. It is an Internet-based encyclopedia edited collaboratively by people from around the world.

Instructors are using wiki sites to discuss teaching pedagogy and share materials such as PowerPoint presentations, podcasts, and videos. At Boston College, a wiki site is an important component of one information systems course where students are encouraged to become coauthors in course development. The instructor uses the wiki in place of a traditional print textbook and as a peer review tool. Students work in groups to add content that can ultimately be used in future courses. Peers read and react to others' assignments, posting their feedback online. Only after the student has had time to revise his or her work is it evaluated by the professor. This approach decreases the administrative workload for instructors and allows students a greater sense of ownership and responsibility (Boston College, 2007). Using wikis as teaching and learning tools in the classroom is congruent with the hands-on approach and the teamwork preferences of students (Junco and Mastrodicasa, 2007).

Information Solutions

As the call for greater accountability and transparency in higher education grows louder, basing decisions on hard data is an opportunity to highlight institutional successes and engage in continuous improvement activities.

Academic Analytics and Student Tracking Systems. Encouraged by how data can have a positive impact on decision making, institutions of higher education turn to technology to help them achieve institutional objectives such as student retention and graduation. Campbell, DeBlois, and Oblinger (2007) examine the future of using analytics to turn academic information into actionable intelligence. The authors define *academic analytics* as the use of institutional data, statistical methods, and predictive modeling to create information that can be used to make administrative and policy decisions. The call for increased accountability in higher education by the federal and state government and institutional needs for more effective managerial tools have helped make the case for the use of analytics (Campbell, DeBlois, and Oblinger, 2007).

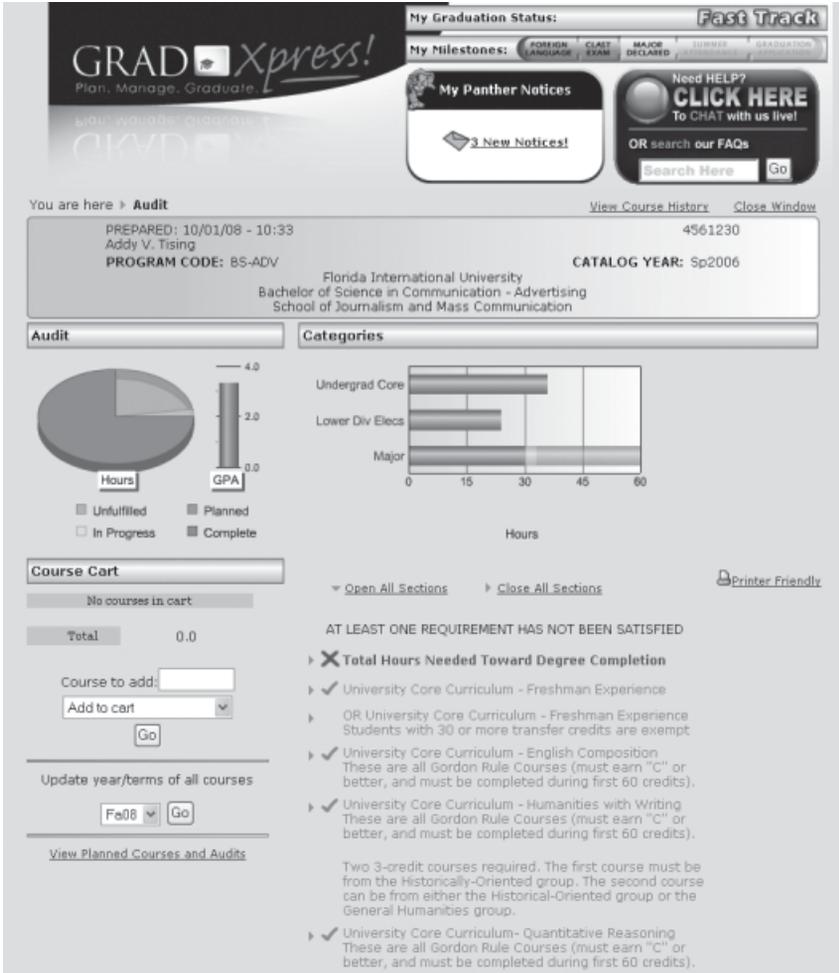
The University of Alabama, Sinclair Community College, and Florida International University are just a few institutions using analytics to identify students at risk and track student success. The information gathered is shared with advisers and other administrators for student outreach purposes. A recent study by the Florida Office of Program Policy Analysis and Government (OPPAGA, 2006) encourages the use of these systems to monitor student progress toward graduation. The University of Florida has seen improved graduation and retention rates as a result of implementing a student tracking system in 1996.

FIU received a grant from the Florida legislature and is in the process of implementing a state-of-the-art student tracking system, GradXpress, which features some of the latest technology in student services. GradXpress uses red lantern (formerly DARS/DARwin), the well-known degree audit system developed by Miami University Ohio. In addition, GradXpress uses several applications such as live chat and analytics to supplement the degree audit system (redlantern/U.achieve, formerly DARwin) and enhance the student experience. When FIU students log in to GradXpress, they see a graphical representation of their progress toward their degree. An electronic display tells them if they are “on track,” “fast track,” or “off track” to degree completion (see Figure 7.3). The system diagnoses trouble areas for students who are “off track” and sends alerts to help keep students on track. Students will be able to use the online instant messaging tools to communicate with the appropriate student support services.

Technology That Drives Institutional Improvement. A new form of institutional self study, Foundations of Excellence[®] in the First College Year (FoE), is shifting the retention conversation from a focus on student characteristics to what institutions directly control—a focus that is critical to meeting institutional goals for persistence (Barefoot and others, 2005). The Policy Center on the First Year of College, a nonprofit, higher education advocacy center in Brevard, North Carolina, works with colleges and universities that are engaged in a comprehensive self-study, improvement planning, and change implementation process focused on the first year of college (Policy Center on the First Year of College, 2007).

Institutions in the FoE project use a unique technology platform termed FoEtec (Foundations of Excellence Technology), designed specifically to meet the communication and reporting needs of those participating in the self study. The evaluation process relies on local knowledge and calls for campuswide involvement in improving the experience of new students, from preenrollment through the transition to sophomore status. Each FoE campus creates a task force made up of faculty, staff, administrators, student affairs professionals, and students and are charged with evaluating all policies and practices that collectively make up the first year of college. Based on nine aspirational foundational dimensions of excellence, task force members make recommendations for improvements and provide arguments supporting existing effective practices in the first year. Task force members complete a comprehensive audit that includes collecting student demographic information, completing an inventory of councils and committees that oversee first-year courses and initiatives, identifying courses that enroll the largest numbers of new students, and identifying first-year data sources and assessments. The self-study process incorporates the audit findings with other assessment data, committee members' knowledge, and any additional assessment efforts initiated by the task force to develop an understanding of what students experience in and out of the classroom.

Figure 7.3. Snapshot of GradXpress Student View



Each participating institution uses a Web-based, password-protected site where the self-study performance indicators, surveys, report templates, findings, evidence, and recommendations are stored. The interactive platform is accessible around the clock, and it includes multimedia training tutorials, customization options, performance indicators based on the dimensions of excellence, and survey analysis and task force membership management tools. Each member of the task force has a user name and password to access the institution's site. The ability to collect a wealth of information about the

first year from every corner of the campus in one secure location is one of the most useful aspects of the FoEtec system, say the participants.

FoE Collaboration. What does this self-study work mean for student affairs professionals? The FoE self-study model includes a broad definition of the first college year in addition to performance indicators that take the role of student affairs in and out of the classroom into account. Task force members who may have never worked with one another come together and learn about the experience of new students. Each academic and social/personal component of the first college year is intertwined to create the complete student experience.

FoE task force members are assigned to diverse subcommittees to address specific first-year issues, evaluate the performance of the institution based on aspirational standards, and come to consensus regarding a plan for improvement. This structure has allowed faculty members to gain insight into the work of student affairs professionals, and vice versa. “A perhaps unintended consequence of this process has been the intellectual cross-fertilization of campus. Offices whose personnel rarely interact outside their unit have learned from others and others have learned from them,” according to Indiana State University, a member of the 2005–2006 National Select Cohort (Policy Center on the First Year of College, 2007).

Participating institutions have the opportunity to build their task force to intentionally recognize the varied perspectives offered by faculty members and student affairs professionals. It is not unusual for the task force to have two leaders: one representing academic affairs and the other representing student affairs. This leadership structure filters down through task force membership as subcommittee cochairs are chosen in the same manner. The Policy Center encourages self-study leaders to invite task force participants with varied perspectives to help facilitate buy-in and increase accountability for change once recommendations have been made. The self study includes distinctive surveys designed to collect the perspectives of faculty, student affairs professionals, administrators, staff, and new students concerning the first college year. Interactive online analysis tools allow task force members, some of whom may have no experience analyzing data, to quickly and easily produce reports that serve as one source of evidence in their evaluations. The sometimes striking differences in faculty-staff and student perspectives make for interesting evidence for use by subcommittee members.

Interinstitutional FoE Collaboration. Traveling to professional meetings to learn from others is common practice, but several FoE institutions have found that they can learn a great deal by interacting throughout the self-study process. Using FoEtec, these institutions share information about the first year by granting task force members read-only access to each other's FoEtec site. Slippery Rock University of Pennsylvania and State University of New York-Fredonia of the 2006–2007 FoE National Select Cohort partic-

ipated in the project orientation meeting where campus representatives met and discussed their approach to the self study. Given the relatively close geographical positioning of the institutions; similar missions as public, regional universities; and similar size, it proved easy to communicate throughout the self study, make campus visits, and discuss progress during conference calls.

This type of collaboration allows self-study leaders the opportunity to discuss strategies used for customizing the FoEtec site, building a representative campus task force, and maintaining momentum throughout the year. Subcommittee members share the policies and practices that are reported to be working well, noted challenges, and ideas for addressing those challenges. In addition, they share the collection of evidence referenced throughout the self study and can view the faculty-staff and student survey results. Each campus completes the self study in the context of its unique culture and history, but sharing access to the FoEtec platform and other collaborative efforts adds an external perspective to the evaluation of the first year.

Technology Utilization Assessment

An institution that is considering using new technological resources to meet institutional goals must ensure that the technology will be both helpful and easy to use. This analysis is referred to as usability testing (Nielsen, 1993). While software companies may spend large amounts of money hiring consultants or keeping usability experts on staff, usability testing does not need to be complicated to be effective. Usability experts such as Krug (2006) and Nielsen (1993) agree that conducting an effective usability test can be done within the limits of a very tight budget. A basic and effective usability test can be conducted by having a typical user navigate through the Web site or other online application while a staff member makes notes reflecting the user's experience. The software development staff can use these results in creating an environment where the input gathered is used to make appropriate changes, which are then evaluated by the users the following month. Colleges and universities thus create a synergy where students are at the center of the application or service and are engaged in its development. Other simple tools that can be use to evaluate the success of a new implementation of technology are surveys and focus groups.

Student affairs professionals are in the best position to assess the effectiveness of new technology initiatives. At Florida International University, one full-time position has been dedicated to usability testing, and the results have been highly encouraging. Instead of hiring a person with a technology or computer programming background, the institution took advantage of student-centric etiquette and student development training that is already part of student affairs preparation by hiring a student affairs professional. This position evaluates not only the Web sites and online applications but also the operations provided in the enrollment services offices. The feedback

gathered from the usability efforts has been critical in deciding where to direct resources.

Another simple way to collect student feedback is to create an online survey. Web-based tools such as Zoomerang, Survey Monkey, and Snap make the administration of a survey using the Internet easy and inexpensive. Online survey tools allow student affairs staff members to create an online survey form without additional technical training. Once the questions have been entered, the application generates a link that is sent to students by e-mail or placed on a Web site or any other method of Internet delivery. The responses are tracked and compiled in an easy-to-read report, complete with tables and statistical data.

Conclusion

Most institutions have a combination of Web-based tools working to help them meet their goals for recruitment, enrollment, communications, and assessment. Potential students and their families look to institutional Web sites to provide everything from tuition information to social networking opportunities. Enrollment management professionals can use Web-based tools to streamline the enrollment process, communicate in real time with potential students and families, and track the effectiveness of Web content. Other units, such as academic advising departments, have found communicating with current students by instant messaging technology an effective way to make it simple for students to ask questions and easier to reach students who may rarely check their campus e-mail account. Student services professionals can engage students in the campus's virtual community by taking advantage of online resources such as iTunes U to provide everything from exciting study-abroad information videos, to guest lectures, to sporting and student activities events. In the classroom, physical space can be enhanced by incorporating Internet-based technology, such as wiki sites, which can encourage peer communication and group collaboration, and give students the opportunity to self-author part of their education. Outside the classroom, wiki sites might be developed for a career services unit to collect and organize content for a newly offered major.

No one wants a student who is struggling academically or socially to fall through the cracks, and student tracking systems are making it easier to reach out to students who are missing too many classes or failing to make acceptable progress toward degree completion. These interactive online resources allow students who may not feel comfortable seeking help to be contacted by an adviser or student services professional. Students have a lot of details to keep up with in college, and having the big-picture view of the road to graduation can help them connect to their future goals.

Web-based platforms such as the one used by campuses participating in the Foundations of Excellence self study can streamline evaluation processes while bringing together groups that do not often have the oppor-

tunity to learn about and discuss each other's roles. This one-stop shop of data, discussion notes, resources, and recommendations for change can make a more transparent and accountable campus community.

Technology is making it easier to create opportunities for everyone on campus to connect, share, ask questions, and work with one another. Are the Web-based resources on your campus creating a virtual environment that can meet student expectations, enhance teaching and learning, and make the work environment for student services professionals more efficient? There are limitless possibilities, and all are at the tip of your fingers.

References

- Apple. "iTunes U: The Campus That Never Sleeps." Retrieved Oct. 13, 2007, from <http://www.apple.com/education/itunesu/>.
- Barefoot, B., and others. *Achieving and Sustaining Institutional Excellence for the First Year of College*. San Francisco: Jossey-Bass, 2005.
- Boston College. "Using Wiki at Boston College: A Case Study." 2007. Retrieved Sept. 22, 2007, from http://www.bc.edu/offices/instruction/eteaching/initiatives/wiki_case.html.
- Campbell, J. P., DeBlois, P. B., and Oblinger, D. G. "Academic Analytics: A New Tool for a New Era." *EDUCAUSE Review*, July/Aug. 2007. Retrieved Oct. 10, 2007, from <http://www.educause.edu/ir/library/pdf/erm0742.pdf>.
- EDUCAUSE Evolving Technologies Committee. "Surveying the Digital Landscape: Evolving Technologies 2004." *EDUCAUSE Review*, 2004, 39(6), 78–92. Retrieved Oct. 6, 2007, from <http://connect.educause.edu/Library/EDUCAUSE+Review/SurveyingtheDigitalLandsc/40514>.
- Horrigan, J., and Rainie, L. 2006. *The Internet's Growing Role in Life's Major Moments*. Retrieved September 27, 2007, from http://www.pewinternet.org/PPF/r/181/report_display.asp.
- Jackson, S. "How Measuring Key Performance Indicators Can Improve E-Commerce Strategy. Part One." Retrieved Jan. 15, 2007, from <http://www.businessknowhow.com/Internet/kpi1.htm>.
- Junco, R., and Mastrodicasa, J. *Connecting to the Net.Generation: What Higher Education Professionals Need to Know About Today's Students*. Washington, D.C.: National Association of Student Personnel Administrators, 2007.
- Krug, S. *Don't Make Me Think! A Common Sense Approach to Web Usability*. (2nd ed.) Berkeley, Calif.: New Riders, 2006.
- Lenhart, A., Madden, M., and Hitlin, P. "Teens and Technology: Youth Are Leading the Transition to a Fully Wired and Mobile Nation." Pew Internet and American Life Project, 2005. Retrieved Oct. 15, 2007, from http://www.pewinternet.org/ppf/r/162/report_display.asp.
- Lipschultz, W., and Musser, T. "Instant Messaging: Powerful Flexibility and Presence." NACADA Clearinghouse of Academic Advising Resources, 2007. Retrieved Oct. 6, 2007, from <http://www.nacada.ksu.edu/clearinghouse/AdvisingIssues/Instant-Messaging.htm>.
- Nielsen, J. *Usability Engineering*. Orlando, Fla.: Academic Press, 1993.
- Noel-Levitz. "E-Expectations Class of 2007 Report: Engaging the 'Social Networking' Generation." 2007. Retrieved Nov. 9, 2007, from <https://www.noellevitz.com/NR/rdonlyres/425D56C3-9ACD-4A90-9782-F70ED7AC3CF2/0/EEExpectationsClassof2007.pdf>.
- Office of Program Policy Analysis and Government Accountability. "Student Tracking Systems Can Be Used to Enhance Graduation and Retention Rates: Report No. 06–48."

May 2006. Retrieved Oct. 15, 2007, from <http://www.oppaga.state.fl.us/reports/pdf/0648rpt.pdf>.

Panther Chat. "LivePerson." www.liveperson.com.

Policy Center on the First Year of College. "What Our Participants Are Saying About the Impact of Foundations of Excellence in the First College Year." 2007. Retrieved Nov. 10, 2007, from <http://www.fyfoundations.org/pdf/Quotes%20for%20the%20web%204-20-07.pdf>.

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