

*Student affairs practitioners must assume the roles of architects, facilitators of change, educators and learners, and policymakers to manage and plan for new initiatives in information technology.*

## Information Technology and Student Affairs: Planning for the Twenty-First Century

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As we near the beginning of the twenty-first century, the role of information technology in our lives has become vital. College and university communities need to stay abreast of technological innovations in order to address the needs of students, faculty, and administrators.

The last five years have already seen tremendous growth in the implementation of information technology innovations in the academic arena. Computerized library systems allow students to conduct research from any computer with Internet access from the comfort of their classroom. Classrooms and courses have incorporated new technology by adding teleconferencing, on-line syllabi, and course-related Internet discussion groups. Innovation in information technology has reached beyond academics, so we must ask, Where does student affairs fit? It is critical for student affairs staff to create a new vision for practice that incorporates emerging technology. This chapter addresses the question of what strategic role technology should play in student affairs administration, management, and planning.

In order to plan for and manage the use of information technology, student affairs administrators need to assume four key roles. The first role is that of *architect*. As architects, the senior, student affairs staff construct the vision, goals, and objectives of technology implementation in student affairs. Stakeholders in this change process must take these elements and design a detailed technology implementation plan. *Facilitator of change* becomes the second role assumed by senior student affairs staff. In this role, staff members impart information to the community and are champions of the value of change. In the

third role, the senior student affairs staff become educators and learners. In these capacities, the staff members teach others the importance of information technology while simultaneously studying and learning about new forms of technology and how to incorporate them into student affairs. The division of student affairs will develop into a "learning organization" in which traditional forms of thinking and learning are challenged, and innovative, collaborative learning is fostered and values (Senge, 1990). In the last key role, the senior student affairs staff become policymakers. Because of the many legal and ethical implications of information technology, appropriate policies must be developed to ensure proper use and optimum student learning. The senior staff should take a proactive position and work to formulate policies and guidelines for electronic responsibility. These four roles allow senior student affairs staff to infuse technology throughout campus and to change the way in which we promote student learning.

### Senior Student Affairs Staff as Architects

The senior student affairs staff, in essence, need to become the "Architects of strategy." As architects, senior staff members should take a leadership role in initiating and seeking consensus on a strategic planning process as it relates to the use of technology in the twenty-first century. In the beginning of this process, staff members pose fundamental questions to constituents in order to construct the goals and vision of the plan. The following list of questions (Burnett, 1996; Ernst and Segall, 1995; Gilbert, 1996) can start the construction process:

- Where are we now? Where do we want to be?
- What do we want to gain for ourselves? For the division? For the institution? For students?
- What obstacles are present, and how can they be addressed?
- What kind of information technology is necessary for students to be successful learners?
- How can technology reshape current work activities?
- How and where can student affairs connect with academic affairs through the use of information technology.
- In what ways can students affairs professionals make themselves known as important players in the technology revolution?

These questions serve as an environmental scan of the present status of information technology and provide a vision for the future (Ernst and Segall, 1995; Mills, 1990). Ideally, this assessment will highlight critical trends and the need for change, guiding the planning process. Throughout the process, the dynamic nature of technology demands ongoing assessment of current trends and practices, because when answers change, they may be signaling a possible change or conflict in goals, vision, or both. This ongoing discussion

and debate can raise new ideas and information and create an information technology plan representative of diverse constituents' needs (Mills, 1990). Another critical part of the information technology planning process is the ongoing evaluation of new initiatives. As the resource commitment to information technology is high, it is important to seek definitive results on whether the investment actually supports positive student learning experiences (Ehrmann, 1996).

During this construction period, the vision and plan begin to solidify. The senior staffs role is one of gathering the information from constituents and translating it into a clear, accepted vision. Throughout further discussion, staff members need to remind people of this shared vision and help them incorporate it into short-and long-term planning. A focus on the vision enables people to think broadly about the implications of information technology and discourages a micro-focus on individual software and workstation needs. It allows for decisions based on the good of the whole rather than on individual need or desire (Guskin, 1996).

As the student affairs technology plan develops, it is critical to ensure it is consistent with the mission and values of the college or university. Through an ongoing dialogue, senior student affairs staff can draw connections between the institutional mission and the information technology vision, thereby helping constituents identify with the planning process. This technology vision may delineate a more active student role, a broader array of teaching resources, increased student-teacher interaction, a reduction of barriers to university services, and increased productivity in the learning environment (Baker and Gloster, 1994). The intentional connection between the student affairs technology vision and college mission strengthens the plan's impact and makes it more viable on a campuswide level.

Perhaps one of the most critical tasks beyond the creation of an information technology mission statement is the identification of fiscal resources to support new initiatives. In times of shrinking resources, the student affairs staff can identify allies who support information technology programs. Often these allies are found within student affairs and in areas such as computing services, faculty support services, and library services (Hall, 1991).

The senior student affairs staff member can address the varying pace of change during the goal-setting and implementation stages of planning. The integration of information technology is a process that occurs over years, so immediate results may not be available (Green and Gilbert, 1995). Individuals typically will share concerns and anxieties that may require significant processing time to be included in the planning process.

### Senior Student Affairs Staff as Facilitators of Change

The adoption of information technology by students, faculty, and staff will not happen overnight. Instead, the new methods of obtaining information will be slowly assimilated into people's lives through a process of diffusion. "Diffusion

is the process by which an innovation is communicated through certain channels over time among the members of a social system" (Rogers, 1995, p. 5). This type of communication is especially important to student affairs practitioners. Because the projects and ideas addressed are new, the communication must be accompanied by education so that members of the social system will accept them into their daily lives.

Communication has many formal and informal embodiments, and its specific nature between the source and receiver has an impact on how the information will be adopted (Rogers, 1995). Because community members will have different technology comfort levels, a wide range of techniques, may be required, such as training sessions, one-on-one discussions, focus groups, and large-group information sessions.

Getting community members to become familiar with and to embrace information technology may require several types of learning strategies. The discover of linkages between the different elements of information technology and the learning and assimilation process can be key. Each individual element of an information technology package is in actuality a different type of technology. An information technology package may consist of e-mail, World Wide Web (WWW) page creation and access, listserv discussion groups, and video-conferencing. These elements, when presented together, form a "technology cluster" that contains one or more distinguishable aspects of technology that are perceived as closely interrelated (Rogers, 1995). If consumers want to adopt one piece of a whole cluster, they may adopt the entire package to receive the benefit of the individual item. Familiarity with one kind of information technology can lead to acquisition of more complex information technology skills and knowledge. Though the individuals might accept and use the cluster for one piece, they are likely to use the other aspects as well.

In the package just mentioned, a person who is unfamiliar with video-conferencing may engage in it if the correct tools (for example, CU-SeeMe, a program that allows people to connect through the Internet and see each other, in real time, through the use of a video camera) are provided through Internet access. By communicating the importance and connectedness of each aspect of the cluster, the possibilities to promote student learning can be increased to their fullest extent.

### Senior Student Affairs Staff as Educators and Learners

The implementation of a technology cluster will require much training and education for community members, including training of all senior student affairs staff members. In order to provide effective leadership, the senior staff members must model the need to continually learn about new innovations in information technology (Norris and Dolence, 1996). Senior staff will benefit from active involvement in national and regional projects and from representation on campus and regional committees. They must freely share their anxieties and feelings about keeping abreast of an ever-changing landscape. This

will also enable senior staff members to bring new ideas to the table about how the division can use information technology to enhance current and future services. In the realm of information technology, the roles of learner and educator become one.

Traditionally, student affairs staff have been users, not developers, of information technology. Therefore, staff members need to look to others on campus for expertise. Professionals in computing services, library or information services, and academic affairs hold a great deal of knowledge about information technology. Student affairs can pull these information technology experts together to create a shared knowledge base for campus community members to access when necessary (Norris and Dolence, 1996). If learning partnerships are formed with these groups, student affairs will benefit from the collective knowledge.

### Senior Student Affairs Staff as Policymakers

With the introduction of new information technology comes the onset of legal and ethical responsibilities and regulations. The Internet provides the biggest challenges in this area. Possible breaches of conduct can occur with e-mail (such as chain letters, harassment, forgery) and Web pages (for example, ownership of individual student and group homepages, academic freedom). The legal and ethical ramifications of these breaches seem endless and need to be continually addressed. In response, colleges and universities need a set of policies and guidelines that outline the evolving legal and ethical issues that have emerged.

Gilbert wisely advises us to "develop new guidelines quickly, develop new policies slowly," because of the dynamic, ever-changing nature of the information technology environment (1996, p. 18). The mission of the university must provide the direction for the spirit and content of newly developed policies. Guidelines about appropriate ways to use the Internet should be created and made easily accessible to the campus community. In addition, institutions should create links from the main campus homepage that include guidelines on how to register a homepage, tutorials on how to create a hypertext mark-up language (HTML) document, a link to the campus Web policy, and rules for proper Internet etiquette (netiquette).

Student affairs staff should also assume a major leadership role in facilitating a campuswide approach to policy development initiatives. Effective collaboration among information technology units, academic affairs, and student affairs will lead to a coherent, unified response to the college or university community regarding policy issues. Disjointed efforts by student affairs to develop policies and guidelines regarding information technology that lack coordination from other campus units are destined to leave students confused about possible conflicting expectations and responsibilities.

Policies and guidelines that regulate information technology should be consistent with and complement any institution harassment policies, student

codes of conduct, and discrimination policies. They should include the criteria for policy violations. In addition, policies and guidelines should address what does not constitute a violation; what is illegal under local, state, and federal laws; and how to report breaches of policy. They also should provide contact information ('Cornell University Information Technology Rights and Responsibilities,' 1996; 'American Library Association Intellectual Freedom Statements,' 1996).

Institutions currently creating new policies can find it helpful to examine existing policies at similar colleges and universities. Many institutions have well-established guidelines that can provide a template. The information technology and policy planning committees at these schools can also prove to be valuable resources. CAUSE, the association for managing and using information resources in higher education, provides an excellent library of policies in areas including the VAM, privacy, access, ethical use, censorship, intellectual property, and government regulations.

### **The Importance of Collaboration**

To implement a successful plan for the infusion of information technology, collaboration with academic affairs is a priority. It is also important to form ties to the outside information technology industry to remain on the cutting edge of innovation. The bonds formed among student affairs leaders, with academic departments and administrators, and with outside business and industry provide the foundation for a truly student-centered learning environment (Burnett, 1996).

Within the academy, the need to coordinate planning efforts across the institution has become a reality due to diminishing financial and human resources and increasing requirements for more effective and efficient technology (Ernst and Segall, 1995). Students receive competing and sometimes contradictory information about information technology from different departments, which may lead to incorrect use and understanding. For instance, if each area supports a different e-mail access program, a student who wants to use this information technology may get confused and either opt not to use the service or use it incorrectly. This affects student learning negatively and breaks down the student-centered environment.

The current separation of services between student affairs and academic affairs may create duplication of systems and competing personal agendas and investment strategies (Norris and Dolence, 1996). Student affairs and faculty need to work together to determine how the use of information technology in and out of the classroom can promote student learning. As faculty educate students on how to effectively use technology to relate to coursework, student affairs administrators can teach students to use technology to enhance personal development through areas as specific as career exploration and as broad as multiplistic thinking.

The Internet has grown into a vast universe of information, but without the guidance of the instructor or peers, students may not process what they are learning. Student affairs can support these experiences by providing introductory workshops on strategies for navigating the WWW and on the value of setting up study discussion groups. For example, at Cornell University, "Travelers of the Electronic Highway" (TEH) workshops were developed by Cornell Information Technologies in cooperation with the faculty advisory board on information technologies and the office of student and academic services (Kiefer and Dailey, 1995). All new students, including first year, transfer, and graduate students, are required to attend a workshop that provides an overview of the Internet and how to use it properly (for example, netiquette) and the computer responsibility policies at Cornell. The student evaluations of the TEH program have been positive: 93 percent of students report feeling more comfortable using the Internet after participating in the workshop (Kiefer and Dailey, 1995).

It is also highly recommended that the development of an institution's homepage be coordinated through a community-wide committee that is dedicated to advancing the mission, values, goals, and priorities of the campus. This committee must also be sensitive to the strategies most effective for promoting the mission of the institution and for identifying logical links with all essential university and relevant off-campus services. For example, the University of Toronto created a homepage coordination committee, with membership from admissions, student affairs, public affairs, computing and networking services, library services, engineering, financial information systems, and the provost's office. Various units collaborate to improve the quality of information shared through the university Web site, which helps students understand and use different university services ('Readers Respond,' 1996).

The collaboration between student affairs and academic affairs can also work to reduce access inequalities among students. For example, student affairs administrators typically act as advocates for students with disabilities. Students with disabilities face many challenges when working with information technology. These students may not be able to use a standard computer setup without the aid of special equipment such as voice synthesizers, Braille keyboards, and closed-captioned monitors. Senior student affairs officers, together with other university officials, can plan to obtain funding for resources to provide this equipment. The use of information technology in the classroom will raise these access issues, and student affairs must be advocates to address them.

Another access issue concerns computer ownership. Many students simply cannot afford to purchase a computer and all of the necessary software. Commuter students without computers are faced with the challenge of finding time to come back to campus to use equipment to complete class projects. Student affairs professionals can respond to these problems by providing public-access computers in student unions and residence halls and by leasing computers at low costs to students. For example, at Syracuse University, the

student union has walk-up computers with which students can quickly check their e-mail and use the Internet without having to wait in line at a computer lab (C. Merrihew, personal communication, Sept. 13, 1996). Temple University has developed a laptop "loaner" service allowing students to borrow computers at the cost of one dollar a day (Gilbert, 1995).

Teaching, learning, and technology (TLT) roundtables provide a unique venue for collaboration between student affairs and academic affairs. This American Association of Higher Education (AAHE) effort creates a framework built on coordination, communication, and collaboration ("AAHE Teaching, Learning, and Technology Roundtable," 1996). In these groups, true intra-university planning can take place. AAHE provides active, engaged support to regional groups and local roundtables including background information, workshops, white papers, guidelines, vision(s), and conceptual frameworks (Gilbert, 1995). The roundtable program "seeks to help participating colleges and universities support better selection and use of a rapidly widening range of instructional choices to serve the learning needs and preferences of a widening range of students, as well as the teaching capabilities and preferences of a wide range of faculty" (1995, p. 48). The specific AAHE teaching, learning, and technology roundtable goals are as follows (Gilbert, 1995):

- To improve education, use technology selectively, and control costs
- To help colleges and universities with planning, evaluation, faculty support, and information exchange
- To promote the participation of other organizations
- To plan national activities.

AAHE has set guidelines for the types of constituents to include on a local roundtable. These include two categories of faculty; four or more representative service organizations from such areas as the library, academic computing, the campus bookstore, and student affairs; and the senior academic officer (Gilbert, 1995). Student affairs staff members represent the views and needs of students, and therefore bring a valuable voice to the table. Unfortunately, student affairs administrators have not been included on a regular basis. If a roundtable does not exist, the senior student affairs officer can approach the senior academic officer and stress the importance of establishing this leadership group to direct the teaching and learning implications of information technology. In addition, on all campuses that have established TLT roundtables, student affairs officers should be lobbying to communicate the important dimensions that a student affairs professional could bring to this group.

### **Involving Students**

Obviously, the implementation of information technology requires a great deal of time and money. However, there are students on many campuses who possess the skills and abilities to do the work of information technology profes-

sionals. They can perform a variety of tasks, such as training peers, training staff and faculty, creating homepages, and upgrading computers and networks. They also can educate student affairs staff about emerging student needs and concerns related to information technology. When the students realize that their voices and abilities are valued and recognized, they will be more inclined to contribute their time, energy, and support to the information technology initiatives.

In 1995, Cornell's "Travelers of the Electronic Highway" program hired and trained more than sixty returning undergraduates to lead the workshops (Kiefer and Dailey, 1995). At Syracuse University, the office of student programs hires undergraduate students to create department homepages, upgrade computer systems, and operate computer information resources including a video screen in the student union, which displays current event information (C. Merrihew, personal communication, Sept. 13, 1996).

Obviously, there are advantages and disadvantages of using students to compose the essential information technology staff. The student affairs units must accept that the technology may take longer to implement, considering that students can only commit a limited number of hours to this work during the academic year and that they are learning as they go along, unlike information technology professionals who are experts and whose quality of work and level of responsibility are more predictable. These students may need training in many areas outside of information technology, such as customer service, workshop presentation, and leadership (Gilbert, 1996).

But, on the positive side, the amount of fiscal resources needed to pay these students will be much less than that required to hire information technology professionals. Student affairs administrators can offer work-study positions or frame the projects as an internship with academic or experience credits (Gilbert, 1996). The students will benefit immensely from the work, as they can apply the new knowledge to their coursework and to the jobs they hold in the summer and after graduation. At the same time, the university or college becomes more student-centered and includes students' voices in campus change and quality improvement.

### **Recommendations for Student Affairs Leadership**

Information technology in student affairs has the potential to provide student services, programs, and activities that promote learning while also improving the quality, efficiency, and effectiveness of administrative operations. The senior student affairs staff set the tone for how information technology is introduced in the division and possibly the greater campus community. In summary, the following recommendations can help to create the conditions necessary for information technology to be embraced in the campus culture and can encourage student affairs professionals to reconceptualize how they accomplish their work.

*Develop a solid plan.* Student affairs units should create a strategic plan for implementing technology. This plan needs to have a strong purpose and vision,

long-term and short-term goals, and methods for continuous assessment. The purpose should emphasize the use of technology to promote student teaming.

*Get involved* in campus committees. Collaboration is key to successful planning. Student affairs must play a visible leadership role on campus committees dedicated to integrating technology into the campus. Academic affairs and information technology units already work together in committees to plan for the future. If student affairs has no representative on these committees, send one.

*Create guidelines.* Students need to understand the most effective and responsible ways to use technology in order to gain the most from it. Concise guidelines serve as teaching tools and can prevent abuses that have legal and ethical ramifications.

*Stay connected.* The WWW provides outstanding resources on information technology planning and implementation. Universities, academic units, national organizations, and outside businesses dedicate homepages and sites to information technology, so explore them and learn more about the field. Join listservs and organizations that address the changing technology in higher education.

*Involve students.* Students are vital to this process, yet many times they get left out of loop. Include them in all aspects of planning and implementation. In order for projects to be successful, students need to serve an active role.

## Conclusion

The acceptance of information technology has become a necessity for colleges and universities. Students demand access to these technologies in order to gain the knowledge and skills they need to compete in the job world. As student affairs professionals, we have the responsibility to meet this need. With student affairs leadership in areas of planning, implementation, and campuswide collaboration, information technology can significantly improve student learning and change the way in which students are educated for years to come.

## References

- "AAHE Teaching, Learning, and Technology Roundtable." [http://www.ido.gmu.edu/aahe/technology/tltr.index.html]. 1996.
- "American Library Association Intellectual Freedom Statements." [http://infolink.runet.edu/~libr-web/libserv/colldev/aladocs.html]. 1996.
- Baker, W. J., and Gloster, A. S., 11. "Moving Towards the Virtual University: A Vision of Technology in Higher Education." *CAUSE/EFFECT*, 1994, 17 (2). [http://cause-www.colorado.edu/information-resources/ir-library].
- Burnett, D. "Raising the Quality of Higher Education Services with Student-Centered Environments: How to Plan for Information Access." [http://ike.engr.washington.edu/news/whitep/technote/hied/bumett.txt]. 1996.
- "Cornell University Information Technology Rights and Responsibilities." [http://www.cornell.edu/computer/responsible-use]. 1996.
- Ehrmann, S. C. "Flashlight Planning Grant Final Report." [http://www.learner.org/content/ed/strat/eval/flashlight]. 1996.

- Ernst, D. J., and Segall, P. "Information Resources and Institutional Effectiveness: The Need for a Holistic Approach to Planning and Budgeting." *CAUSE/EFFECT*, 1995, 18 (1). [http://cause-www.colorado.edu/information-resources/ir-library].
- Gilbert, S. W. "Teaching, Learning, and Technology." *Change*, 1995, 27 (2), 47-61.
- Gilbert, S. W. "Making the Most of a Slow Revolution." *Change*, 1996, 28 (2), 11-23.
- Green, K. C., and Gilbert, S. W. "Great Expectations." *Change*, 1995, 27 (2), a-18.
- Guskin, A. E. "Facing the Future." *Change*, 1996, 28 (4), 27-37.
- Hall, J. W. *Access Through Innovation*. New York: Macmillan, 1991.
- Kiefer, C., and Dailey, D. "New Students Get Electronic 'Travel' Lessons from CIT." *Cornell Chronicle*, May 16, 1995. [http://www.news.cornell.edu/Chronicle&5.16.95/travelers.html].
- Mills, D. B. "The Technological Transformation of Student Services." In M. J. Barr, M. L. Upcraft, and Associates, *New Futures for Student Affairs: Building a Vision for Professional Leadership and Practice*. San Francisco: Jossey-Bass, 1990.
- Norris, D. M., and Dolence, M. G. "IT Leadership Is Key to Transformation." *CAUSE/EFFECT*, 1996, 19 (1), 12-20.
- "Readers Respond." *CAUSE/EFFECT*, 1996, 19 (1). [http://cause-www.colorado.edu/information-resources/ir-library].
- Rogers, E. M. *Diffusion Through Innovation*. New York: Free Press, 1995.
- Senge, P. M. *The Fifth Discipline: The Art and Practice of the Learning Organization*. New York: Doubleday, 1990.

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