Spring 2002

ACUTA Journal of Telecommunications in Higher Education

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# Events Calendar

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ACUTA is a member-driven organization dedicated to the enhancement of teaching, learning, research, and public (community) service by providing leadership in the application of telecommunications technology for higher education.
Successful IT organizations and professionals in the 21st century will be those who understand and blend their institution’s needs and available resources into creative, affordable technology solutions, not once, but time and time again.”

Patricia Searles Nelson
Cornell University
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From the Executive Director
Jeri A. Seemer, CAE
When I think about the people I have known whom I consider to be leaders, I realize that leadership is expressed in many different ways. Among those ways are:

- **Positional leadership.** The president of the university or of the United States, the CEO of Enron, the director of my work unit, and the mayor of my city all carry a mantle of leadership that comes from the role identified by their titles. One may not always agree with the decisions or path of “the” leader, but there is no denying the influence that leadership, the position itself, confers.

- **Moral leadership.** The ability to define what is right or is the right way to do something distinguishes leadership in groups beyond theologians to include whistle-blowers, organizational “consciences,” judges, ombudspersons, and all those individuals who bring a genuine expression of some truth to the workings of a group.

- **Creative leadership.** The ability to cut through the slag that surrounds almost any issue to see unique and interesting methods, products, or decisions and to be forward-thinking beyond the immediate demands or currently accepted realities distinguishes leadership not only in the arts and research sciences but also in technical, humanistic, and organizational dynamics.

- **Scrum leadership.** It would be rare indeed that any group of people meld together in a true commune of interests and equality for all ideas, decisions, and actions. One individual always seems to stand out as leader, although that mantle often gets passed around based on the needs of the moment and the strengths and interests of the personalities in the group. In a group of friends, a board of directors, or any scrum headed down a field of motion, some one person provides the impetus to create directional action. (*A scrum is a rugby formation.*)

- **Individual leadership.** The principles that individuals determine for themselves as the reality and goals of their life create a pattern for the most basic sort of leadership. It’s a *Wonderful Life* showings every Christmastime remind me that destiny is not assumed, that people really “lead” themselves and are fortunate to find the strength of individual will to make the best of that leadership.

The articles in this issue of the *ACUTA Journal* are about leadership and management. We ACUTA members manage people, processes, technologies, and projects. But we also are leaders. We are not just communications technologists, although that may be the commonality that brings us together in ACUTA. We are leaders in our schools, affiliations, associations, organizations, workteams, communities, families, and most important, our own destinies. How do you define leadership for yourself? How do you define it for those you think express it?
Leaders on Leadership

Great leaders never tell people how to do their jobs. Great leaders tell people what to do and establish a framework within which it must be done. Then they let people on the front lines, who know best, figure out how to get it done.

—General H. Norman Schwarzkopf

The information infrastructure of the future will be judged by how well it supports human relationships, knowledge discovery, integration and dissemination, and a secure and quality life for all. There is no more important, or greater, leadership challenge facing the world today than to build the right infrastructure for tomorrow.

—Janet Poley, CEO & President
American Distance Educ. Consortium
Univ. of Nebraska, Lincoln
New Directions for Higher Education,
no. 115, Fall 2001, p 52

You cannot be a leader, and ask other people to follow you, unless you know how to follow, too.

—Sam Rayburn
Former Speaker of the House

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Telecommunications/IT Leadership in Higher Education

Whenever an industry or enterprise is confronted with transformational issues such as we see facing higher education, telecommunications, and the broader information technology industry, the need for leadership becomes paramount. For those of us working in telecommunications/IT within higher education, there is no question that we must contribute to the leadership of our units and institutions. The technologies we plan, implement, and manage will have a significant impact on how our institutions address the transformational issues facing higher education. My personal belief is that leadership skills are the essential foundation from which each of us can help our units and institutions in these challenging times.

Leadership Leads the List

What is expected of us today as technology professionals is rapidly evolving as are the expectations for all professionals in the Internet age. We will be measured by how quickly we can adapt to this rapidly changing environment while simultaneously meeting the ever-changing needs of the constituents we serve. In this new environment, the traditional skill set—which includes technical knowledge, business acumen, and management ability—is still valid; but the skills that will actually advance our units and institutions, as well as our personal careers, are leadership skills.

Traditionally, one of our top priorities as telecommunications/IT professionals has been to provide high-quality, reliable services. For this we have relied heavily on our technical, business, and management skills. While providing essential services will obviously always be at the core of our mission, it will no longer be the major focus of our position. Providing leadership in all aspects of our daily activities will be essential to our institutions and our professional careers as change becomes a constant in our professional life.

Most of us did not begin our careers in what we think of as leadership positions, and many may not consider their present responsibilities to include a leadership role. However, I believe that if we understand the difference between leadership and management, we can see how each of us can and does practice leadership in his or her current position, whether it is classified as technical or managerial.
Leadership versus Management

What is the difference between leadership and management? It appears that there has long been some confusion about what leadership really is.

This confusion is not limited to higher education, telecommunications, or information technology. In What Leaders Really Do, John Kotter writes, “Today there is less confusion about the differences between leadership and management than when I first wrote about it in 1987. But the problem is still monumental.”

To understand the differences between leadership and management, we need to understand the primary purpose of both leadership and management and how each operates.

Leadership and management are two distinctive systems of actions. They are, in fact, complementary systems, both of which are required in the 21st-century workplace. Each has its own purpose and defining set of characteristics.

The fundamental purpose of leadership is to produce useful change, especially nonincremental change, the type most required during times of transformation. Leadership is primarily about producing and coping with change. The highly technology-driven, competition-filled, volatile environment that characterizes our field requires more leadership than ever before. This is not limited to technical functions such as telecommunications/IT, but applies to all aspects of higher education.

The fundamental purpose of management is about coping with and managing complexity. It is primarily about bringing a degree of order and consistency to key areas of our units or institutions. Management must keep essential systems functioning and limit chaos in our highly complex work environments.

Some business writers have characterized management as hard and cold, perhaps because it functions through well-defined hierarchies and well-established business systems. Our units and institutions manage by:

- Creating plans and budgets to meet the goals and targets of the future
- Developing the capacity to meet the targets by creating an organizational structure with all the incumbent requisites of staffing, communicating, delegating responsibility, and monitoring progress
- Ensuring the plan’s accomplishment through monitoring the results, identifying deviations from the plan, and problem solving to control and correct deviations

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Lee Burnett
University Health Care System
Augusta, Georgia
Leaders lead by the following process:

- Developing a vision and the strategies needed to accomplish that vision
- Aligning relevant human and other resources behind the vision(s) and strategies
- Empowering the human resources to overcome obstacles if necessary to make the vision happen
- Communicating the benefits and impacts of implementing the vision(s)

Much of the work of a leader is accomplished outside the formal reporting structure of his or her unit or institution. It is accomplished through a complex web of dependent relationships sometimes referred to as an implementation network. This implementation network is primarily composed of individuals with whom the leader has established working, trusting relationships based upon the vision or strategic objective(s). For us in higher education, these are our colleagues with whom we forge working relationships that cross departmental and institutional unit boundaries. This implementation network is designed to overcome the obstacles, both cultural and human, that are inherent when attempting to make any systemic or transformational change. Leaders recognize and communicate the potential impact a change is likely to have on both the organizational culture and individuals within the organization.

It is essential to understand these differences. As telecommunications/IT professionals we are in a position to be change agents within our campuses. To be effective change agents requires us to be leaders even though a large part of our daily jobs is and has been to keep current systems functioning.

Today—and even more in the future—our jobs require us to execute through both management and leadership. It is estimated that today’s top executives spend in excess of 80 percent of their time on leadership, while those at the bottom of the management hierarchy spend no more than 20 percent of their time on leadership, even in dynamic industries. It is not a choice between leadership and management but recognition that today we need both. However, in this highly complex and rapidly changing work environment that we call higher education, it is more leadership that is and will be required of all us practicing professionals.

For many, merely knowing the difference between management and leadership is insufficient to allow them to see how they can practice leadership in their own current positions, especially for those who see their position as purely technical. I contend that we all can practice leadership once we fully understand the skills and attributes that highly effective leaders exhibit.

**Twelve Leadership Skills**

According to many business writers, leaders exhibit and use 12 distinct skills or attributes. Most, if not all, have been viewed as “learnable.” Each of the 12 skills has an impact on how you work with others and how they respond to you. This is important to remember since most, if not all, of us accomplish our jobs in conjunction with others or through others. What are these skills, and how can the telecommunications/IT professional use them effectively?
1. Vision
As individuals, we must have both a clear goal and a firm commitment to reaching it. Our staff and others will readily line up behind us if we let them know where we are going and how we are going to get there.

What are your goals? Have you clearly communicated them to your staff and peers? Do you have a plan for how to accomplish your goals? Have you shared that plan with your team members and peers? These are all activities that each of us can practice whether we are planning to change the standards we use to cable a closet, move from a traditional PBX environment to a VoIP environment, or merely reduce our service response time from 48 to 24 hours.

2. Charisma
This attribute stems from high self-esteem and high energy. If you have it, you attract others who want to be like you, have what you have, and do what you do.

While charisma is not always on the list of learnable skills, it is possible for telecommunications/IT professionals to become more charismatic in order to communicate effectively about the impact we have on our institutions and in our profession. Charisma comes naturally to some of us, but most of us have to put forth some effort to develop it.

3. Character
Your ideas, values, experiences, knowledge, and wisdom make up your character. This is the core of your creative center. People trust individuals and leaders whose character embodies truth and strong values. Freely sharing your experience and knowledge with staff and peers is one way to demonstrate character. We all like to work with or for an individual who is willing to help us grow in our profession by sharing of him- or herself.

4. Responsibility
More than being willing to take the initiative and be accountable for the outcome, this includes knowing the level of risk and the potential rewards.

Responsible individuals or leaders go beyond what is normally accepted to achieve the exceptional. They demonstrate their willingness to take risks that are commensurate with the rewards to be gained. Being willing to work on justifying that project that has the potential to change the status quo on your campus is one way to practice responsibility.

5. Planning
You must be able to balance planning with execution. This means you must know how to develop a plan, how to organize people and other resources to accomplish the plan, and when to take action that will facilitate execution of the plan. This is one of the easiest of the leadership skills to practice. Every position within telecommunications/...
IT is constantly confronted with a series of projects, both large and small, that must be accomplished. As you execute the plan for a specific project, make sure you practice the basics: planning, organizing, and monitoring.

6. Social Skills
If you listen and respond well to people and express genuine interest in them, you have strong social skills.

One element of this is the ability to recognize and return each individual’s behavioral style. Can you respond well to both the extrovert and the introvert? Do you actively listen to your team members and customers alike? Do you actively acknowledge what you have heard?

7. Achievement Drive
Effective leaders are highly motivated. They have a need, a burning desire, to produce results. Their drive sets an example for others. Do you let your staff and peers know what is important to you and what motivates you?

8. Emotional Stability
This is just another way of saying maturity. It is the ability to maintain your balance in the face of good and bad experiences. As you work on a project, do you share with staff how you handle those aspects that have not gone well? Do you attempt to help them learn from less-than-desirable results?

9. Tolerance for Ambiguity
A leader can deal with roadblocks while moving forward, juggle lots of activities without losing focus, and see how all the details fit into the big picture. This skill is one that most of us practice daily without thinking about it. We typically are handling multiple tasks simultaneously while working toward a specific goal or objective. Do you let your staff and peers know how you handle this multiplicity of activities? Do you share how you resolve those roadblocks encountered while working on a project?

10. Decisiveness
People have no desire to follow weak or wishy-washy decision makers.

People like to follow those who can assess situations, analyze choices, and move toward solutions. This ability is absolutely essential to leaders. We constantly exhibit this skill by making the myriad of decisions each and every one of us makes on a daily basis. However, do we let our staff and peers know that we do not always have complete information when making the decisions? Do we share with them how we react to decisions that produce results different from what we planned?

11. Delegation
Effective delegation requires competent staff/individuals who you know will do the work you assign. Follow through by inspecting that work. This is how you get more done through other people.

12. Positive Outlook
Concentrate on what you can do right. Communicate your expectations for each project or task. Share with all your commitment to the project and/or task. Believe you will reach your goals. In short order, other people will believe too.

Conclusion
Asked about leadership, John Chambers, CEO of Cisco Systems, responded: “Leaders today lead by example and drive strategy by listening to their customers and taking advantage of growth opportunities. They communicate openly and stay focused on the environment in which they work.”

I believe this is precisely what we as telecommunications/IT professionals need to be doing on our campuses. Practicing the skills and attributes of highly effective leaders will help us all accomplish what Chambers said about today’s leaders.

Our challenge as telecommunications/IT leaders within higher education is to practice leadership by assisting our institutions to recognize opportunities to use information technology in meeting today’s challenges and transformational issues. I believe each of us has the potential to provide leadership from our telecommunications/IT position not only to our unit and/or division but also to our institution.

A former president of ACUTA, Tony Mordosky is associate provost, Information Resources, at Rowan University in Glassboro, New Jersey. Reach Tony at mordosky@rowan.edu.

1 “Executives Leading the Way,” IQ Magazine, November/December 2001, p. 44.
Leaders on Leadership
Pat Searles Nelson
Cornell University

Agility
I believe the most important leadership skill is agility, accompanied by innovative thinking and a constantly inquiring mind. We are in a field of ever-increasing importance to our campuses. The technology curve is rising rapidly, with no end in sight. Universities have quickly moved from IT being optional to it being important, and now essential, to their educational as well as administrative missions. Our jobs involve engineering, installing, and maintaining state-of-the-art products and services at a time when not only are there extreme financial pressures on our institutions, but our “customers”—especially students—are demanding more for less. This set of circumstances is not likely to change anytime soon.

We must be personally and organizationally agile and innovative, always learning and questioning how we can do things faster, better, and for less money. Doing things on our own and building customized solutions are luxuries we can no longer afford. The 21st century is about listening—to customers, suppliers, peers, competitors—and putting the “best of the best” together to build efficient, sustainable, and economical product and service solutions.

We need to cultivate an entrepreneurial approach to all that we do, understanding and taking into consideration our institution’s tolerance for risk so that we can balance the technology/resource scale appropriately. Flexible partnerships, cooperative ventures, and outsourcing have become not merely acceptable but necessary tools. We need IT products, services, and organizations that can turn on a dime—and that’s not easy given the increasing technology demands and decreasing resources.

I believe successful IT organizations and professionals in the 21st century will be those who understand and blend their institution’s needs and available resources into creative, affordable technology solutions, not once, but time and time again.

Perhaps most people would not consider her a “great leader,” but I have always admired Helen Keller and consider her a consummate innovator. Whenever I find myself complaining about what we don’t have to do our job and about all the roadblocks in our way, it helps to think about someone like Helen Keller and all she accomplished without two of a human being’s most basic senses—sight and hearing. She could have thrown up her hands, adopted a “poor me/why me?” attitude, accepted her shortcomings as fate, and accomplished only what anyone would have expected of her, which was very little. Instead, she conquered the seeing and hearing world with dogged determination and became a role model and inspiration, not only for those similarly encumbered but for everyone who knew her or knew of her.

I’d sum up the relevance of her inspiration in this way: No matter how little you have to work with, no matter who thinks something can’t be done or isn’t worth the effort, circumstances could always be worse. Pick up the pieces you have, think outside the box, and do the absolute best job you can with what you have to work with. You may be surprised where you end up!
Managing for Success

Whether the name of the game is football or field hockey, telephony or technology, eventually a team leader appears. That leader is a go-to person who seems to help everyone, who has earned the respect of others on the team, who follows through on promises and programs.

Even coaches and senior managers are hard put to define what makes a leader. It might not be the person with the highest batting average or the one with the most seniority—although in some situations it is. It probably is not the smartest person on campus—many studies show that extremely intelligent people make poor leaders.

Some people become leaders by default. Other folks work hard to become one of the select few and never make it. Some people who appear to be natural leaders in one facet of life fail miserably in others. Others just have the knack for bringing out the best in everyone around them.

Today, many of the most successful people running university communications and networking programs see themselves not as PBX people and not as computer nerds. Rather, they call themselves managers. They just happen to manage computer and telecommunications infrastructures.

Kelly J. Mentzer is one example of a person trained in telecom who now runs the whole shop—data and voice, too.

Formerly the telecom director, Mentzer was promoted to overall director of computer information technology at Albuquerque Technical-Vocational Institute in New Mexico. T-VI is a four-campus community college that will expand to a fifth location later this year.

“You’ve got to have good people around you, and you have to be willing to become a generalist,” he says.

It’s not easy to move into the IT world. “I came up on the telecom side. It takes a lot,” Mentzer says. His college degree in business administration proved helpful in his eventual success. From business administration, he went into the infrastructure world, working in Indiana for a contractor who did cable plant for companies such as GTE and Qwest.

Then he became the switch administrator for T-VI. But he saw that T-VI was going to need a modern IT shop. “I took training. There was lots of self-study,” Mentzer says.

As he delved deeper into the world of IP and the open systems interconnection (OSI) model, he began to
understand how the data world and the voice world were becoming one. His professional education began with the world of twisted-pair cable and moved forward into optical fiber.

At T-VI they run a gigabit backbone serving 20,000 to 24,000 students. T-VI is the second-largest school in the state. But the students aren't the only ones being educated. “I’m still learning,” Mentzer says of his opportunity to manage the united voice and IT division.

Starting in Data

Bob Myers, director of network and communications services at Calvin College, Grand Rapids, Michigan, started on the data side and moved into a position where he oversees telecommunications as well. Interestingly, he has some of the same problems as Mentzer, especially with the speed at which technology advances.

“Technology on both sides of the fence has passed me by in favor of management skills,” Myers says. After moving into the telecommunications world he discovered that, in many ways, the telecom side was similar to the old mainframe business—the hardware, wiring, and single-vendor focus were familiar.

Again, it is management, not technology, issues that give him pause. “The most difficult part is negotiating with the carriers,” Myers says. He did not come up through a world of tariffs and chargebacks and contract details. “Some of that is Greek to me,” he says.

Federal regulations also give him pause when wearing his telecom manager hat. He looks at issues such as handicap access, E-911, and whether he is required to provide access to 10-10 dialing services for students and shakes his head. Yet his management background allows him to assign the task of working out the details to the best people he has working for him.
Campus leadership is the privilege and the responsibility of those who continue to grow themselves and who attract good support staff.

Bill Lewandowski, director of technology operations at Kutztown University, Kutztown, Pennsylvania, got his start in the business in the U.S. Navy. He took his training to Kutztown, starting in the operations section there.

“Operations came easy since I did it in the Navy,” he says. But he quickly added skills in programming to his resume, taking courses at the college. Next came networking. “I learned telecom as we went along.” Lewandowski continues. He has been doing telecom at Kutztown for the past three years. The department consists of himself and an assistant. She does the moves and numbering on the PBX; he does the billing. They also do all of the quick adds and changes, although big jobs are handled by his networking section.

By expanding his technology background, Lewandowski was able to broaden his responsibilities in the department, working his way up. “I’m doing what I want to do now,” Lewandowski says. That includes overseeing operations and running telecom.

No Room for Second Best

In the world of management there is no value to the old adage “If you can’t beat ‘em, join ‘em.” That simply assures one a seat at second fiddle to the real leader. Campus leadership is the privilege and the responsibility of those who continue to grow themselves and who attract good support staff.

The alternative is to ride a downward spiral, as the best and brightest gravitate to a successful leader’s team and away from static, stagnant work groups. Those who remain are tenured but unmotivated; they will never be hired away and will never leave of their own volition.

It is the administrator’s job to help people move up the ladder and across to other areas of responsibility. Ron Langley, director of computer and telecommunications services for California State University, Bakersfield, sees that as the key responsibility of a successful manager. He takes time during each employee’s employment review to avoid the stagnancy pitfall.

“I use the annual review to talk about career paths,” he says. “I realize that some career paths will take workers out of the institution. That’s fine. But I need to know so I can build others to take that spot.” That is one way to assure everyone a chance to advance.

Another of Langley’s stated goals is to use creative strategies to get people to think about what they are doing for the department and where they are going.

“That look at it this way: They have a contract with me to perform a job, and I have an obligation to them to provide training for their goals,” Langley says. Langley is another ACUTA member who freely admits that the college is in trouble if it expects him to program a PBX or a PC. “I’m a management-type person,” he states.

The “business management” idea turns up in almost every conversation with successful managers. “To be successful, you have to take a solid business approach,” Mentzer states. He says his job is to “manage and direct the Institute through the maze of technology” and not to know exactly how to do video streaming. This gets back to his concept of surrounding himself with the best and brightest.

“To succeed you have to become a generalist with knowledge in all areas,” he says.

That is similar to Myers’s approach and appears to be typical at most small-to-midsized institutions as well as the larger schools where it might be expected.

“I have to have an extremely strong management team. Just like everyone else, we deal with pay issues, budgeting issues, and cutbacks. It is very hard,” Mentzer says.

Being flexible with worker hours is one way to keep good people. It doesn’t always work, especially with the younger ones. His 55-person staff loses 6 to 10 good workers a year. “We hire at entry level. We train them. But
we can’t pay them what they are worth, and they bail out for private industry.”

However, being flexible on nondollar issues (within school policy guidelines) helps him keep people, or at least keep them longer. Meanwhile, he is able to use a good programmer or good video person to best advantage.

“Sure,” Mentzer admits, “I have a lot of weaknesses. I’m really weak in programming, and a lot of other areas, too. But I know how to ask questions. My learning curve is about 90 degrees and it moves at a fast pace.”

Moving Up and On

Being willing to let go of the security of the old and familiar and take a leap into a new area is one of the hallmarks of a successful person. Industry trends add urgency to that leap.

However, there are some workers who simply are not interested in exploring new worlds. While Langley respects that, he still makes a regular effort to expose all workers to new jobs. He notes one individual who was assigned briefly to a job in another area who came back saying, “That assignment was awful. I’m happy where I am. That proves that I never want to move over there.” But Langley can rest peacefully at night knowing he made the opportunity available to the worker, and the worker chose not to accept it.

Most top managers agree that cross-training is vital both to personal and to departmental success. “Convergence makes this all the more relevant,” Mentzer continues. “The true telecom person needs to be retrained to IP and IP telephony over data networks.”

If there is any doubt in anyone’s mind that building telecom-only skills is a dead end, look at Avaya and North-ern and the competition they are getting from 3Com and Cisco. It’s working vice versa, too. Then look at the blending of network skills on both sides. It is a clarion call to everyone in the telecom and information technologies field.

Getting Out of the Box

Unless you’re the lead dog, the view never changes. The way to change your view is to look “outside the box.” For Mentzer that means looking for good ideas anywhere and everywhere.

“I tend to model after the large corporations and apply it here on a smaller scale,” he says. “I don’t look so much at universities in particular.”

He notes the industrywide move a decade or so ago from centralized systems to the distributed model. Everyone found it labor-intensive and expensive. Now the industry is coming back to a centralized model.

“Networks facilitate the convergence model and reduce edge costs,” Mentzer says. At T-VI, telephony is in IT. He shivers when he realizes some schools still have telecom in the facilities department and IT in another area altogether. He points out how Qwest has reduced its support structure by

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localizing all activities in two cities, condensing its labor and plant overhead, automating as much as possible.

"I look at operations like that for ideas on ways to cut costs here," Mentzer says.

Langley at Cal State Bakersfield makes it a point to expose his staff to "the other side" of the house, no matter what their basic responsibility. "I have one worker on the network side, which puts him between telecom and IT," he says. "So I have him doing work on strategic planning and assessment." This exposes the worker to a broader view of operations at Bakersfield. Eventually he will be prepared to handle a larger leadership role in the department and move into a more responsible job.

Most people—whether IT or telecom—echoed Langley's basic strategy. "My approach always is to look at myself as a manager. I try to bring in highly qualified people for all of the jobs."

Leaders must keep growing, too. "I'm learning telecom as we go along," Lewandowski says. "I'm not a telecom guru." Unlike his coursework in operations and networking, he has no formal training in telecommunications.

Interestingly, the tag line on Mentzer's e-mails reads: "One should not try to be a person of success. One should try to be a person of worth, and success will follow." That appears to reflect his philosophy and the strategy taken by those who have successfully merged careers in telecom and information services.

Always practical, Lewandowski says, "I would encourage newcomers to get involved in all aspects of the business. You never know where in the place you are working they will need you." He notes that outsourcing various communications and networking functions is commonplace today, and that provides a degree of uncertainty about the future of any job.

"The more you know, the better off you are," Lewandowski concludes.

Conclusion

Those days when a man spent his professional life with one company and retired with a gold watch are long gone. Fast-paced change is a constant as technologies and departments converge. For leaders in today's business environment and on campus, flexibility and growth seem to be the secrets of success.

Curt Harler is a contributing editor to the ACUTA Journal. He can be reached at curt@curtharler.com.
The Challenge of Leadership

Define the Target/Goal
A team is a collection of individuals doing different things but with a common purpose. The team must know what target is to be achieved and what is expected from it. Having a clearly defined enemy works as a rallying point for the team, even if the enemy is just a deadline.

Think Like a Team
Put the team first. If there is conflict between individual interest and team interest, the leader always sacrifices self-interest for the good of the team and requires team members to do the same.
At the same time, an effective leader provides support for individual members as well as the team. A leader is confident but not arrogant, not afraid to point out mistakes as they occur, but careful to do so with respect.
However strong and passionate a quarterback is, he cannot win a game by himself. Football is a team game. So is business. Individual brilliance means a lot, but an average group filled with team spirit and playing with passion can overcome a group of talented, experienced, but undermotivated individuals.
If each person perceives that he or she is an important part of the team, the team can achieve much more than the sum of its individual members. Just as the hand consists of a thumb and four fingers, a team consists of different individuals. The objective is to make them work together like a fist.

Accept and Work with Diversity
Be objective and unbiased. Convey your high expectations for everyone and your confidence that you will be successful.

Convert Negative Energies to Constructive Forces
Don't allow frustration to overwhelm you, whether it's yours or someone else's. Attitude is everything. Everyone faces problems; a leader regards a problem as a challenge, an opportunity for learning and innovation.

Take Risks
When you want to make your dream come true, you must take risks. A dream is a vision. To dream is to imagine a different future. A leader not only dreams big but also puts in place a strategy to make the dream a reality. To make things happen the way you want, you have to envision the future, paint a picture for others of what you want to achieve, and be willing to put yourself on the line.

Learn to Face Opposition
When a leader knows he is right, he faces his critics with courage, usually winning their support in the end. Before giving up and accepting what is perhaps a lesser decision, the leader will speak up—but he must be fighting for the right issue, and not just against an individual.

Make the Best of Limited Resources
Maximum utilization of available resources is just good policy today. When there are constraints, the situation demands more of you and forces you to be more imaginative, creative, and innovative. That's not a bad thing.

Face the Challenges
A strong leader does not dwell on the setbacks but rather looks for a way around obstacles and moves on. Flexibility is an asset.
A leader has been described as one who can have a vision, explain it to others, and influence them to follow his or her path to it. This is a simple concept, but often difficult to achieve. Becoming a successful leader is a demanding journey that always ends in growth for those who undertake it.

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High-Bandwidth Leadership

Today's successful IT leaders must be multichanneled, fast information processors who are always turned on and tuned in to their staff. A new, "high-bandwidth" model of leadership has emerged. High-bandwidth leaders respond to today's need for speed with visionary enthusiasm, rich feedback, personal responsibility, and a quest for continuous improvement. They communicate quickly and influence skillfully. They possess vision and passion along with flexibility and compassion. High-bandwidth leaders see the big picture, down to the tiniest pixel. They inspire others with their vision of possibilities and are masters of self-motivation.

Imagine this new 21st century leader as the multichanneled human analogue to the complex system of digital routers, fiber-optic cable, and servers that provides the IT backbone for the global economy. In this demanding role, a high-bandwidth leader has three responsibilities: to make waves, create protocols, and build intelligent networks.

Make Waves

At the University of Texas system in Austin, Dr. Darcy Hardy has emerged as a high-bandwidth leader. Five years ago she stood alone before the Board of Regents. Dr. Hardy knew the way of the future pointed to distance education. She also knew that most board members were in the dark about IT, URLs, and the possibilities of the Internet. If she didn't enlighten them, UT would almost certainly fall behind other large universities. Hardy pitched a vision of a network of campuses offering courses throughout the Great State of Texas over the rapidly growing Internet.

Enthusiasm is contagious. The board caught Dr. Hardy's conviction and granted her one-person department $300,000. Today, as assistant vice chancellor for academic affairs and director of the UT telecampus, Dr. Hardy has a staff of 23, and over the past four years she has administered an $11 million program. Dr. Hardy foresaw what was possible for the UT system and made waves to rock the boat in that direction.

How does a leader make waves? First, by creating a compelling vision that goes beyond short-term managerial goals. Leaders think big. They use imagination to uncover possibilities by probing into the unknown and asking, "What if ...?"

A leader also makes waves by inspiring willing followers. Forcing people to work together takes little imagination. In The Leadership Challenge, James Kouzes and Barry Posner define leadership as "the art of mobilizing others to want to struggle for shared aspirations." True leadership inspires the minds and hearts of people who willingly choose to follow.

Create Protocols

Communication networks—human or hardwired—must have a common set of protocols, so information can flow freely. Computers linked on a WAN aren't worth a nanodollar unless they can talk to each other in a common language. To create a high-performing team of willing followers, IT leaders must identify explicit standards of behavior for communication and teamwork and then model those standards personally.

To realize their vision, 21st century IT leaders operate as communication architects. They design an environment based on trust that allows for powerful, sometimes risky dialogue where innovative ideas are nourished. Teams produce trust by consistently using standard operating procedures, protocols, and agreements acknowledged by all members.
When mistrust, suspicion, and doubt infect a work group, the cost in lost productivity because of interpersonal noise is extremely high. The best way to stop a negative-attitude virus is early prevention. A good leader installs a healthy set of communication protocols early.

When new members come on board Dr. Hardy’s team in Austin, she takes time to tell each person what she expects not only in output but also in honesty. She lets them know she values diversity of opinion and expects disagreement and discussion in team meetings. “That’s what keeps us fresh and helps us grow,” she says. On the other hand, Dr. Hardy is careful to set boundaries. “What I don’t want is people complaining to each other behind my back.” If they really have a problem with a decision, “I want them to come to me first so we can talk about it,” she says.

The leader must tell his staff how he communicates best: by phone, e-mail, or face-to-face. As the leader, do you prefer lots of discussion, or do you like to see things spelled out visually in detail? Maybe you prefer getting down to the nitty-gritty with people, or maybe you prefer working at more of a distance. Good working relationships with others begin with a healthy dose of knowledge about your own strengths, weaknesses, and biases. Take time to discover and honor the communication preferences of people on your team. A high-bandwidth leader knows that everyone communicates on slightly different frequencies, and the leader’s preference may not work best for the group.

“The meaning is the message received” is a principle so important, and so often ignored, that it deserves repeating: What they get is what matters, no matter what you meant.

Successful leaders always take responsibility for how messages are received. If they “just don’t get it,” a good leader finds another channel to communicate the message. Leaders ask for understanding and can modify their own communication style to ensure accuracy.

Another powerful step leaders take to create communication protocols is to make explicit agreements. Forge agreements with your team on such things as how to handle conflict, give feedback, and conduct meetings. Let your team know when you look for consensus or compromise and when you make the final call. Most important, create a protocol for recognizing and mending broken agreements without blame. Then write the agreements down, sign off on them as a group, and do periodic reality checks to measure how well everyone lives up

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to his or her intentions. Creating agreements builds a strong foundation for the teamwork leaders need to realize their vision.

How do you find out how much trust—or mistrust—underlies workplace dialogue? Unfortunately, when communication drops to uncomfortably low levels, many leaders don’t ask and employees certainly won’t tell. A variety of assessments, audits, and surveys are available to probe the conflicts, hidden assumptions, and indiscussible issues in the workplace. Any painful issues that surface are a sign of disease and need to be treated as a problem everyone shares.

The health of an organization can be measured in the time it takes for bad news to travel from the bottom to the top. A responsible leader cultivates a safe environment where people feel enough trust to bring up the most difficult issues. Even when communication protocols are sorely tested, a high-bandwidth leader doesn’t play the blame game. He allows for open disagreement but doesn’t permit attacks or insults. The key is not to take anything personally.

In conversation a strong leader models nondefensive dialogue rather than debate. Dialogue is an open conversation where meaning flows through. Dialogue generates “yes ... and” responses that search for solutions rather than the “no ... but” arguments that make people wrong. Adopting a dialogue model of conversation takes discipline, but the valuable new ideas, enthusiasm, and loyalty generated are well worth it.

Creating protocols and explicit agreements about how you prefer to handle the communication process creates clarity. In a confused world clarity produces power because it generates the credibility and trust essential to mutual understanding and teamwork.

**Build Intelligent Networks**

In the old top-down leadership model, leaders were kings of the hill. Now skillful leaders are queens of the hive. Around them they weave relationships, webs of communication where authority and position may change constantly. Sometimes like a wave, a high-bandwidth leader’s message echoes among the masses. At other times the leader’s message ricochets like a particle with a personal, individual ring.

An effective leader tailors messages carefully for each situation. She is able to create a network of aligned understanding in many directions at once: horizontally with staff and internal customers and vertically within the institutional hierarchy.

Working in a network of 15 universities in the University of Texas system presents some unique challenges for Dr. Hardy. Like many IT initiatives, distance education emerged out of grassroots support, but that time is over. “Now it takes funding and top-level support. If it’s not there, it just won’t happen,” says Dr. Hardy.

The challenge is to manage groups of deans, faculty, and students—dodge any firestorm and create buy-in. Over the last 10 years Dr. Hardy has changed her strategy about how to do that. “Now there are enough people who want to learn new technologies, who want to embrace new ways of teaching that I don’t worry about the ones who don’t want to. The tide has shifted. We don’t try to convince them anymore. We don’t try to change their minds.”

To gain support she lets the enthusiastic early adopters champion causes for reluctant holdouts. “They’re the best ones to make our case,” says Dr. Hardy. Several times a year she sponsors training for prospective distance-education faculty. Rather than preach the virtues of distance education herself, she creates “veterans’ panels” where faculty who have been doing distance learning present their courses.

“Having the veterans come in and talk about what they’ve done makes a much better case than me standing there and telling them, ‘Aw, you can do this—it’s not a big deal,’ ” Dr. Hardy says.

The network a leader creates is only as useful as the quality of information flowing through it. Its power increases exponentially with the number of nodes. Sometimes the most interesting messages come from the periphery, the young edge of growth that may need the most nourishment. In order to be functional, networks need to be maintained and updated with good information.

A skillful high-bandwidth leader keeps many channels open and is always listening, the most underrated—and most important—communication skill of all. She listens deeply, without judgment or evaluation, listening for the meaning behind the message for what might be left unsaid. Then she asks for understanding to create a strong network built on mutual trust.

**The Human Touch**

Of course, the human brain has far more bandwidth than the most complex digital network. Human beings are much more intuitive, creative, and, some would believe, even more fascinating than farms of humming servers. The most critical aspect of good leadership has less to do with technology and more to do with people. In this high-tech, high-touch world, leaders need courage, awareness, and commitment—all qualities that speak in that richly human voice textured with understanding, humor, and compassion.

Personal and organizational transformation takes place when highly connected groups of people deliberately choose new ways to communicate, collaborate, and cooperate and still respect each other’s individuality. Words related to “communication” suggest community,
common beliefs, and communion—values that transcend the individual boundaries. Authentic communication comes from the heart as well as the head, from reason and also feeling.

"It can’t just be all about business," says Dr. Darcy Hardy. "You’ve got to deal compassionately with people," she says. "When the pressure is on and people are stressed out, breakdowns will happen. You’ve got to put your people first." Finding that delicate balance between results and relationships, between productivity and people, is the high-wire act successful 21st century leaders are able to manage. Push too hard for results and people leave. Overlook performance problems and goals aren’t met. Leaders must be able to embrace paradox. Perhaps that’s one reason they become such compelling figures for their followers.

One of the biggest personal challenges high-bandwidth leaders face today is holding true to a vision while surrendering self-importance. A leader is successful because he focuses on a cause, not on himself, and inspires others to follow him in pursuit of a goal.

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by James S. Cross, PhD
Michigan Technological University

College and University IT in the Age of Discontinuity

As the 21st century opens, we are on the cusp of a technological acceleration that will affect campuses along with the culture as a whole. The assumption of continuity that has always defined and reinforced higher education institutions is at odds with the forces of change in our capitalist marketplace. Joseph Schumpeter coined the phrase “gales of creative destruction” to capture the impact of these forces. Three general factors characterize and contribute to this age of discontinuity:

1. The inexorable spread of information technology into practically every aspect of the economy
2. The increasing convergence and cross-fertilization of technologies
3. The accelerating rate of change

How will the role of IT expand? What structures and processes will most likely change? And how will what we manage change?

A New Role for IT: Driving the Transformation

Most functional units on campuses do not comprehend what is possible with technology; therefore, it is difficult for them to think creatively about the future, customers’ unspoken needs and frustrations, convergence, and cross-fertilization. On the other hand, IT staff often have little understanding of the customer experience and seldom think creatively about how to change it. IT departments are frequently somewhat isolated, usually internally focused units that take on objectives defined by other people. These objectives are not regularly scrutinized by direct conversation with the external customer. By and large, IT does not have enough insight into the customer experience to determine if the objectives being supported are flawed.

If information technology has the power to transform campuses and the customer experience in the 21st century, as many people feel it does, who should drive the transformation? Gary Hamel, author, consultant, and professor at the London Business School, concludes that CIOs and IT people are going to have to drive the transformation. Hamel also concludes that as the people who understand the technology and the opportunities technological change affords, CIOs and IT leadership will have to become more externally focused on the customer experience and customers’ unarticulated needs and frustrations if they are to gain the insight necessary to drive the transformation.
Changing Structures and Processes for Competitive Advantage

As the line between business strategy and technology strategy continues to blur, so does the notion that technology implementation will leisurely follow behind business strategy. Successful institutions in the 21st century will continually execute, upgrade, and innovate as an ongoing business strategy. Continued success means constantly moving between the concept of technology and the concept of business in crafting competitive business solutions.

Information technology will continue to be infused into every aspect of the economy, and it will continue to combine and recombine with other technologies and disciplines in an ever-accelerating, nonbiological evolution. Various sources indicate that fewer than one-third of today’s major corporations will survive the next 25 years, and 75 percent of the names on the S&P 500 in 2027 will be companies unheard of in 2002. What will the ones that vanish have done wrong? What will the ones that survive have done right? And what will the new ones have done right to get there? These are questions that need to underlie decisions as we plan strategically for the future.

The future-sensitized campus that fully recognizes the trends in technology and the overall picture of convergence, creative destruction, and change acceleration will have a competitive advantage. By looking ahead and pushing innovation to make the next advance, institutions will be able to focus on melding technological change with changes in the marketplace, customer preferences, demographics, culture, processes, and practices.

The creative destruction process is the essence of capitalism, and every capitalist concern has to live with it. Colleges and universities are no exception. We must accept destruction as a part of the creative process. Unfortunately, institutions are run by people who have the same mental models, values, thoughts, opinions, feelings, history, and culture lock-ins as do corporations. The established processes in most institutions tend to stifle creative and innovative attempts to identify unmet needs and the ways to meet them. Research indicates that the more successful an organization becomes, the more difficult it is to be innovative and to change.

Convergence, innovation, and creative destruction require the integration of data collection and business intelligence systems for real-time data modeling and analysis. The integration of business intelligence, operational, and data modeling systems with real-time data flows is essential as convergence continues to be a technological driving force. Bill Raduchel, executive vice president and CTO of AOL Time Warner, concludes that the real challenge will be converting technology that works into systems, products, and services that customers want, need, and are willing to pay for.

Managing the Impact of Convergence

Convergence has taken us a revolutionary step forward with the migration of different communication streams—voice, data, video, and other media—into a single unified network. Mobile computing, Internet appliances, PDAs, and Web-linked phones are emerging as the new workhorses for consumers and businesses.

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The critical issue for colleges and universities is not whether convergence and innovative technologies will change business processes and practices, but in what ways and how quickly. These technologies in a converged environment have the potential to generate tidal waves of creative destruction, changing everything by connecting a myriad of gadgets that previously could not speak the same language. For example, Nokia, Motorola, and Ericsson are developing cell phones that incorporate Bluetooth technology to link the phone, earpiece, and microphone so users can speak, listen, see, and manipulate the display concurrently.

The convergence of voice and video communications onto IP-based networks holds great promise for value-added applications such as unified messaging, speech authentication, voice-enabled queries and dialing, one-number access, and CTI-enabled Web and portal applications. But how do you safely move to the new technologies? How do you implement advanced business solutions amid a changing infrastructure? Imagination and IT leadership are the limits as people and businesses go mobile. The future promises unparalleled communications, commerce, and convenience. Our challenge is to be informed, receptive, and prepared to open the door to opportunity.

The Business Case for Tomorrow

How will colleges and universities respond to this revolutionary world of technological change that requires tremendous investments of dollars, people, time, talent, and energy? To believe everything that’s written about convergence and innovative emerging technologies is to think they will eliminate software apartheid and world hunger and bring about peace and tranquility around the globe. As with any massively hyped concept, every institution has to form its own vision and strategy. Although it is interesting to project the impact, I have no doubt that it will cause radical change. The most troublesome aspect is that although it may rock your boat, it won’t part the seas. As Stanley N. Katz, director of Princeton University’s Center for Arts and Cultural Policy Studies, states, “We must ensure that information technology serves higher education, and not vice versa.”

For the institution confronting philosophical and technological upheaval, evidence suggests that a strategy of building balanced and coherent teams that understand the customer experience works best. The teams promoting innovations and change must develop services in line with the demands and needs of the people being served, while keeping a sensible and realistic eye on the future. Potential benefits must be evaluated in terms of business and academic processes to embrace economies of scale, scope, added value, efficiency, effectiveness, reliability, manageability, and trade-off.

The business case must embrace the creation of an integrated strategy that differentiates campus products and services from those of competitors to provide a true competitive advantage. Jack Trout and Steve Rivkin in *Differentiate or Die* assert that far too many organizations still don’t understand how vital it is to differentiate their products and services from those of their competition. In the face of stiff competition, successful organizations have to give the customer a reason to choose their product or service.

The business model for embracing new and innovative technologies must be based on three premises:

1. That the campus will migrate to the technology for delivery of services
2. That an integrated campus strategy can provide competitive advantage
3. That the campus business model and processes are in sync as they move between the concept of technology and the concept of business in crafting real-life solutions

New and innovative technologies—cell phones, PDAs, pocket PCs, stillphones, wireless laptops, and Bluetooth-enabled personal area networks—are no longer just high-priced toys for grown-up girls and boys. They are rapidly becoming the lifeline for everyone from students to faculty to top administrators. With greater value, increased functionality, enhanced capability, improved operating efficiencies, and individual empowerment, these technologies have quickly become an integral part of what industry watchers call a worker’s personal area network.

The Challenge

The toughest challenge is selecting and synchronizing a vision consistent with the culture of the organization. The value proposition must be built upon several considerations:

- Anywhere, anytime, anyplace access
- Faster and smarter mobile professionals
- Satisfied customers
- Relationship management
- Leveraged core competencies
- Brand recognition
- Value-added functionality and features
- Competitive advantage

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Although new and innovative technologies will continue to change the way colleges and universities operate, IT leadership and the ability to crystallize a vision are the driving forces in realizing the potential and opportunities the technology and convergence make possible. What can administrators do to keep their institutions alive and vibrant? Richard Foster in *Innovation: The Attacker’s Advantage* concluded that organizations that go on the attack win out over defenders in times of technological change. According to Foster, organizations must learn to change at the pace of the marketplace. It’s not only that change is the rule but also that the rate of change is accelerating. Clearly, we are living in the age of discontinuity, and our campuses as well as our culture will feel the impact.

James S. Cross, vice provost of information technology at Michigan Technological University, is a past president of ACUTA and a frequent contributor to the Journal. Reach Jim at jcross@mtu.edu.

References

Additional Resources
Leaders on Leadership

Anthony R. Tanzi, RCDD
Brown University

Vision

As ACUTA's president in 2000–2001, I chose to focus on the concept of vision. In one of my newsletter columns, I discussed the differences between leadership, management, and vision. I believe that on our campuses, vision and leadership go hand in hand. In practical terms, vision means seeing where we have to be as an organization and what new skills staff must develop in order to be in a particular position at a designated time.

Your vision may be something as simple as using the Web to improve customer service or something as complex as merging technologies or departments. Whether the process or the outcome is small or large, people have to share your vision if they are to follow your leadership, and they must be convinced that you will lead them to the goal.

It is, unfortunately, very easy to become entangled in the tedium of everyday problems and routines. Effective leaders will set aside some time to practice being a visionary if they expect to meet their goals.

In their book The Leadership Challenge 2d edition (Jossey-Bass, 1995), Barry Posner and Jim Kouzes identify five practices and 10 commitments that constitute effective leadership. I think this, in a nutshell, is what leadership is all about.

1. Challenge the process. Successful leaders and teams, they say, make a commitment to (1) search for opportunities and (2) experiment and take risks. They do not wait for opportunity to happen. Whether they are leading a staff or an association, they are always seeking to make connections from what others are doing, translating those connections into potential opportunities. They also recognize that occasional failure is inevitable, but it can provide us with some valuable lessons.

2. Inspire a shared vision. Leaders and teams inspire a shared vision by first (1) envisioning the future and then (2) enlisting the support of others. Traditional leadership conferences emphasize the need to "sell" your vision as a leader. Kouzes and Posner suggest rather that you provide ample information to those whom you would lead, allowing it to be their vision as well. If it is their vision, their support will come quite naturally.

3. Enable others to act. As leaders we must commit to (1) fostering collaboration and (2) strengthening others in order to enable them to act. Sometimes we must look further than our internal resources to achieve grand visions. Global thinking, the result of today's communications technology, is so pervasive that it is changing the way we look at many activities we engage in, including the way we lead our organizations. Partnerships and collaborations are more common now than ever. We must look for ways to work with others, and we must continually strengthen the skills of those we lead to enable them to be effective participants in our vision.

4. Model the way. Effective leaders and teams (1) set an example and (2) establish small wins. Our actions always speak louder than our words, so it is essential that as leaders we practice what we preach. If we fail to model the behavior we want to see in others, we compromise our integrity and without integrity we should not expect to be effective.

Establishing small wins means recognizing milestones as we strive for a goal. Achieving a vision, in some cases, may take years. If we do not evaluate our progress and have small celebrations along the way, we get discouraged and success eludes us.

5. Encourage the heart. Whether we admit it or not, we all benefit from hearing applause for a job well done. For this reason, we must (1) recognize individual contributions and (2) celebrate group accomplishments as we strive to realize our vision.

Nothing breeds success like success. Too often we move too quickly from one project or one event to another, without taking time to recognize the efforts of those involved.

I highly recommend The Leadership Challenge. It has had a powerful effect on my own thinking regarding leadership.
by Megan Statom
ACUTA Communications Assistant

Educating the Leader

Executive education is available, but the cost is $1,000+ per day. If you're serious about becoming a leader, here are four schools that would love to hear from you.

So, you're a 40-something technology professional on a college campus, and you like your job, but you're ready to get serious about taking your career to a new level. You want to be the CIO. Where do you go to learn how to do that? Look around. Your own campus may be one of several offering a relatively new kind of education for executives making the climb to the top.

Darden Graduate School of Business

If you don't see what you want on your own campus and you can dig deep enough into your pocket to come up with $25,500, pack your bags for Charlottesville. The University of Virginia's Darden Graduate School of Business has a program specifically designed for people like you.

"There are about 10 business schools in the United States with a significant array of programs for executive education," says Brandt Allen, associate dean of Darden's executive education program. "Darden is the fifth largest. We do more executive education per faculty member than any American business school."

The Executive Program (TEP) is just one of several options Darden offers in the executive education arena. TEP is a four-week program held on campus at the University of Virginia. Class sizes range from 30 to 60 participants (33 in 2001) and include executives from all over the world.

According to Darden's general brochure, "The Executive Program is about vision—about seeing potential where none had seemed possible." Executives who partake of The Executive Program's fare learn to formulate and implement strategies for competitive advantage, understand and lead the change process, rethink business processes, engage in systems thinking, and foster coordination across functions. Subjects covered in the program include managing in a global context, leveraging information technology, e-business strategy, and transformational leadership.

One of the unique features of TEP is the Executive Wellness program. This is a voluntary fitness plan that is part of Darden's commitment to developing the whole person.

"Darden's goal is to make TEP a transforming experience for those who attend," says Lou Centini, a senior director of executive education at Darden. "We touch all dimensions of the individual: intellectual, by building functional skills and helping them to become effective leaders; physical, by learning to value their health; interpersonal, by dealing with ambiguity and realizing that it is good to be passionate about your purpose; and spiritual, by examining core values and beliefs as they apply to the workplace. These themes are woven throughout the program to challenge people in ways they hadn't anticipated."
According to BusinessWeek, Darden is ranked among the top seven schools in the United States for nondegree programs targeted at executives. But of course, Darden isn’t the only choice. Also among the top schools are Harvard Business School, Northwestern’s Kellogg Graduate School of Management, and Michigan Business School.

**Harvard Business School**

Harvard Business School (HBS) offers a two-week program targeted specifically at information technology. For a fee of $11,500, Delivering Information Services will address the challenges business leaders face in a marketplace where the competitive playing field is continuously changing as technology advances.

Four teams of professors teach Delivering Information Services, each presenting a different aspect for consideration. Team 1 focuses on effective IT management and the changing role of the CEO and the CIO, and the relationship between the two. Some topics covered by this team include IT management in the 21st century and the pressures and alternatives of outsourcing.

Team 2 discusses business transformation, computer operations, intranets, and the Internet, with emphasis on issues such as transforming the network organization and using IT to improve the lifetime value of customers.

Electronic commerce and the Internet is covered by Team 3, including consideration of the value of a firm’s Web page and electronic commerce.

Team 4 concentrates on the Internet and the law, highlighting protection of intellectual property and the use of patents and copyrights in the Network Era.

**Kellogg School of Management**

More than 5,800 participants attend programs at Northwestern’s Kellogg School of Management each year. For $4,050, you can attend Kellogg’s four-day seminar titled Winning Strategies: Creating Business Value through Technology. Attendees will look at the impact of information technology on strategy and operating models across various industries and discuss the building blocks of e-business infrastructure.

One of Kellogg’s programs that is aimed at leadership is Reinventing Leadership: A Breakthrough Approach. This five-day course is offered twice in 2002 at a tuition of $6,150. Designed for executives who want to maximize their managerial efficiency, this seminar pledges to give professionals a model for understanding their business and leadership and to challenge their basic beliefs about leadership.

**Executive Education Center**

The University of Michigan’s Executive Education Center is currently featuring a class called Leading Change: Creating Transformational Competencies. The fee for this five-day program is $6,200. Leading Change addresses challenges that participants identify so that it will best address the real needs of those who attend. This seminar is intended to help executives develop their own transformational processes for their unit and gain the mind-set of a transformational leader.

Building the Leadership Engine is a two-day program offered for $5,100. Based on Noel Tichy’s best-selling book The Leadership Engine: How Winning Companies Build Leaders at Every Level, this class offers to improve the executive’s ability to develop other leaders as well as develop his or her own teaching skills.

**What’s the Big Deal?**

Across the board, executives who take part in these educational courses are quick to sing their praises. What makes these programs so invaluable to top executives worldwide?

• Interaction with Fellow Executives “I’m learning from the other IT folks here how business is done in their countries. They face the same IT issues, so I’m studying their best practices,” says recent TEP member Andy Miller, director of computing and network operations at Boeing Space and Communications. “I view my interaction with my colleagues here as one of the most effective things I can do to learn about international business and IT matters.”

IT leaders in other executive education programs share Miller’s sentiments. “An opportunity to meet and speak with your peers is often overlooked as an event necessary to your personal development,” states Harvard participant Harry Tobin, knowledge management leader at PriceWaterhouseCoopers LLC. “At HBS, the ideas and strategies come from the professors; implementation comes from your peers. Take the opportunity to relearn and refocus—you can mature an entire year in just two weeks.”
A Faculty of Experts
The HBS faculty are authors of revolutionary books and articles and are leading authorities in their fields. According to the HBS brochure, the executive education faculty has "an immeasurable wealth of real-world expertise." By including faculty members from the business school with other disciplines such as Harvard Law School, HBS hopes its curriculum will give class members a broader understanding of how IT influences the entire establishment.

Likewise, Kellogg promises that its faculty, almost a third of whom are from outside North America, offer the global orientation required for the worthy exchange of best practices. Executive programs are designed and taught by the most senior members of Kellogg's faculty. These professors are leading practitioners and scholars of distinction, well known for their research.

Learning by Doing
A large part of many of these programs is the application to real-life situations. Darden's TEP offers business simulations so that participants can use what they are learning. The class is split into groups that run hypothetical companies; the group with the most successful company wins.

In Harvard's Delivering Information Services program, executives examine case studies. After putting themselves into the managerial positions discussed, they must come up with solutions to their problems, commit to an action plan, and sell their colleagues on the solution. Debate and discussion are an integral part of this program.

Conclusion
"Future CIOs don't need more training in technology," says Darden's Allen. "They need this leadership training."

Mary L. Pretz-Lawson of Carnegie Mellon would probably agree. "I don't need to know all the answers to every technical question related to these services," she told us. "Rather, I need to have enough technical knowledge to understand the issues and know who should address them. Lots of people have lots of technical knowledge, but they can't get a project out the door."

To lead in today's volatile work environment, whether on campus or off, it isn't enough—or maybe even necessary—to be a technology superstar. You must know how to lead yourself, and your colleagues, into the future.

Megan Statom is the ACUTA communications assistant. Reach her at mstatom@acuta.org.
Making the Outsourcing Decision

Just a few years ago, when I first wrote about outsourcing for ACUTA, the question was “Should we outsource?” Today we’re asking, “What should we outsource?” and “How should we do it?”

What is outsourcing? In its simplest sense, outsourcing is the transfer of operational responsibility of a business process or infrastructure management to an external service provider. Outsourcing has evolved to become the strategic use of outside resources to perform activities traditionally handled by internal staff and resources. Traditionally, the outsourced process or function was generally noncore in nature, and the functions ranged from high-volume, repetitive processes such as electronic transaction processing (i.e., student billing and account management) to a more customized service such as technology help-desk services. Today, outsourcing is growing in popularity to include collaborative relationships with outsourcing business partners to drive business transformation.

Why Outsource?
Initially, the benefit of outsourcing was typically thought of in financial terms. Outsourcing often represents the opportunity to substitute fixed costs for variable costs, making a strong argument for its use as a sound financial management tool. Outsourcing has even been referred to as a “blunt instrument to offload unimportant activities and wring the costs out.”

Today, outsourcing is also seen as an opportunity to improve service levels and take advantage of the latest technology without the capital and human resources investment. Outsourcing now represents an opportunity to engage in collaborative relationships with business partners to create high-performance support operations that keep pace with industry best practices. It is seen as a way to gain access to competitive skills, improve service levels, and increase ability to respond to changing business needs.

Many public sector organizations are taking advantage of the same benefits that outsourcing brings to their operations.

Here are the top ten reasons why outsourcing is desirable:

10. Reduce and control operating costs
9. Improve organizational focus
8. Gain access to world-class technologies and capabilities
7. Free internal resources for other purposes
6. Access resources that are not available internally
5. Accelerate reengineering benefits
4. Address a function that is difficult to manage/out of control
3. Make capital funds available
2. Share risks
1. Two words: cash infusion

Here are some examples that typically apply in a university telecommunications environment.

In a recent article, Beth Ellyn Rosenthal, an editor for the BPO Outsourcing Journal, stated that 80 percent of the nation’s monthly phone bills have mistakes that are typically not in the customer’s favor. Most university telecom organizations pay hundreds—sometimes thousands—of telecom-related accounts, making it virtually impossible to closely monitor the
billings with their limited accounting staff. This is one case where outsourcing can pay for itself and return a “profit” to the organization through cost savings, at least in the short term until the accounts are cleaned up and billing errors under control.

Or consider that some universities simply don’t have the financial resources to pay salaries and benefits that will attract and retain technology staff. Even if they can attract them, keeping their training current with rapidly advancing technology and supplying the tools and other resources they need to be effective can be a major challenge.

Finally, capital funding for new systems and upgrades is often very difficult to obtain because these needs are in competition with other projects that are more closely tied to the core functions of the university. Outsourcing allows manageable operating costs to replace capital funding in obtaining the latest voice and data technologies.

**What Can Be Outsourced?**

In higher education telecommunications/information technology, the functions we typically think of outsourcing include

- bill auditing/payment;
- hardware installation and maintenance;
- PBX engineering;
- moves/adds/changes;
- customer service; and
- help desk.

In addition to transaction-based and business process outsourcing, recent trends include an increasing array of outsourcing services, including the following:

- **Platform IT outsourcing**, which is defined as a service provider who assumes responsibility for managing all or part of a client’s IT infrastructure. Examples include hardware facilities management, onsite and offsite support services, server vaults and data security, and disaster recovery capabilities. These relationships typically involve the transfer of IT facilities, staff, and hardware. This is becoming increasingly popular in the government sector because government entities are not able to compete with private companies for technical talent on the basis of price alone. In order to manage their increasingly complex IT infrastructures that have fallen behind the private sector, government entities are increasingly turning to outsourcing.

- **Application outsourcing**, which is defined as an outsourcer that provides the management, maintenance, and

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support of software applications. This group typically includes third-party applications service providers (ASPs), which deploy, manage, and remotely host a software application developed by a third party through centrally located servers, and proprietary ASPs, which develop, own, and subsequently rent their own software solutions directly to clients.

- Systems and network infrastructure outsourcing, which is defined as a third-party service provider that pro-actively provides and/or manages IT infrastructure and applications through a remote hosting environment. Specific examples include a broad array of technical functions, including hosting, collocation, performance monitoring, backup data storage, and firewall intrusion detection services.

When done well, outsourcing is much more than simply supplanting resources by “subcontracting.” Outsourcing involves substantial restructuring of specific business activities by contracting out major functions to specialized service providers who become valued business partners. We only want to outsource because the service provider can leverage its expertise, economies of scale, and access to resources to make our operations run better and provide better service to our customers.

What Factors Influence Successful Outsourcing?

A study conducted by the Outsourcing Institute in 1998 identified the following critical areas for a successful outsourcing program:

- Understanding your goals and objectives
- A strategic vision and plan
- Selecting the right vendor
- Ongoing management of the relationship
- A properly structured contract
- Open communication with affected individuals/groups
- Senior executive support and involvement
- Careful attention to personnel issues
- Near-term financial justification

The importance of carefully managing the personnel issues can’t be overemphasized. Often, when faced with the prospect of having their positions outsourced, employees will go through various stages as they deal with the new reality. Although every individual is different, many will typically first have a "rejection" phase where they feel as if they are not appreciated, or as if they are being laid off. This often gives way to a realization that the change is going to happen, and they enter a self-interest phase wherein employees begin to look after their own career interests. Finally, most staff members come to realize that their best interests are served by joining forces with the new arrangement and supporting the new organization. Regular, open communication is essential to gain the confidence of the affected staff members.

One more item should be added to this list: the use of outside expertise. When venturing into the outsourcing arena for the first time, assistance from a competent firm can guide you toward a successful outsourcing arrangement and away from the pitfalls inherent in establishing this type of relationship. If you have never crafted a service-level agreement (SLA), you don’t want to do it alone.

The Importance of Service-Level Agreements

Establishing appropriate service-level specifications is a crucial foundation for a successful outsourcing relationship. If not done properly, the outsourcing relationship can be defeated even before the work is transitioned to the service provider.

The specifications play two vital roles in an outsourcing agreement. First, they ensure accountability on the part of the provider. Second, they determine the price for the service. As the buyer, the only way you can have a comfort level with the outsourcing arrangement is to set required service-level specifications and then regularly measure the provider’s performance to determine whether it has achieved those levels. This affects the price for the service because the level of required service will dictate the level of resources that is required.

Service-level agreements typically take one of three styles. It is important to match the SLA style with the
Collaboration

Identifying the single most important leadership skill is like selecting one book or CD to take with you to a desert island. It is not an easy decision.

If I must narrow it down, I believe that the most valuable asset any leader can bring to campus and excel—not just survive—would be the willingness to collaborate with other campus leaders.

Each of us has our own niche, our particular area of expertise, as we provide services to our institution. But we must be able to work alongside others to generate the momentum necessary to accomplish the really mission-critical projects. That takes the ability to step back often for a look at the big picture with others in the mix.

One of the best examples in history of this ability to collaborate for success might be Dwight Eisenhower, who was chosen in 1943 to lead Operation Overlord. Eisenhower brought extensive planning skills to this assignment but was chosen primarily because he worked well with the British (even Montgomery) and could deliver a combined operational plan. That spirit of cooperation was critical if the Normandy landings the following year were to be successful. In this case, it was Eisenhower’s ability to collaborate that made him the logical choice to lead.

I think we could apply the same principle to our own career path. If we want to be leaders, we must also be collaborators.
defined objectives of the outsourcing relationship.

1. The *utility*-style SLA is similar to what we typically expect from a utility company; basically, the service is on or off. For all practical purposes, there are two levels of service: acceptable and unacceptable. If the service is on, all is well. If the service is off, we want a credit on our invoice for the length of downtime.

2. The *process-improvement*-style SLA is typically used in business process outsourcing. The service-level specifications for a process improvement objective will measure success of changes introduced to the process, rather than just the end result.

3. A *value-added*-style SLA will specify the actual value that is expected and the quality of the desired result. This style will specify the effectiveness of results in creating value in your organization, not just the execution of the process itself or simply reducing costs. Added-value outsourcing will typically have a strategic impact on your organization because it will involve business process reengineering that leads to new directions, such as a shift away from day-to-day process management and toward strategic, long-term planning.

**Components of a Successful SLA**

A good agreement has several critical components. The emphasis must not be on which party negotiated the best deal, but rather on negotiating a reasonable contract for both parties. Both parties must benefit from the agreement. By reaching complete consensus, both parties can reach agreement on issue resolution.

The SLA should help manage the strategic relationship between the university and the supplier, and it must include the identification of responsibilities, which is key when processes change. When processes are outsourced, it is important to let the outsourc service provider take total ownership for the process. As the buyer, you control the outcomes through the service measurements; you can’t continue to run the day-to-day outsourced function.

To be successful, the outsourcing relationship must focus on results. To be meaningful, the results must be objective, measurable, quantifiable, and comparable against preestablished criteria.

Space limitations preclude going into SLAs in more detail here, but I want to emphasize the importance of getting help in developing your first SLA. Until you’ve had a good amount of firsthand experience with outsourcing and SLAs, you can benefit from working with someone who can help you construct an agreement that can achieve maximum success.

**Conclusion**

Today’s university telecommunications managers are looking ahead and recognizing that the responsibility for ensuring the success of their organizations does not rest entirely in-house. Although many of us have struggled with the concept of outsourcing critical business functions, especially those with direct customer interaction, a clear definition of noncore processes can aid in the “build versus buy” decision.

For many, outsourcing has become the only viable means of maintaining an up-to-date technology infrastructure while reinvesting cash and human capital in areas that provide the greatest return on investment for the institution. By leveraging the outsourcing relationship, the university can acquire best-practices process expertise to facilitate the design, building, training, and deployment of business processes or functions. The institution also acquires experienced personnel who are able to accommodate changing market conditions.

The most important focus is writing a contractual agreement for outsourcing that eliminates risks, defines the university’s goals, includes the service provider’s performance guarantees, quantifies performance measurements, and lays out a path toward continual improvement in the outsourced process. Defining these vital components of the contractual relationship takes time and effort but will lead to a successful experience for both the institution and its new partner.

### References

Interview

Judith Bailey, Ed.D.
Northern Michigan University

ACUTA: Having climbed the ladder from high school teacher to college president, what attributes, skills, or experiences do you think have made the most valuable contribution to your success?

Bailey: I believe that it is my ability to recognize that I can learn a lot from others and I seek their input, sort through it, digest it, and then make a decision and move on. I try to remain open to new ideas and ways of doing things, and I surround myself with people who are creative, willing to look at these new ideas and take the risks necessary to put them in place. I enjoy the strategy part of leadership needed to make major change happen.

ACUTA: NMU’s Web site states that “the Mission of Northern Michigan University is to form an academic community where the best teaching and learning are available to those in its programs.” How can information technology and telecommunications professionals on campus participate more effectively in the accomplishment of this mission?

Bailey: Technology is a tremendous tool—and I want to emphasize that technology is a tool and not the end result of teaching and learning—but it certainly is a major facilitator. For us at Northern, technology has been used to make sure that we have closed the digital divide for our students by giving all students the same access to information and communication. Our IT professionals have been outstanding, and one of the things I try to do is to recognize them for the skills they bring to the table. I do not take any credit for having put in the IT infrastructure. We’ve used technology both to enhance our administrative services and to make them more user-friendly.

Also, technology has streamlined our efforts, freeing up staff to spend more time face-to-face helping students. Registration is now almost 90 percent online. Technology has been a tool that has allowed the faculty to reorder the learning tasks and put more time on interactive opportunities with students.

ACUTA: To survive in today’s rapidly changing world, organizations and institutions must continue to innovate. Research indicates that the average corporation today earns approximately 33 percent of its revenue and 60 percent of its profit from products and services it did not sell or offer five years ago. What new and innovative projects has NMU initiated that you are most proud of, and what leadership qualities do you feel have contributed to the success of these initiatives? We are all aware of your laptop program, so please tell us about that and other projects that you are most proud of.

Bailey: The question being discussed as I came to Northern was “How do we achieve ubiquitous computing?” We have come from that question to the...
Key to success is having quality academic programs, providing personal attention to the students, and using technology to enhance the learning environment and services.

Teaching, Learning, and Communication (TLC) initiative, a tool being the laptop. That has been our greatest innovation in the last five years because it has transformed the learning environment in and out of the classroom. With each student having access 24/7 to technology, they are able to have a very connected learning environment—one that reaches beyond the confines of campus. As you walk around campus it’s evident that there’s an excitement about learning, about reaching beyond the shores of Lake Superior to the world and bringing in interesting opportunities. We’ve partnered with Michigan Tech on Internet2, accessing resources that we haven’t had before. We are now using Internet2 to bring in SCOLA language classes from around the world.

ACUTA: Campus research initiatives involving genomics, biotechnologies, and nanotechnologies carry with them an air of controversy because they manipulate human organisms rather than machines. What guidance do you offer to campus leaders on how to decide and balance the moral, political, and ethical issues against the promise these technologies offer for efficiencies in our organizations, cures for disease, reduced human suffering, and longer life?

Bailey: Those really are difficult balances. Northern is not a research-intensive institution. We do occasionally get into these dilemmas. The primary criterion is Are we doing what’s best for our students? Are we complying with all the research, protocols, and regulations, and particularly have we discussed the possible moral and ethical issues surrounding a controversial type of research among the faculty, administration, and then me with our governing board so that there are no surprises? Making a decision to move forward is one thing; having people surprised by the intended or unintended consequences of that decision is another.

ACUTA: At a time when customers have more choices than ever and the longest economic expansion in U.S. history comes to a close, what advice do you offer to aspiring managers and leaders on how to be successful in today’s world of fierce competition and tight budgets?

Bailey: Universities have always had some sense of fierce competition and tight budgets, but it certainly has been enhanced recently. My personal advice is to focus on your core mission. Key to success is having quality academic programs, providing personal attention to the students, and using technology to enhance the learning environment and services. Budget decisions need to be based on whether or not they are going to move the core mission and vision forward and should be evaluated against goal achievement.

The other piece of advice is not to back away from making essential investments. Rather than impose across-the-board reductions, what are those programs and initiatives that need to be held harmless? Can you use these times as an opportunity to reconfigure or redefine how you carry out that part of your mission?

ACUTA: Clearly the tragic events of 9/11 forever changed the way Americans approach work and their personal lives. What advice do you offer on how to manage and mitigate such risks at colleges and universities? What steps are responsibly prudent, and which represent emotional reactions? What are the long-term economic implications for colleges and universities?

Bailey: My colleagues and I struggle with what those long-term consequences are because we are not sure whether the immediate reactions we saw at the end of 2001 are going to translate into different attendance patterns by college students in 2002 and beyond. The question is Do students want to stay nearer home or pursue their university of choice regardless of location? How families are balancing these decisions is unknown; we’re all just waiting to see what trends emerge. Right now we’re not seeing a dramatic shift at all.

The issue of economics certainly drives student choice. I think we will see more decisions based on costs rather than national security issues.
Universities should have crisis plans in case of terrorist attacks or other crises. How we communicate in the midst of a crisis and how we ensure the safety of people on our campus is critical. At Northern, we have reviewed our policies and have upgraded and strengthened those where necessary. Some of those require financial investment.

ACUTA: Most leaders and senior administrators consider uncertainty a major obstacle to success in today's tough economic time. How has your campus approached crafting strategy to guide it in creating value and boosting institutional success in an uncertain world? How important is creativity to the planning process, and how do you promote it?

Bailey: I would first take issue with the premise that uncertainty is a major obstacle, because I'm not sure anyone would move forward if we all waited for calm and secure environments.

The best strategy for moving forward is first to be clear about the primary goals you want to achieve and how they fit with your mission and vision statement. Have a lot of dialogue on campus, whether you use a strategic planning team or a presidential council. Go beyond that smaller circle of input we are all comfortable with and get broad input around what the priorities are, how and where to invest, and how to move forward.

As we implemented the Teaching, Learning, and Communication initiative, we were successful only because we were able to have lots of conversation about the pros and cons, the value added, and where investments would be made. While there was not total agreement in every area, there was an opportunity to understand what was behind decisions. These actions built morale and created a focus on understanding what the key goals were we are trying to achieve in the next few years.

A colleague of mine says, "Communicate, communicate, communicate," and I would add to that to make sure your communication is focused, it has a listening component, and then actions occur after communication and listening.

ACUTA: Are there any other comments you would like to make regarding leadership issues as we look to the future?

Bailey: Many senior administrators are less comfortable leading change that involves technology than almost any other. They'll lead a new construction project, they'll lead a change in an academic curriculum. But to look at how you, as a university president, transform the learning environment through the use of technology is daunting to some because the assumption is that the president has to understand all the inner workings of the technology. That's wrong.

What I do is surround myself with people who are competent and whose advice I can trust. Then we make sure that we have put in the infrastructure,
Leaders on Leadership

Patricia Todus
Northwestern University

Team Building

I believe that the most important leadership skill is building a team-oriented culture. The very essence of a university is collaboration. Teamwork is another word for collaboration. Building and emphasizing a team culture within the telecommunications/information technology organization and in relationships with university colleagues is critical to the overall success of the organization, the institution, and the leader.

The telecommunications/information technology staff that works as a team to solve problems, bring new services to the community, and provide the vision to the institution is enhanced when that team understands, has had input into the vision, and is involved in making the vision a reality.

In a telecommunications/information technology organization there is no shortage of projects, and the staff is usually stretched to bring them all to a successful end while continuing to provide excellent ongoing services. A staff that embraces the value of teamwork quickly learns that working together allows staff members to achieve their goals and those of the organization. A leader who encourages teamwork and publicly awards team efforts soon learns that everyone gains from this culture.

Using this teamwork philosophy in building relationships throughout the university has the same positive effect. Bringing together university colleagues to collaborate in the information technology planning process and work with the telecommunications/information technology office to achieve the technology goals builds stakeholders and champions when the plans are presented for adoption and the all-important funding. Developing a teamwork culture is a challenge, but one that pays off in innumerable ways.

invested in support mechanisms such as excellent technical staff, hardware, and software, and in the support to help faculty examine how technology can be used in the teaching/learning environment. I didn’t need to know all those answers. As the leader I needed to be able to put together teams that could bring those answers to the table and then be willing to take the risk and have the confidence that they had enough knowledge to successfully carry out their responsibility within the overall plan.

ACUTA: For this issue of the Journal, we have asked leaders from several ACUTA member schools what historical figure they regard as a good example of leadership. Is there someone who stands out, in your opinion, as a consummate leader?

Bailey: One person I regard as an outstanding leader is Colin Powell. Another is Eleanor Roosevelt. Right now I am reading Katharine Graham’s autobiography. I was impressed by her personal account of the leadership challenges she faced when she became the owner and publisher of the Washington Post. Having no management experience, she was able to create change in a very different way.

ACUTA: Would you say that choosing the right people to work with is the key to success?

Bailey: Yes, and they can’t always be people who will tell you what you want to hear. They have to be individuals who are strong personalities who have skills that complement your own. They should be people that you can work with very openly and honestly. The team can agree to disagree until you walk out of the room, and then everyone agrees. I have been blessed by having been mentored by such people and by having the opportunity to surround myself with outstanding people. Sometimes you have to create that team; you don’t just inherit it. That’s a little harder. But the dividends are worth what you go through to achieve a cohesive team.
Insights into Online Learning Initiatives

by Phil Lillies

Many traditional colleges and universities are exploring online learning initiatives designed to allow an institution to break out of its geographic and demographic niche. As a fully engaged member of a team implementing an online learning initiative, the director of telecommunications or networking can bring unique insights to such an undertaking. Consider the following scenario.

The Project
The faculty of commerce has decided to begin experimenting with online learning by offering a certificate program in e-commerce via the Internet. The primary objective of the initiative is to allow the university to better address the needs of previous graduates and other working adults throughout North America, and indeed, the world. The program is to be highly innovative, featuring a blend of interactive case studies—delivered asynchronously over narrow band, and live online video classrooms—possibly delivered synchronously over broadband to suitably equipped sites.

Course content is to be created by digitizing and repurposing existing classroom materials, which will require the intervention of specialists such as Web and instructional designers. A Learning Management System (LMS) is to be implemented to store content and track student activities. The LMS is to conform to the shareable courseware object reference model (SCORM), which will allow the content to be reused in different applications and platforms.

Your job as director of networking is to oversee drafting of a proposal for the telecommunications infrastructure and to reflect on the elements of the scenario to be sure that the underlying approach is sound.

Positive Elements in This Approach
Certainly the approach has a number of points to recommend it:

- **Minimal impact.** Leaving the transition in the hands of Web and instructional designers—whose mandate is to re-purpose existing materials whenever possible—limits risk in that existing development and delivery processes will be minimally affected.

- **Easy to manage.** Starting from existing classroom materials means that a linear, gated transition process can be set up. Fundamentally, this approach should be relatively easy to manage because it has known inputs and an intuitively understandable outcome.

- **Intuitive.** Students and instructors alike will readily understand the approach: video sessions take the place of traditional classroom sessions, and interactive Web pages take the place of paper-based content.

- **State of the Art.** An LMS can make it easy to manage thousands of students, while SCORM compliance will ensure that the content is both reusable and even resalable (for example, to publishing houses or other educational institutions).
Where the Problems Lie

However, this scenario also has a number of elements that give reason for reflection:

- **Cost.** Interactive Web design, because it requires the use of highly skilled specialists, can be extremely expensive, requiring 100 hours or more to develop just one hour of instruction. Video classrooms, depending on the bandwidth requirements of the system chosen, can require investment in expensive telecommunications infrastructure.

- **Conflicting goals.** Minimal impact on current processes has its downside. This minimization of impact is unfortunately also likely to dampen general commitment of staff to the program, which can easily lead to program failure (Cookson provides an example. See especially pp. 19–20). Moreover, the easiest and cheapest content to repurpose will be well-written informational pieces that can easily be placed online. Unfortunately, offering such content, unless it is carefully set in a context that adapts it to the needs and interests of the learners, is likely to be in conflict with fundamental adult-learning principles. (For a summary of adult-learning principles, see Imel.)

- **No discovery planning.** Discovery planning, a concept developed by McGrath and MacMillan, means investing minimally up front, to get a new venture working, and then making new investments only when certain fundamental objectives are met. For example, discovery planning would suggest that investing in a SCORM-compliant LMS up front made no sense until a successful instructional design strategy had been “discovered,” at which point it might make sense to analyze whether a SCORM-compliant LMS could be incorporated. In sum, a controllable approach may not be optimal either for learning or for cost-effectiveness.

A More Effective Approach

Is there a more effective approach that would allow the university to achieve its primary objective of breaking out of its geographic and demographic niche? Yes, there is. In this regard, it is worth noting here that as Zuboff points out, an approach that merely replaces traditional processes with technology (for example, face-to-face presentation with video, or paper with online) is not truly innovative. A truly innovative approach imposes a new operational metaphor that takes advantage of technology in creative ways. A more innovative metaphor is proposed by Khan:

> Web-based Instruction (WBI)... [creates] a meaningful learning environment where learning is fostered and supported.

In other words, the focus should not be on delivering content but on structuring a learning environment.

For an institute of higher education, a learning environment that fosters self-directed learning probably makes the most sense and can be less costly to develop than interactive Web pages, or even Web pages that are simply repurposed from original classroom content. Facility for asynchronous computer-mediated communication (CMC) that permits instructor-led threaded discussions is one key component of such an environment. Another key component is ready access to libraries of online materials. (Jonassen gives a more complete treatment of learning environments.)

An example of an online university that has very successfully implemented the self-directed approach while keeping costs down by offering minimal interactivity and avoiding all broadband solutions is Athabasca University. Its instructional media development Web site is available at http://emd.athabascau.ca/html/multimedia.html. From this screen interested parties can access a document that describes the assistance available from the Educational Media Development (EMD) staff, who offer their expertise to help developers "navigate these digital waters successfully."

The disadvantage of a truly innovative approach, of course, is that it may meet with resistance from those most committed to traditional teaching methods and technologies. At the very least an innovative approach will require training and reorientation. Examples of some of the challenges of teaching using CMC are available at http://www.curtin.edu.au/home/allen/we3/igm/120413.html on the Curtin University of Technology’s Web site. They describe how various tasks can be given to students, with appropriate support, so as to challenge the fixed roles of teachers and learners. In this approach, students, through collaboration and cooperative problem-solving, become active participants in their learning, and academics use the CMC discussion as a means of facilitating the learning process. This approach...
may not enable staff to reduce their workload, but it will certainly improve the quality of teaching.

Today, Web-based instruction is widely recognized in the educational community as an effective methodology as more and more colleges and universities have implemented online learning initiatives. A rapidly expanding wealth of material exists electronically for those who would explore its value and potential.

Conclusions

In reflecting on the approach to an online learning initiative, a director of networking must not only consider cost factors but also ensure that technology does not take precedence over the principles of education.

The correct approach is doubtless some combination of moderate, up-front investment in technology, discovery planning, appropriate-but-limited use of costly interactive Web pages, innovative focus on establishment of learning environments, and training that ensures the dedication and commitment of full-time faculty. Any other approach is unlikely to unlock the true potential of online learning either for the instructors, the students, or the networking and telecommunications engineers that provide crucial behind-the-scenes support for the learning endeavor.

Philip Lillies, with a Master or Arts in philosophy from the University of Toronto and a Master of Distance Education from Athabasca University, is an e-learning consultant living in Saint John, New Brunswick, Canada. He can be reached at plillies@hotmail.com.

References


The Scope of the Project

In 1997, Kent State explored its telecommunications options and decided to replace an aging Centrex voice system with new PBXs and ATM networking that would provide for the convergence of voice, video, and data. By September 2000, all eight campuses in northeast Ohio plus an architecture design studio in Cleveland were linked by a fully converged voice/video/data system that used fiber-optic cable. The project was achieved by a core group of 13 University staff members. The winning bidder was Total Systems Integration (TSI), a consulting firm in Galion, Ohio. TSI engineered, designed, and wrote the bid specifications per Kent State’s planning committee guidelines. NEC Business Solutions of Irving, Texas, was awarded the entire project and was the lead contractor.

The contract with NEC included state-of-the-art digital PBXs with integrated voicemail for 5,000 staff and 7,000 residential students. The system may grow to include all 31,000 students at all eight campuses. Funding comes primarily from the existing telecom budget from savings generated by eliminating Centrex costs. Unique terms of the contact include a technology refresh program at no cost. In addition, the program guarantees industry-compliant replacement of all hardware and software components for 10 years and extends the warranty to 2012.

The campuses are now capable of anywhere, anytime exchange of data between students, faculty, staff, and neighboring communities to support the University’s mission and strategic planning goals. These goals include enhancing communications, increasing collaboration, developing innovative ways to manage increasing costs, encouraging technology-enabled grants, expanding national and international partnerships, and facilitating outreach in Ohio and throughout the world.

This project earned top honors “for the magnitude of its network overhaul and financing smarts” by winning the 2000 User Excellence Award from Network World magazine.

From There to Here

In 1997, Kent State’s Information Services Department implemented the processes that were developed by a 1995 planning committee. The 12 dedicated members of the committee included staff from Information Services, Telecom and Networking, residence services, regional campuses, students, faculty, and key business officers. Committee members attended biweekly meetings for two
years. The committee was charged to support the university mission and nine strategic goals using technology. High priorities included increasing student and staff communication, enhancing student/faculty collaboration, using technology as a tool, expanding research opportunities, increasing access to programs, and expanding outreach.

The committee decided to upgrade and expand the 1994 network from a Kent campus data infrastructure to an eight-campus, fully converged network that provided state-of-the-art voice, data, and video services. The Telecom and Networking staff would assume centralized operations and maintenance of the new network. The president and the executive officers approved the committee recommendations and committed their full support to the entire project.

The Kent campus's 110 buildings were cut over to the new system from April through August 2000. The old system used 6,200 Centrex lines that were linked by an aging copper network. That network ran at near 100 percent capacity on a site covering more than eight acres. The system used 100 ten-year-old Lucent systems and had 3,200 telephones for faculty and staff. Student telephones were not provided. The system supported 16 voicemail systems that were not integrated into the network.

The new, expanded ATM network includes more than 40 miles of fiber-optic cable and is linked by five Nortel Centillion 1600 Multiservice ATM switches, three distributed NEC NEAX 2400 PBX switches, a Centigram voicemail system, and 16 ISDN primary rate interface (PRI) trunk lines over two DS3s for routing diversity. The new system premiered for 6,200 residential students and more than 5,000 faculty and staff for the fall 2000 semester. The new system supports 10,244 DID numbers that support voicemail for students and staff and provides 4,344 administrative telephones.

Focus groups were conducted with every department to document their equipment needs, gather feedback, and develop individualized enhancements (e.g., automatic call distribution [ACD], menu applications, call boxes). In addition, more than 100 training sessions for students, faculty, and staff were conducted during summer 2000. The training sessions continued until November to support additional educational needs that arose as users became accustomed to the new system. A Web site provided information about implementation, timelines, training opportunities, the network, and other project developments throughout the phases and continues to provide information updates.

In October, the Kent campus was connected to seven NEC digital PBXs that were installed at each regional campus. The seven regionals added another 702 lines with voicemail and telephones. The regional campuses serve 2,000 faculty and staff. Once the regional campuses were connected, the university realized additional cost savings since users were able to dial five digits across the entire network and use least-cost routing.

The three immediate voice service enhancements were as follows:

- 24/7 access to automated options/voice messaging for students and staff
- Improved safety from the unique E-911 location identification of every phone (supported by the campus police department)
- Facilitating university business that had been hindered by too few lines and the lack of voice messaging

Standardizing the telecom system on all eight campuses also facilitated technical support and maintenance, enhanced client satisfaction, simplified user training, and reduced the cost for maintaining onsite equipment and parts inventories.

Good Communications

Students and staff members were surveyed throughout the project, from inception to post-implementation. The ongoing feedback provided the opportunity to continuously improve the processes to enhance customer satisfaction. Client expectations were managed by providing continuous education and information about the project, potential enhancements, problems, and potential services that would be available after implementation of basic service.

The new services were popular, and staff members wanted and needed everything immediately! The continuous communication process promoted each aspect of the project and reinforced the message that all aspects of each phase would be fully implemented before moving on to the next phase. Phase 1 included basic services to staff and students. Phase 2 introduced enhanced services in January 2001. Phase 3 recently began and included developing and implementing new projects that are possible with the fully deployed system (e.g., streaming video).

Former issues with busy signals and no answers were resolved by the 24/7 access to automated systems and the increased number of lines with voice messaging. In addition, staff and students are pleased with no-cost, five-digit dialing between campuses. Furthermore, the traffic reports indicate that there is sufficient
capacity to support the users during the peak calling periods, and voicemail reports indicate there is adequate messaging capacity. Enhanced ACD reports demonstrate improvements in the registrar's office and the student financial aid department, and automated processes have already increased the time staff are available for students who need personalized assistance. Additional campus offices will implement ACD and menu applications soon.

Cost Factors
The project expenditures (including the eight-campus ATM network, electronics, video, and data gear) were funded by Centrex and Lucent equipment/repair cost savings coupled with operating cost containment measures. Implementation was achieved using a core team consisting of telecom staff (three administrative, three full-time technicians, three part-time technicians, and four network administrative/technical staff members). The team merged staff from the separate offices of Telecommunications and Networking to create a converged unit. The new unit assumed centralized operation and maintenance for the eight-campus system. Additional operating cost reductions include:

- Ten-year contract pricing
- Extended warranty on parts and equipment
- Centralized work order/installation process using existing staff
- Reduced on-hand inventory due to standardized equipment/parts
- Decreased need for warehouse space
- Enhanced support staff expertise and end-user satisfaction due to "one system" training

In addition to readily identifiable cost savings, other savings were clearly identified by comments from students and staff. For example, clients noticed a savings in time and effort when using the voicemail option. More than 30 percent of the voice messaging occurs before and after regular business hours. The university lunch hour is another peak usage period. Although e-mail is a key communications tool, many users prefer the personal touch of a voicemail message. In addition, the automated system allows students and staff to register, inquire about financial aid, obtain grades, and conduct other functions without having to call during normal business hours.

New Initiatives
The expanded and enhanced ATM network linking the eight campuses dramatically improved the speed and reliability of intracampus communication. In addition, the fault-tolerant network is lightning-proof, which is a problem throughout northeast Ohio. Furthermore, systemwide monitoring is now in place; thus problems are often resolved before being noticed by the users. Many problems are centrally resolved, thus minimizing travel among campuses.

Standardizing software, hardware, and applications improves data services, development, deployment, management, and maintenance by the centralized Information Services staff and the help desk. Additional Web-enabled applications are being developed that will be more fully utilized as users become aware of them. The former stand-alone systems and applications that required excessive financial and labor-intensive support were eliminated, leaving more resources to support the integrated system.

Developing new video and distance-learning courses and degrees are university priorities. Classes are conducted in 25 high-tech classrooms at all eight campuses. The course material and number of courses have been enhanced and expanded by the new network's capabilities. Distance-learning courses now serve 2,127 students. Furthermore, the regional campuses previously offered only two-year associate degrees. Now the regionals offer the third and fourth years via distance learning so students may complete a baccalaureate degree in nursing, business, and technology.

Courses are being developed in collaboration with Ohio's ONEnet initiative that will link more than 3,800 K--12 school districts via ATM. The collaboration expands delivery capabilities to the entire state. In addition, serving K--12 students creates recruitment opportunities by providing early exposure to education as well as a positive university experience for parents and students. Another Ohio initiative mandates that K--12 teachers complete a master's degree by 2005. The mandate sparked numerous planning and programming development teams to create distributed courses required for certification using the new, robust network.

Equally paramount in the university's mission is to be a recognized leader in using technology as a tool to enhance learning and university business operations. As one response, the university became a charter member of Internet2. Some of the Internet2 research activities include Kent State's pioneer use of H.323 videoconferencing for international collaboration and research. Furthermore, the university participated in both of the Internet2 International Megaconferences that have been held. Participating in each Megaconference required extensive use of the new network.

Outreach Opportunities
Other ways to maximize the new
network include using the video caching/streaming capacity to intensify efforts to secure grants and private sector support (consistent with Kent State's Carnegie Research Extensive classification) and enhancing Kent State's identity as a university that is engaged in scholarship and outreach efforts that address community, regional, and statewide needs. Outreach opportunities are referred to as "engagement" opportunities to capture the vision and mission developed by an Outreach Review Committee in May 2000.

While "outreach" indicates a one-way approach to community involvement, the committee recognized that resources and knowledge return to the university from the community. Therefore, engagement with communities is a win-win situation.

One outreach project is KINETA, a technology-centric office that provides service to business and industry. It recently spun off as a private corporation, Kineta Technologies. KINETA relied on opportunities that were enhanced and/or made possible by the ATM voice/video/data capabilities. KINETA assisted international businesses such as Anixter and Davey Tree in the development of technology solutions for business problems.

Another outreach activity that is supported by the ATM network is providing basic computer skills and technology training to low-income residents of Portage County at the Moulton Hall Technology Center electronic classroom. In addition, through partnerships with school districts, more than 50 children are bussed to the Ameritech classroom in Moulton for technology-rich classroom instruction. Furthermore, the Ravenna City Schools are provided free Internet access by the University.

President Cartwright's keynote address to the March 2001 Educational Management Association of South Africa discussed the strong links between education, social equity, and cultural transformation. Her visit included talks to explore collaborative efforts with the Witwatersrand University, the University of Cape Town, and the University of Durban. All the collaborations would require a robust network. President Cartwright's leadership in supporting technology and international higher education initiatives is well recognized. Additional international initiatives include H.323 videoconferencing with the TE Institute in Greece, Volgograd University and Tver Institute University in Russia, Wultan University in China, and a Kent State–based international business program in Geneva, Switzerland.

Grants Provide Assistance

Kent State has obtained numerous technology-related grants:

1. $1 million for VTEL classrooms
2. $200,000 from the Ohio Learning Network to enable the "virtual presence" of students backstage at the Great Lakes Theatre Festival. It is a world-premier Internet2 application of real-time, broadcast-quality video that allows students to observe, dialogue, and collaborate with theater professionals at a distance.
3. $1.2 million from the Department of Education to "Prepare Tomorrow's Teachers to Use Technology Today.
4. $2.1 million federal grant awarded for a Deaf Education Teacher Education program. The program explores using Web-based technologies for deaf and hard-of-hearing students and how to teach teachers since the Web is the greatest "communication equalizer."

The list is not all-inclusive but demonstrates Kent State's involvement in state-of-the-art telecommunications and related technology applications. The projects go beyond meeting mission and strategic goals to establish new business partnerships, create new revenue sources, and attract quality students and faculty.

Technology literally affects every aspect of university culture, and the ATM network is a critical link. The planning team is already looking toward 2012 and beyond while current objectives are still in process.

Information for this article was taken from Kent State's application for the Institutional Excellence Award. Contact Margie Milone at mmilone@kent.edu for more information.
Leaders on Leadership

Mary L. Pretz-Lawson
Carnegie-Mellon University

Facilitation

A good leader must be a facilitator who has the ability to interact with a multitude of people in a variety of positions.

My role as a facilitator of divisionwide projects has become very important in rolling out new services—including wireless LAN, DSL, and VoIP—that span multiple groups. I don’t need to know all the answers to every technical question related to these services; rather, I need to have enough technical knowledge to understand the issues and know who should address them. (Balancing this is a constant challenge for me.) Lots of people have lots of technical knowledge, but they can’t get a project out the door.

A successful leader must also be able to assess new technologies well enough to make sound deployment decisions. For this, and for other reasons, he or she must also be intensely curious about the university, reading and attending everything available in order to recognize the “hot spots” and be prepared to provide solutions.

Someone I admire as a good example of leadership is Shirley Chisholm, who became, in 1969, the first black woman to sit in the House of Representatives and, in 1972, the first woman candidate for president. “Of my two ‘handicaps,’” she once said, “being female put more obstacles in my path than being Black.”

From the Executive Director

Continued from page 48

work that is going on today. I would agree, with the editorial comment that excellence in day-to-day operations is a requirement in order to enable the leader to focus on future directions.

Organizational skills are essential in the successful leader, even in highly technical fields. In studying the “state of the art” in organizational leadership, ASAE found that

The emerging consensus in … leadership is that successful leaders … must, first and foremost, lead their [organizations] through their skills as organizational architects/designers who know how to put the various parts of their [organizations] together, and as facilitators who make sure that the various parts … work productively together.

I hope these concepts stimulate some beneficial thinking. Leaders can be found at all levels of an organization, and we can all benefit from nurturing and developing the skills of an effective leader in our own professional lives.

Finally, I feel compelled to acknowledge the passing of a great leader in the higher education telecommunications community. Ruth Michalecki of the University of Nebraska was a tremendous leader in ACUTA, a mentor and friend to many of our members. As president of ACUTA, as a respected leader at her institution, as an adviser to governors and university presidents, as a national spokesperson for the telecommunications management profession, Ruth set an example for many to follow. She never hesitated to share her vast store of knowledge and experience with other ACUTA members by devoting countless hours to teaching, writing, and editing ACUTA publications. After her ACUTA leadership, she went on to become president of the International Communications Association, representing telecom users in Washington, D.C., before Congress and the FCC. Despite her many national responsibilities, Ruth still found time to be an actively contributing member of the Editorial Board for this Journal.

Many current leaders in ACUTA were introduced to the profession through Ruth’s “Introduction to Telecommunications” courses and her continuing support and mentoring throughout the years.

Fortunately, ACUTA had an opportunity to recognize and thank Ruth for her many contributions to the profession by granting her the Bill D. Morris Award in 2000. We will miss her advice, her expertise, and her generous spirit.
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From the Executive Director

Competencies of Leadership

I recently had the pleasure of spending two days with ACUTA's president-elect at a symposium devoted to issues of effective leadership in professional associations. In two intense days of study and interaction, we examined the changing nature of leadership and the competencies that are called for in a successful association leader today.

In thinking about this issue of the Journal and about management and leadership in the context of higher education technology, it occurred to me that many of the insights from the symposium are just as meaningful in a higher education setting as they are in association management.

There are many parallels between higher education management and association management. Both are nonprofit organizations, where education, professional development, mentoring, diversity of opinion, research, and service are highly valued. Both are environments with many stakeholder groups, where decisions are often made by consensus and an understanding of group dynamics is key. And both are environments in which an authoritarian management style is not the most effective model, and communication skills are essential to success.

So, with thanks to Tecker Consultants, LLC, the leaders of the American Society of Association Executives (ASAE) Symposium for Chief Elected Officers and Chief Staff Officers, I would like to share some ideas that I believe have value for ACUTA members in their roles as managers and leaders at their institutions.

Tecker describes the four competencies of leadership as the management of attention, management of meaning, management of trust, and management of self.

• Management of Attention
The management of attention is defined as the ability to communicate a compelling vision that brings others to a place they have not been before. It can be a set of intentions or a vision, and imparts a sense of outcome, goals, or direction.

• Management of Meaning
The management of meaning is the ability to make ideas tangible and real to others. The skilled leader is able to integrate facts, concepts, and anecdotes into meaning for the individual members of his or her team. Through the use of a language, metaphors, or models, this leader enables people to understand and support the goals of the organization.

• Management of Trust
The successful leader is reliable and constant. His or her words are supported by actions.

• Management of Self
Successful leaders know their skills and deploy them effectively. They know their strengths and nurture them. Rather than acknowledging "failure," they will admit to a "mistake," "error," "false start," or a "miss." They concentrate on winning, not on "not losing."

Tecker's research indicates that leaders in successful organizations focus on where the organization needs to go next, not on the details of the

continued on page 46
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☐ Cancellations received June 29 – July 12, 2002: Registration fee must be paid. Credit memo will be issued (less $25 administration fee) for any cancellations received June 29 – July 12. Credit must be applied to registration for another ACUTA event within one year of issue.

☐ Cancellations received after July 12, 2002, are not eligible for refund or credit.

☐ Cancellations may be mailed, faxed, or e-mailed to Kellie Bowman 152 W. Zandale Dr., Ste. 200, Lexington, KY 40503; fax 859/278-3268; or e-mail kbowman@acuta.org