

## Extending an Invitation to Tomorrow How integrating technology throughout a college led to transforming change

It all started because of Jimmy. His fifth-grade teacher assigned him the colony of Georgia for his research project and instructed him to use at least three reference sources. When Jimmy announced this at the dinner table, Dad offered to take him to the public library. They spent about an hour there, but Jimmy was not impressed with the books they found. Dad persuaded him to take the books home anyway, sure that Jimmy would find what he needed if he devoted some time to reading. Then Jimmy disappeared upstairs to his room.

Three hours later he came pounding down the stairs calling, “Dad, I found just what I need for my paper!”

Dad commented that the books must have been helpful after all.

“No, Dad, the books were completely useless. But I got on America Online and found a bulletin board for American history. I posted a note that I was in the fifth grade and had to write a paper on Georgia and asked if anyone could help me. A professor from the University of Chicago replied that he had a lot of letters, newspapers, and diaries from colonial Georgia. He offered to send me the file electronically if I wanted it. I got great stuff, and my paper is almost finished!”

In 1993 this was an unusual tale. When Dad, an Ohio Dominican College vice president, reported with pride on what his son had been up to, I realized that we had only seven years to get ready for Jimmy. The faces of several of our faculty flashed before my mind as I imagined how they would react to Jimmy’s research methods. Many faculty members had never sat down at a computer.

Then and there, Ohio Dominican College set out to transform itself. To be ready for Jimmy and his peers when they arrived in the year 2000, our faculty had to harness technology for teaching and learning.

### The Five M’s of managing change

To be a successful small-college president is to be an expert at managing change. Over the years I have adopted the following Five M’s as my checklist in embarking on any change process. So when we were contemplating the major challenge of getting ready for students like Jimmy, we asked ourselves:

- Is the potential change rooted in the **mission**?
- Will the change process fit our **milieu**?
- Does it speak to the needs of the **market**?
- Is it consistent with the formal and informal **message** we wish to convey?
- What about the **money**?

Ohio Dominican’s **mission** grows out of our Dominican motto: to contemplate truth and to share the fruits of this contemplation. Our mission statement refers to the technical progress, new human insights, and searching questions of the (then) coming 21st century.

By Sister Mary  
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Ohio Dominican College  
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It speaks of the expanding horizons of an unknown future. It clearly supports the proposed change of the sort we needed to be ready for students like Jimmy.

Ohio Dominican's **milieu** encompasses its location, history, sponsorship, and campus culture and values. The college is located in Columbus, a global information center and the birthplace of Chemical Abstracts, OCLC, and CompuServe. The college's sponsorship and long history of partnership with the Dominican Sisters of St. Mary of the Springs, a teaching order, give us our focus on student learning and development.

Our campus culture has been described as friendly, helpful, dedicated, hard-working, challenging, and religious. We are collaborative, nurturing, flexible, student-centered, personal, and mission-driven. The background of most of our faculty is not technology-oriented. We had to take all these factors into consideration as part of this change process.

The Ohio Dominican student body is diverse in age, ethnicity, religion, national origin, and prior educational experience. Almost all are from either Ohio or from a foreign country. Four-fifths are commuters. Many are first-generation college students with high financial need. Our **market** is not the traditional residential constituency of many of our peer institutions.

Ohio Dominican conveys its formal **message** through our curriculum, so any transformation we were to undertake had to serve the curriculum's values. The informal message we always wish to communicate is personal, student-centered, caring, and collaborative. Thus concerns about possible depersonalization through technology had to be faced.

Finding **money** for change is always a major task, and the job of transforming ourselves technologically was no exception. Our 1993 endowment of only \$4 million would not support the continuing investment we needed to make.

There was much in the five M's that supported the proposed change and helped us approach it. There were also potential barriers that we had to anticipate and overcome.

### Getting a vision

Our senior leadership had periodically discussed installing a network to link all the computers on campus. My question always was, "Exactly what are we going to do with it?" Not until we had a vision was I willing to seek the funding to make this happen.

Prompted by Jimmy, we sought input from trustees and others. We asked employers and community leaders what skills were missing in the college graduates they were hiring today. Computer skills were a given. But also near the top of most lists was the ability to work effectively with others in self-directed teams made up of diverse individuals. We decided to be intentional about developing this critical workplace skill as part of our vision.

Early in 1994 we articulated the following vision:

1. To radically transform teaching and learning in light of
  - what our students will need to know and be able to do in the 21st century,
  - contemporary developments in learning theory and cognitive psychology, and
  - modern information technologies.
2. To remove barriers of time and space from learning.
3. To build collaborative skills among students and personnel.

The next step was to share our vision and identify the steps needed to transform it into reality. We invited a consultant to campus late in January 1994 to meet with senior

administrators, key trustees, faculty, and staff. Since he was convinced we were ready to move, we invited him to our January board meeting to share his findings. The chair of the educational affairs committee recommended that our administration be authorized to develop plans to achieve the vision. The board instructed us to incorporate into the plan a realistic replacement schedule for hardware and software, to be funded out of the operating budget.

### Planning to make it happen

In spring of 1994 the college took several detailed planning and organizational steps. We created a new division by pulling together academic computing, administrative computing, the library, the media center, phone services, and academic support programs. The primary mission of this new Division of Learning and Information Services was to serve learning. Our director of media agreed to lead the division; his strong record of service to faculty and their confidence in him was critical to our success. His selection signaled that this project was about faculty development, not primarily about technology. As a further symbolic gesture, we placed the new division under the academic vice president.

After asking the campus community to help us identify a common set of software so we could standardize, we carried out technical planning for hardware and software. Because we had a vision and knew our market, we chose *not* to wire the dormitories at this time. Fewer than 20 percent of our students live on campus, so wiring dorms would not move us forward in transforming teaching and learning. This is one example of the way our vision helped with technical planning.

Our financial plan included refinancing some bonds and accumulating additional debt to create the campus's digital infrastructure. We began the painful but essential process of budgeting for replacements on a schedule of three years for desktop computers, four years for software and printers, and five years for servers and other items. Funding depreciation on technology investments in this way required the ongoing commitment of the vice president for business affairs and the board's finance committee.

However, these steps, necessary though they were, would not transform teaching and learning by themselves. Teaching and learning are done by people. The most important part of our planning concerned how to enable and inspire faculty to think in new ways and do things differently.

### Putting faculty first to put learning first

Back in 1994 Ohio Dominican's 40 or so faculty members had limited experience with computers. Because many felt intimidated by their students' technological expertise, we needed to provide a safe place to experiment. The result was the "faculty playroom." This small room in the library was equipped with two computers, a printer, a scanner, and a plethora of help materials in print, software, and video formats. Faculty members were encouraged to come over and mess around. One of the professional staff from the library media center helped them get started.

In May 1994 we were ready to announce our vision and plans for the future. Much thought went into this event; after all, we were about to tell a faculty justly proud of its teaching and student service that it had to change.

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We decided to call the process the Invitation to Tomorrow. Our strategy was to carry out the change process by enablement, encouragement, positive incentives, and rewards. No one would be compelled to participate.

We also decided on the point at which we would deem Ohio Dominican a success at moving from a focus on teaching to a focus on student learning: when we had transformed at least 60 percent of our courses. Thus we did not need to get caught up in converting a small number of resisters.

During the first week of classes in May I invited all members of the campus community to gather for a special announcement. Virtually all the faculty and staff came, along with a number of students, an audience of about 300. I made a brief presentation encouraging all to respond to the Invitation to Tomorrow. Then we asked attendees to join one of five breakout groups where they could ask questions of and make suggestions to the group leaders, who were senior administrators and key faculty. In this way we hoped to capitalize on enthusiasm, reduce anxiety and rumor, and provide information people needed to get ready for change.

From the initial faculty enthusiasts, the academic vice president identified a team of four to take to a weeklong conference for liberal arts colleges. The team returned with a plan to proceed with two critical tasks. First we would engage the faculty around the team's initial draft of the competencies that all our graduates need to succeed in the new millennium. And we would provide presentations, visits to other campuses, conference attendance, and reference materials on recent findings in cognitive psychology and learning theory. The team realized that most faculty members were scrambling to keep up with developments in their own academic disciplines. We had to also make it possible for them to learn what is being learned about learning.

### **Beginning implementation**

To finance our plans, we prepared a proposal for a learning center and faculty development to submit to the U.S. Department of Education for a five-year Title III grant. Much to our delight, we received word in July 1994 that we were recommended for more than \$1.5 million in funding. This grant would transform teaching and learning through the Invitation to Tomorrow; provide critical support for our library to join OhioLINK, the virtual academic library of the state of Ohio; and make possible many faculty development opportunities.

Originally included in the first-year Title III budget were networked desktop computers for all full-time faculty. However, it turned out that Ohio Dominican was tied with another institution for the last grant available in the 1994 competition. Because the Department of Education decided to split the grant between the two of us, we got only half of what we had requested the first year.

As it turned out, this was the best thing that could have happened to us.

To help us choose the faculty members who would receive the computers in the first year, we devised an application procedure. As part of this, we asked them to be part of an Invitation to Tomorrow work group, led by members of the faculty planning team from the prior summer. Work groups met weekly to carry out four tasks assigned by the academic vice president:

- envision what our graduates should look like for the 21st century;
- ask how our students would get there, with a focus on our students as learners;
- identify what learning strategies would be needed throughout the curriculum; and
- explore how information technologies could support these competencies and address our students' multiple learning modes.

Faculty members who participated in the Invitation to Tomorrow groups received the first networked computers as well as many opportunities to learn about learning. We were able to stretch our funding to get computers for everyone who applied, about half the full-time faculty. If limited funds hadn't forced us to use an application process, we would not have had nearly the leverage we did for encouraging faculty to attend to the needed tasks.

### Three pioneering applications

Three substantive curricular changes came out of the work of the Invitation to Tomorrow groups in that first year.

Our English faculty designed a new freshman sequence to be taught in computer classrooms. The move encouraged several changes. For example, beginning students learned word processing and digital presentation and research skills right from the start. Professors were able to transform their approach to teaching writing as a process because students could do some of their writing in the classroom. Faculty also moved strongly toward a collaborative model, with peer reviewing and critiquing. Our digital classrooms, which are designed to support this model, have received national attention because of the way they serve our vision to transform teaching and learning.

Humanities core faculty embraced the opportunity to move background material for student readings from large-group lectures to a digital presentation and tutorial format. This freed up class time for discussion and analysis of the classical texts that form the heart of the program. Because humanities and English composition courses make up half of a typical freshman's load, this change immersed beginning students in new ways of learning and prepared them to use these skills in their subsequent courses. If faculty hadn't made the conscious decision to introduce these changes early in students' college careers, professors would likely have introduced the technology applications in advanced courses in major fields. This not only would have forced them to teach digital skills along with content, but it would also have reached relatively small numbers of students.

Members of our teacher-education faculty responded enthusiastically to the early opportunity to transform teaching and learning and so continue to be leaders in our efforts. They moved quickly to integrate new ways of learning into all their major courses. Today elementary, secondary, and special education teachers from Ohio Dominican are sought after for their ability to harness technology for student learning.

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## Continuity of leadership

Just as the Invitation to Tomorrow was developing real momentum, our academic vice president was named to a college presidency. At this critical juncture we had to search for a new academic leader.

Because we had just begun a major transformation requiring a skilled change agent, our needs were complex. The new academic officer had to be committed to improving student learning and capable of leading a change process then in its early, fragile stages. Change agents typically want to create their own vision. Ohio Dominican already had a vision and a direction; we needed to bring them to reality. A trustee remarked that of 20 candidates who would be fine academic leaders in small liberal arts colleges, perhaps only one would be suitable for Ohio Dominican.

Accordingly, the board's education committee recommended that we make use of a search firm. We appointed a search committee of the usual constituencies. A human resource expert from a trustee corporation helped our faculty understand how a search firm could indeed assist us. The search consultant we hired did a superb job of identifying the strengths and opportunities of the college and the position. The successful candidate was a person whose change-leadership skills, experience in learning and technology, and interest in our mission were a good match. Bringing this person to Ohio Dominican was a critical step for the Invitation to Tomorrow. The entire change effort could have dissipated had we selected the wrong person.

During the transition period, the Invitation to Tomorrow relied on our director of learning and information services. Fortunately he was a respected leader able to maintain the momentum of the faculty change process and administer the Title III grant in an exemplary manner.

## Setting priorities

It's a great challenge for a small college to provide adequate staff support for faculty engaged in experimenting with learning and technology. To meet that challenge, we have invested in people as a means to grow our own leadership. We have also developed clear priorities each year to help learning and technology support staff manage competing requests.

In the early years of the Invitation to Tomorrow, we sought to help a broad cross-section of faculty learn to use digital tools and support the development of applications that would affect the entire freshman class. We chose to stress the application of powerful productivity tools that could be applied in many academic areas. Thus, we focused on mastery of word processing, presentation software, spreadsheets, databases, and communication software.

Subject-specific and course-specific software were of lower priority. Faculty could install these on specific PCs and experiment with their classes. However, this software was not put on the network and support staff were not available to provide individual assistance. Making our highest priorities clear helped staff manage the workload. Although some faculty members would have liked more help with pet projects, they understood the need to deal with our main concerns first.

In 1997 we decided to outsource training for the productivity software. Our training partner designed sessions that were function-specific rather than software-specific. For

example, a session on writing and editing would include not only word processing software but also importation of materials from the Internet and use of data from spreadsheets and databases in the written document. Many of our faculty and staff took advantage of these sessions, which were conducted on campus. Outsourcing this training was a significant relief for our small staff.

More recently we have placed major emphasis on helping faculty learn to develop their own courseware. In the summer of 1999, 17 faculty received training, individual consulting help, and summer pay to enable them to prepare Web-based modules for courses to be taught the next year. These modules use the college's designated standard courseware platform. Faculty who complete the program are now able to develop significant distance-learning modules with a minimum of help and can assist other faculty with these applications. This is particularly important because our Title III grant is ending and funding for faculty development will decrease.

### Spreading the word

We gave special attention to communicating our change message in three ways. First, we fostered electronic internal communication via what was called the "Faculty Ideabook." This online resource came about when three professors sought out teaching and learning strategies that other faculty members were trying in their courses. The team developed a simple template to describe these, including e-mail links, and posted the information electronically as the Ideabook. This supplemented informal communication, workshops, and meetings in helping faculty keep up with changes initiated by their peers.

Another communication task concerned our admissions staff, who in order to market the college needed to understand the new ways in which technology was helping Ohio Dominican students learn. So training has now become an integral part of orientation for new admissions counselors. They visit classes where the Invitation to Tomorrow has changed teaching and learning and interview faculty and students about the experience.

Because external constituents who send us students, support our programs, and hire our graduates also need to hear the message, we also provided a series of Invitation to Tomorrow presidential briefings. Among those invited to these luncheon meetings are employers, donors, school counselors, teachers, community leaders, and friends.

### Encouraging collaboration

In 1995, Ameritech asked the Ohio Foundation of Independent Colleges to design a program to introduce private liberal arts faculty members to digital technologies. Two representatives from Ohio Dominican played a key role on the planning committee—so key that OFIC adopted our Invitation to Tomorrow title. The ongoing Ameritech program consists of four summer workshops each year that draw faculty from some 20 colleges. Ohio Dominican has presented one of the workshops each summer. Our faculty members participate in the on-campus workshop as well as in those at other consortium colleges.

Because this collaboration brings together faculty peers from many colleges, our faculty have learned and shared much with their colleagues. The reaction of visitors from the other colleges to Spangler Library, home of the Division of Learning and Information Services, has helped our people realize how far we have come and how effectively the

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Invitation to Tomorrow initiative is structured to support learning. This has increased our pride and confidence in what we are doing.

### Rewarding, respecting, and attracting faculty

Five years into the Invitation to Tomorrow, we continue our strategy of respecting and rewarding faculty. Professors who significantly change teaching and learning are rewarded with released time, summer pay, consultant and technical support for priority projects, travel money for conferences on learning strategies, campus and trustee recognition for their achievements, and merit pay. However, we recognize that teachers as well as students have different teaching and learning styles. No one has been compelled to change teaching and learning in any particular way. Faculty members' own judgments prevail as to what works best in their courses with their students.

For the past three years our focus on learning and technology has attracted talented young faculty to Ohio Dominican. In several cases this focus has been the deciding factor between our offer and that of a more prestigious college. These new professors bring enthusiasm and expertise, thus contributing to the overall momentum of the Invitation to Tomorrow.

Nearly all Ohio Dominican courses now employ such basic tools as e-mail and computerized library resources. More than half use other applications that considerably enhance learning. About a third of our faculty are engaged in supporting learning in ways that would be impossible without technology. This is where the real transformation of the Invitation to Tomorrow is taking place.

### Clues to cultural change

One sign that transformation has occurred is that the "new" becomes invisible. People are no longer aware of the change. They have forgotten how they did things before. The new way is now a normal condition of living and working.

Our academic vice president recently interviewed two faculty members about their use of technology for teaching and learning. Neither is a highly visible technology leader who's known to be doing flashy things in courses. Yet in both cases learning and teaching have been transformed.

When Professor A was asked how she was using technology, she responded, "Just the usual things. Nothing special." Pressed for details, she described using e-mail, accessing electronic library and reference resources, having students work with our standard statistical software in lab reports, and posting materials for student use.

"Oh, and then there's the collaborative research project," she said, describing a common psychology research database maintained at another college. The database provides several standard survey forms in different topic areas. A student chooses a form, administers it to 10 to 20 subjects, submits the results to the database, and receives in return hundreds of survey responses accumulated by students at other colleges using the same instrument. This gives a large body of responses, a "real-world" set of data that the student can then analyze and interpret. Nothing special, perhaps—but still a vivid example of learning in a totally new way.

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Professor B also responded that there was nothing special about her technique—though then she added, “Oh, but I am really worried about one of my students. She lives 50 miles from campus and comes for the scheduled class once every two weeks. But she can’t get here in between to use the computers and has no computer access from home or work.” When asked why this was a problem, Professor B explained that she uses just the ordinary things, such as e-mail, listservs, and other electronic resources. But students post to the listserv their progress on all class projects and respond to one another’s postings. Because the postings form the basis for class discussions, the student who lacks access misses out on learning.

Neither of these professors was initially conscious of the extent to which they had changed. They took the change for granted. This is transformation.

### Mission and community outreach

Because our mission calls upon us to share what we have learned, Ohio Dominican has taken on several good causes within the college’s ZIP code, 43219. For example, we provide extensive academic support for urban middle and high school students through Village to Child, Upward Bound, and Educational Talent Search. Three afternoons a week throughout the school year, Village to Child enables neighborhood children to use our computers for learning. College students and faculty extend the Invitation to Tomorrow to young people who would otherwise have no technology access—a worthwhile effort, given that these children need to be ready to compete with Jimmy and others who enter college in the year 2000.

The partnership between the Invitation to Tomorrow and our outreach activities has attracted community attention and financial support for both programs. Participation encourages college students to consider becoming teachers. Just as faculty members are the secret to Ohio Dominican’s success in the Invitation to Tomorrow, good teachers will make the difference for urban school children.

### Change’s impact on students

The Class of 1999 was the first graduating class to experience the Invitation to Tomorrow as entering freshmen. These graduates are proficient in the skills of the digital age. They have grown in their ability to work productively in groups.

The ones whose degrees are in teacher education are in demand because they know how to use technology to help students learn; in fact, new teachers leave Ohio Dominican with their own CDs containing electronic portfolios of their projects and lesson plans. Graduates in business, computer and information science, library science, and accounting are well prepared to move directly into the workplace with technology and collaborative skills. Liberal arts and science graduates readily use many digital tools in their research and writing. And all are able to use digital resources to continue efficiently and effectively as lifelong learners.

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## Future challenges

By now the use of technology has become so embedded in learning and teaching that Ohio Dominican students need network access at all times and from everywhere. For the past several months a task group of faculty, staff, trustees, and experts has been working on ways to meet this need. We have concluded that all our students need laptop computers that will handle ordinary courseware and productivity tools. Classrooms need to accommodate the connectivity of student laptops. And students need to be able to reach our campus intranet from home and work.

We expect to begin the laptop project with a pilot group of students by the fall of 2000. We plan to wire classrooms with multiple network drops over the next several years. Thus every classroom will become a computer classroom. Because Ohio Dominican is committed to serving many students with high financial need, our challenge is now to find the resources to fund this important laptop project.

## The Five M's revisited

The Invitation to Tomorrow truly extends and embodies our **mission**. We have developed it in a way that respects and capitalizes on our culture, our location, our traditions, and our **milieu**. Our **market** of diverse students, usually their family's first generation to attend college, needs and is well served by the Invitation. Our faculty members have developed the formal **message** of the curriculum and the informal **message** of personal, student-centered, learning-centered education to this new medium. And we are managing to find the **money**. The Invitation to Tomorrow is a successful change process in part because of the five M's.

But the real success is because of our people. Now we are ready for Jimmy.

## You win with people

Many have contributed to this transformation. Campus leaders include Mike Bromberg, Tina Butler, Ron Carstens, Larry Cepek, Marion Cohn, Sister Catherine Colby, Jill Dardig, Darlene Erickson, Jane Evans, Anne Hall, Lynda Huey, Andy Keogh, and Jim Sagona. Critical to success have been trustees, consultants, and persons no longer on our staff: Ed Barboni, Rowland Brown, Bill Carroll, Allen Koenig, Don McConnell, Mary Lee Peck, and Bob Smith. We acknowledge special support from American taxpayers for the Title III grant and from the Ameritech, Columbus, and Teagle foundations; Wolfe Associates; and local corporations and donors.

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