At an alumni dinner in New York City in 1871, a Williams College professor gave an impassioned plea for more and better plant and equipment. James Garfield, Williams Class of 1856 and the future U.S. president, stood up and reportedly proclaimed: “The ideal college is Mark Hopkins on one end of a log and a student on the other.” This aphorism continues to capture the essence of undergraduate education today: the key ingredients are a committed faculty member (in the 1871 example, Williams President Mark Hopkins) and an intellectually engaged student. But can we still say that a log is enough to connect the two? The technological revolution presents many challenges to the academy. Some see the promise of more efficient operations, others the eventual demise of the residential college as we know it. Some see an important new source of revenue through the establishment of for-profit subsidiaries, still others a distraction from the student-centered teaching approach that Hopkins pioneered. What the two of us see is a great opportunity to make the Mark Hopkineses of the world better teachers. This is not to say that the Internet, multimedia, and instant communication should not be expected to enhance faculty research, the engagement of alumni, and the many other functions integral to the success of colleges and universities. But whether you are at Macalester, Williams, or any of the other thousands of institutions that compose our remarkably diverse and impressive higher education industry, anything that can increase the interaction between a student and a faculty member is a very good thing, and the new technologies do this in dramatic ways.

Walk around almost any campus. Whether through multimedia presentations that augment chalkboards and overheads or course Web pages that save class time by announcing new problem sets, providing answers to old exams, or supplying links to current media outlets, professors can now focus more on their comparative advantage: providing individual attention to students. As economists, for example, we have found that the time previously spent showing students how to derive the multiplier or how to solve a profit-maximization problem when we teach Principles is now being reallocated to individual or classroom discussions of how economic policies relate to the great philosophical questions of our day. Both of us have our favorite Web-page packages and other ways to use technology to improve our teach-
ing. As longtime professors, we feel liberated by how technology is making us more effective in the classroom.

As colleges and universities continue to wire just about everything but the bathrooms (and just wait . . .), there may be unexpected adverse effects on the culture of our institutions, of course. As any parent can attest, the world of instant messaging can be a lonely one for children. When a student is connected to the world while sitting in his or her room, what should an institution do to encourage that student also to venture out and engage other students face to face? Are students who go to cyber cafes, who sit in rows next to each other but seldom turn their heads, really having a richer experience than those logged on while alone in their rooms?

New information technologies pose substantial economic challenges as well, especially at small schools. A large university can spread the cost of a sophisticated Web site or an elaborate software-based course companion over many thousands of students, but a college of two thousand students faces formidable overhead costs in trying to match those efforts. The obvious and necessary answer for small colleges is collaboration and cooperation. The Internet in fact offers unprecedented opportunities for colleges to pool their efforts to produce world-class courseware and information resources while maintaining the intimacy and personal attention that are the hallmarks of the small-college experience.

Institutions will need disciplined judgment to figure out what is best produced locally and what will benefit from cooperative effort. It is plainly crazy for the history faculties of Macalester and Williams to build two separate Web-based resource centers on, say, the economics of slavery in the antebellum South. This is quintessentially the place for teamwork across a range of institutions. At the same time, there is all the reason in the world for Williams and Macalester to encourage their professors to put a personal stamp on the connections they invite students to draw between this common database and their individual research projects. On the one hand, we need to avoid forcing our faculty and students into an impersonal “one size fits all” mode, but on the other hand, we must not indulge in a “not invented here” syndrome that perpetuates reinventing the wheel. We are all fortunate that Bill Bowen and Pat McPherson of the Andrew W. Mellon Foundation have taken a strong lead in helping higher education institutions to work through these dilemmas. The Mellon Foundation has supported innovative uses of technology through grants both to individual liberal arts colleges and to their consortia, through the establishment of regional technology centers to assist colleges in this arena, and through the creation of new entities such as JSTOR and ARTstor, which are working to make electronic archives—of academic journals and of images, respectively—available via the Internet to participating colleges and universities.

Policymakers in higher education face important and expensive decisions on the role of new technology in their operations. As in any time of change, models of the future compete. Should we focus on gaining financial profits? On reaching new audiences? The two of us don’t have all or even most of the answers (if you don’t believe us, ask the faculty at our colleges). But the most important place to focus first must be the heart of the enterprise. Faculty already use technology to enhance their interaction with students; even Mark Hopkins today would log on. There is every reason to believe that they will continue to do so, in ways we cannot now imagine. A very small number of institutions may reap new profits, a few more may find new audiences, but all of us can devise ways to teach our students better with the help of new technologies. That should remain the top goal in apportioning limited resources, technological or otherwise.