Reframing Our Thinking

With this issue of \textit{EDUCAUSE Review}, the editorial oversight of the New Horizons department changes hands. I want to thank Lev Gonick, of Case Western Reserve University, who over the past two years has provided the \textit{Review} readers with a series of intriguing columns, focusing particular attention on the use of multimedia in learning environments. These commentaries examined topics such as insight initiatives, Net-Gen, spatial thinking, and media, visual, and digital literacies. The authors used powerful terms such as sea change, second enlightenment, and institutional imperative.

This emphasis reflected a critical point that Lev made in his initial column: currently, learning is the key innovation “space,” or area, for higher education.\(^1\) He suggested that the ways in which schools make use of information technology to innovate in learning will “differentiate and distinguish academic institutions.” I think this was an accurate assessment then and remains valid today. The experiences of those of us in higher education information technology over the past two years have only underscored his point. As much as we have accomplished, there is still much left to do.

In that column, Lev made a second important point: “The issues related to integrating new media and learning are every bit as much about helping \textit{institutions} learn (and change) as they are about transforming the individual learner.” The rapid evolution in educational practice is a highly reciprocal process. Changes in learning practice are in turn serving to reshape colleges and universities. They are forcing those of us in higher education to reframe our thinking across a variety of dimensions. Changes in how we equip our spaces, how we assign priorities and promotions, and how we revamp and evolve our budgets, rationales, mission statements, and the values that our institutions articulate—these are all in flux thanks to the infusion of technology into the lives of educators and thanks to the institutional changes that this infusion precipitates.

This process involves not just faculty and students but also IT professionals, librarians, deans, administrators, and even parents and alumni. Because of the diverse mesh of players, perspectives, and institutional dimensions, we cannot focus solely on technology. We must keep in view the ripple effect that innovations and expectations in educational practice have on the institution. And since technological innovation can be either encouraged or discouraged by the institutional environment, I hope this department can help us think “out of the box” by scanning the horizon not just for technologies but also for institutional practices.

In light of these considerations, I plan for this department to retain an overall focus on innovation in learning. But in addition to the role of multimedia, I would also like to examine other aspects of innovation in learning. The horizon we need to scan is multifaceted. Emerging innovations in the areas of learning spaces, course management systems, lecture-capture systems, applications for collaboration, and techniques and partnerships to encourage and deepen engagement are all important pieces of the puzzle that we are collectively trying to fit together.

One way to appreciate this diversity of issues is to briefly recall the shift in focus from classrooms to learning spaces and all that this shift has entailed. Perhaps as recently as seven years ago, most of us were thinking in terms of classrooms as the locus of teaching and learning. Since that time, we have witnessed rapid developments in networked mobile devices, such as the iPod, and the increasing capability of mobile phones. We have also seen faculty and students switch to laptop computers; the industry will soon be shipping more laptops than desktops. And we have been quickly adding wireless layers to campus networks, with wireless proving to be so popular that many campus constituents simply use the wireless layer even if they are at their desks.

All of these changes served to enable mobility and to make significant progress toward the goal of “anywhere, anytime.” This, in turn, forced us to see that thinking only in terms of classrooms was no longer adequate. We needed to move from the narrower concept of classrooms to the broader one of learning spaces. As a result, environments such as learning commons are beginning to appear in libraries, display-equipped “discussion pockets” are being created near classrooms, and cyber cafés are springing up in places that never would have been considered just a few years ago. Virtual environments, taking inspiration from the Web 2.0, have widened the locus for learning. To meet these challenges, we have all had to develop new alliances, methods, and budgets. Hence mobility, made possible by technology, has had an impact throughout much of the institution, not just in IT shops.
But just when we feel that we might be getting a handle on one thing, a fresh wave of new technologies appears on our horizon. Perhaps the greatest challenge faced by those of us in higher education information technology is that we are being continually required to reframe our thinking. At times, it seems that innovation is no longer an option but, rather, a fact of life, an almost daily experience.

A good example of this conundrum is the emergence of the web as an application platform. The web is quickly becoming a cloud of applications, raising the question of whether to continue to provide even core services or instead to outsource them to this cloud. Just one or two years ago, if we had asked ourselves “how many” of our services we could outsource, our reply probably would have been “not many.” But then Google’s e-mail service arrived, and within a relatively short time, reports began to surface of institutions outsourcing e-mail services to Google and also to Microsoft.

How far will this cloud spread? As recently as four or five years ago, we were all using Microsoft Office, running locally on our laptops, and we would probably have been hard-pressed to imagine applications being delivered any other way. Since then, the concept of the application service provider has taken hold, and we are witnessing a surge in the number of network-based alternatives to “classic” Office. Google is again playing a major role: with the recent rollout of its presentation application, it now covers all three of the Office application “bases”: word processing, spreadsheet, and presentation.

But this first generation of the web-based office is already being superseded. Google’s efforts have been based on Ajax, itself a re framing of how the web works technically. Now numerous small companies are using Flash to implement office applications, delivering a smoother interaction that more closely approximates the experience of using Office directly on a computer. Nor does this stop with office applications: there are more than a dozen different choices for online image editing. Although none of these can rival Photoshop, they do offer a set of basic editing functions that support most of the standard editing requirements.

Recent efforts by Adobe (Adobe Integrated Runtime, or AIR), Sun (JavaFX), and Microsoft (Silverlight) will soon accelerate the development of a new generation of networked-based applications. These can be thought of as third- or fourth-generation Internet-based technologies, all designed to make Internet-based applications seem more “lifelike”—that is, seem more like a native application. Nor is Google idle: it has announced Google Gears, which will enable users to work with an Internet-based application offline, with no Internet connection.

All of these developments clearly indicate that as much as we have reframed our thinking about higher education information technology in the past, there is a great deal more in store. And I believe that if we want to know what is in store—what is coming toward us and how we need to reframe our thinking—we should consult our students. Thus I hope to offer students an opportunity, via this department, to be heard. Now more than ever, it is the students who are driving the technology issues that are in turn pushing the broader institutional issues.

Over the next two years, the New Horizons department will contribute to this reframing process. Within the context of innovation in learning in higher education, we will be looking not only at emerging technologies but also at emerging practices that make innovative use of those technologies. I look forward to working with members of the EDUCAUSE community in scanning the horizon for these new opportunities.

Note

Malcolm Brown is Director of Academic Computing at Dartmouth College. With this column, he begins a two-year term as Editor of the New Horizons department of EDUCAUSE Review.