

## Introduction and Overview

Dwindling financial resources and extensive public, corporate, and governmental scrutiny, have made the late 1990s a time of major transformation in academic institutions. For many institutions, a key part of this transformation is a move to distance independent education as a way of developing new audiences and methods of delivery.

What do we know about distance independent learning? Why should the ASIS community be interested? Distance learning employs technological developments to deliver information to students over new channels. Though the ASIS community has traditionally focused on environments where control for interactions rests with the information consumer, the editors believe that in the future a more pro-active stance on the part of the information provider will become more common. In any case, this *Perspectives* issue examines distance learning as part of an integrated information environment including—among other things—library services. The implementation of distance learning causes a rethinking and redefinition of an educational institution's resources and its allocation of delivery channels and clientele. It also requires the development of new benchmarks for rating institutions and their support services. For example, the variety and content of online resources may become even more important than traditional measures of academic library quality, such as the size of a library collection.

This *Perspectives* issue gives the ASIS audience background knowledge on the nature of distance independent education and the major issues involved in its successful implementation. It frames important questions and offers examples of existing implementations as well as visions of where the field is headed.

Historically, the geographic isolation of students from educational institutions has been the prime motivator for developing distance education programs. Correspondence courses have been, and still are, the most common delivery method of course materials to distant students. In such courses, student/teacher interaction takes place by mail or over the phone and lacks the immediacy and spontaneity of the face-to-face classroom. Beginning in the 1960s, broadcast television became a medium for instructional delivery. In this mode, student access to faculty is most often limited to mail or telephone commu-

nication. In the 1980s, the establishment of the VCR as a household appliance provided students the freedom to attend class at their convenience either by recording a broadcast or viewing a prepackaged videotape. Most recently, the arrival of the Internet as a means of connectivity and information distribution and the explosive growth of the World Wide Web have transformed distance teaching from a broadcast mode to an interactive one. Now digital libraries house course and reference materials that can be delivered directly to a student's computer. One might argue that the distant student's experience now parallels that of his on-campus counterpart. Computer mediated communication has created interactive virtual environments—classrooms, faculty offices, and student hangouts—that provide a learning experience as diverse as that of traditional education.

In the last decade "distance" has expanded to include temporal as well as physical isolation. Today's distance learner may be an urban dweller with easy physical access to a college or university. The changing social fabric, with its increasing demands on individuals at work and decreasing support for individuals from the extended family, has made time a highly valued commodity in our society. Technological innovations which allow individuals to shift activities or interactions to more convenient times (like VCRs, answering machines, and e-mail) have become indispensable parts of many Americans' lives. In addition, the guarantee of lifelong employment in the workplace has all but disappeared. Workers must continually update their skills and learn new ones to meet the demands of their employers. Distance education provides the opportunity for people to respond dynamically to the demands of their environment and to do so in a way that is far less tethered to time and place than traditional education is.

This *Perspectives* issue provides the reader with some historical perspective on distance education. Barron traces the long tradition of distance learning within the Library and Information Science communities; Roberts offers a view of global trends in distance education, and she frames this view with an emphasis on content not technology.

As the needs of the distance learner have changed, so have the methods for delivery of educational material. Since there is such a wide variety of distance education models, discussions over methods often fail because the discussants do not realize they are talking about very

different models and experiences. Besser's article breaks down the distance experience into its component parts and identifies areas where implementations differ. He contends that concepts such as time, place, and desired level of classroom interaction serve as important groundings for a discussion of any particular distance education implementation. He also divides the distance experience into classroom and non-classroom components and provides a framework for discussing the pieces of the distance experience independent of one another, instead of as a monolithic whole. He points to the role of the various players in the process. His piece provides the vocabulary, definitions, and concepts needed to discuss and compare different distance implementations.

Many of the articles in this issue concentrate on specific instantiations of distance learning that take place as a result of technological advances. Sutton's article addresses how institutions must face the issue of providing a stable infrastructure and philosophy for sustaining the current demands of distance education and accommodating future growth. He chronicles how the California State University system plans to provide access to rich digital resources in order to simultaneously deliver online resources on-campus, between campuses, and to off-campus sites.

Linn suggests that as we move away from a broadcast mode of teaching (whether in the classroom or at a distance), the demands on the learner change. Rather than being a passive recipient, the student must transform himself or herself into an "autonomous learner." At the same time, course content and design need to be mindful of the learning process. Linn lays out a plan for "scaffolded knowledge integration."

Burge provides us with a succinct synopsis of lessons learned from over 15 years of distance teaching. Her insights echo Linn's assertion that the role of the learner is transformed, and she explores how the role of the instructor must change as well. Davis sees the role of teacher expanding, as multimedia replaces text as the means of information dissemination within courses. In his vision of the future, course material is likely to be produced by commercial publishers rather than individual instructors. Within this rich environment, the teacher will need to develop skills in order to guide students' interactions with the material to insure they are grounded in the basic concepts of a subject, its history, and its future.

Three articles in this issue feature classes using the most recent technological advances for media distribution and collaboration. Sharing and preserving scarce resources to create a large enough audience to teach subjects that might otherwise dwindle into obscurity is illustrated by Faulhaber's course on the Catalan language. He points out how the technology itself often became the greatest obstacle in this endeavor. Holland created a virtual classroom that spanned the campuses of the University of Michigan and the University of Illinois, Urbana-

Champaign. Ever mindful of the costs and benefits to the students and the instructors associated with extending the classroom in innovative and experimental ways, she developed a task/technology fit matrix to guide the course development. She used formative evaluation to engage her students as partners in refining the methods of instructional delivery throughout the semester. Besser and Bonn were prompted by their experience teaching in another virtual classroom that joined the Michigan and Berkeley campuses. In reflecting on their experience they raise interesting questions about the hidden costs of our romance with technology, the rise of intellectual piece work within academic institutions, and freedom and control within the classroom. Their article looks beyond the techniques and methods of distance education to its far reaching implications for the institution and its mission.

The Synthesis/NEEDS project described by Wood and Agogino takes an innovative approach to development of a storehouse of modular curricular materials to supplement traditional classroom engineering education. Acknowledging that educational goals differ among the member institutions in the Synthesis Coalition, the project strives to develop materials that can be accessed and aggregated in many different ways to suit the needs of each institution as well as both novice and advanced students. Like Burge, Wood and Agogino employ the Kolb model when designing their learning environment.

To provide further insight into the most recent developments in distance education, Donahue has organized a set of references and Web sites that give the reader both a current and historical perspective on distance education.

Finally, we need to ask about the effectiveness of distance education. Douglas' profile of the success of the University of South Carolina's program indicates that it may be comparable to South Carolina's face to face classroom. There are precious few studies that assess effectiveness on a national level.

A Perspectives issue on Distance Independent Learning would not be complete without an article on assessment and evaluation, and the editors worked with a specialist in this area to prepare and edit such an article. Unfortunately, because of unforeseen circumstances and the constraints of our publication schedule, it will not appear in this issue.

Throughout this issue of *Perspectives*, several themes recur: The need for timely distribution of current scholarly literature, the need to clarify copyright policies for online resources, the need for equitable access to online resources, the need for multiple resources and expanded staff with diverse skills to support the learning process, and the need to separate technology from content and pedagogy. These needs are likely to be met as the environment and the marketplace mature. The editors feel that other questions will require more basic research to resolve: What constitutes communities of learners?

What are the processes and interactions that distinguish them? What resources are critical to knowledge production? What resources are mere embellishments? How can we measure the success of this kind of learning enterprise? The editors believe that the experience and expertise of the ASIS community will play an important role in answering these questions and designing and delivering truly effective distance independent education.

Howard Besser  
Stacey Donahue

## Acknowledgments

The guest editors thank Maria Bonn and Wendy Burnett for their contributions to the production of this *Perspectives* issue. The guest editors acknowledge the Kellogg Foundation through the CRISTAL-ED Project at the University of Michigan for supporting their research on distance education.

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**Elizabeth J. Burge** builds on 14 years of experience in distance education to think critically about issues in learner-centered views on adult learning in a variety of modes. Her doctorate was a qualitative inquiry into how learners construed their learning in a computer conferenced environment.

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At the time of this writing, **Stuart A. Sutton** was Director of the School of Library and Information Science at San Jose State University. He served on the University Technology Planning and Implementation Group and the President's Roundtable on the restructuring of the University. He also served on the Academic Issues Work Group in the Office of the Chancellor on the removal of obstacles in the California State University system to the use of instructional technology and the leveraging of human and instructional resources across the twenty-two campuses of the system. He is currently serving as Associate Professor and Director of the MLS Degree program at Syracuse University School of Information Studies.

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