

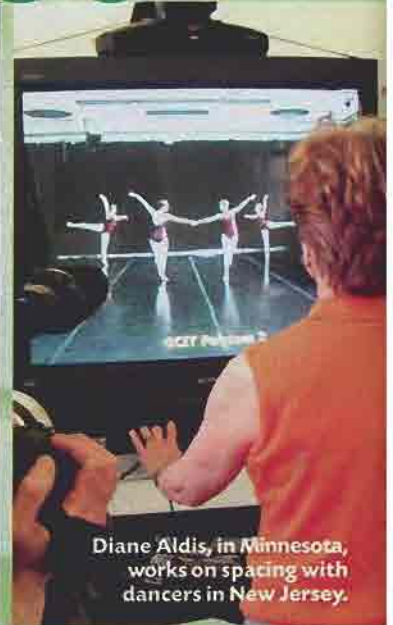
distance makes



Assistant Coach Heather Brady selects an image to transmit during a choreography session at The Performance Lab.



TPL Coach Stephanie Valencia Kierlin corrects a student thousands of miles away by "sculpting" her on the screen.



Diane Aldis, in Minnesota, works on spacing with dancers in New Jersey.

the dancer

Innovative video, computer and satellite technologies are changing the face of dance education, helping teachers reach students thousands of miles away.

grow
stronger
by Maureen Janson

Teacher Diane Aldis instructs a young dancer to lengthen her spine while executing a *cambré forward*. "Try it again and open your sternum," she calls out enthusiastically. The student responds, creating a graceful line with her arm, reaching her head out and forward. "Beautiful!" Aldis affirms. The young dancer smiles and continues to perform the choreography.

This may sound like a typical coaching session, but in fact, Aldis is in The Performance Lab at the Hennepin Center for the Arts in Minneapolis, Minnesota, while her student is more than 1,000 miles away in a studio in New Jersey. With the aid of an elaborate videoconferencing studio setup, Aldis is teaching a class at Southern New Jersey Academy of the Performing Arts.

TPL is one of several fearless educational

technology, TPL has been able to facilitate master classes, coaching sessions and other types of exchanges between institutions in different locations, such as between Aldis and her student in New Jersey.

Setting up videoconferencing in a dance studio takes serious collaboration. Each site is typically equipped with one or more fixed cameras, plus a handheld camera operator to film movement from all angles. Up to six people work together within a studio to arrange an "exchange." Along with the event participants, a coach or teacher, an assistant coach, a technical director, camera people and a web coordinator are present. On the receiving end, a teacher and student or students are present, along with their own videoconference personnel.

To correct a student, a teacher, referred

technology allows them to see themselves being corrected from three dimensions. "When you use the technology in the right way, the teacher is present," says Hauser. "Two classrooms become one classroom. The interaction is immediate and very focused. It creates a larger studio atmosphere."

Chapman, who directs Ballet Arts Minnesota, has always had great interest in reaching as many students as possible. "I had been exploring possibilities of sharing dance with students in locations where they did not have access to master teachers and mentors, and it was my husband's idea to find technological options," she explains. "I knew nothing about technology. I just saw that there were capabilities sitting idle."

Dale Schmid, visual and performing arts coordinator for the New Jersey Department of Education, has been involved in more than 60 exchanges with TPL. He is reluctant to dub TPL "distance learning," preferring to call it "interactive exchange technology" to stress its real-time, back-and-forth aspects. "This medium is particularly suited to dancers who use the mirror for feedback," says Schmid. "The camera lens becomes that mirror and students see the hand of the teacher on their virtual image."

Thus far, TPL has been deemed an educational success by many of those involved. "People have a fear that technology might create social distance," Schmid comments. "We have found just the opposite to be true. Younger students are used to the media, and when the TV talks back to them, they become even more intensely engaged." This is not to say that TPL doesn't have its problems. Frustrating sound delays are common, and if the visual signal is lost, which happens occasionally, there is no way to regain it. But the technology has significantly improved in four years of exchanges, and glitches are becoming less frequent.

The possibilities for using this technology are endless. Future plans include the incorporation of video projectors into each participating studio that will allow dancers to move simultaneously with life-sized images of "distance dancers." This would unite smaller classes in various sites into one large class. In other words, a teacher in one site could instruct a class of dancers distributed across several locations.

Beyond Distance Learning: Into the K-12 Classroom

Distance learning is not a new concept, even in K-12. Early experimental applications of technology to K-12 education have included closed-circuit television, allowing students to watch live presentations in other classrooms. In Washington, DC, R. Virginia



A distance learning taping
at the Kennedy Center

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Education Department
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institutions exploring how computer technology can enhance the teaching of dance. These relatively new tools represent breakthrough ways to augment the abilities of teachers to reach broader audiences. Now, without ever meeting in person, students can take class from teachers on the other side of the country. Students can also participate in private coaching sessions or watch live lecture-demonstrations by professional companies that they may never otherwise have the opportunity to see.

Go Global: The World is Your Student-Base

When it comes to something as physical as dance, many may question how education can be truly effective without face-to-face interaction. Several programs, including TPL, have tackled this dilemma with streaming video and other real-time technologies. Already at the forefront of interactive video

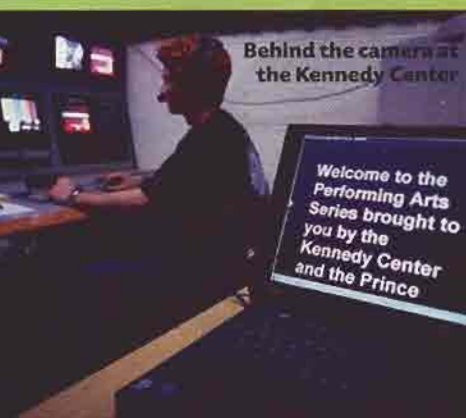
to as a "coach," points to the student's image on the TV screen. (TPL calls this process "sculpting.") The coach is videotaped while making these corrections, and the tape is transmitted live to a TV monitor in the student's receiving studio. The student sees an image of him or herself with the teacher's "hands-on" correction and is able to apply it immediately, as if the teacher were physically present.

TPL Artistic Director Rick Hauser, who founded the program with Project Director Marcia Chapman, reminisces about the first master class exchange between teacher Stephanie Valencia Kierlin and a class in Ohio. "[Kierlin] reached out and touched the student on the TV monitor, the student immediately reacted and we all gasped," says Hauser. "We knew we had discovered something amazing."

Both Hauser and Chapman have noticed that students seem to easily adapt to this style of training and, in fact, prefer it because the

TECHNO terms

Distance learning: A term encompassing all learning that takes place at locations remote from the point of instruction, e.g., via cable television, Internet, satellite, videotape or correspondence; the integration of technology in educational courses whereby



students may view and participate in lectures from various locations or on an individual basis.

Interactivity: A reciprocal exchange between a computer or video and its users, enabling immediate feedback, guidance and verification as users input data.

Online learning: An educational approach through which students take courses and/or obtain information via the Internet in a time frame and place that are most convenient.

Real time: Right now; i.e., a live chat session happens in real time. (E-mail, on the other hand, does not happen in real time.)

Streaming video: A sequence of moving images that is sent and displayed live to a viewer in compressed form over the Internet. Streaming media is streaming video with sound.

Videoconferencing: The transmission of video images between geographically separated participants in a meeting, allowing for two-way communication.

Webcast: The real-time broadcast of information over the Internet (see definition of "real time" above), often of a live event or an online simulcast.

Rogers, senior program director of the education department at the John F. Kennedy Center for the Performing Arts, has helped bring dance to students in K-12 classrooms for more than 10 years in some 47 states through Distance Learning Initiative programs (co-sponsored by the Prince William Network). Like closed-circuit TV, but on a grander scale, the Kennedy Center conducts free live broadcasts of performances and lecture-demonstrations via a C-band satellite dish.

Drawing from the Kennedy Center performance roster, Rogers has brought such artists as Suzanne Farrell and dancers from Pilobolus to students far away. "We try to select companies that have a lecture-demonstration component," Rogers explains. "And each performance has an interactive portion." Students call in or e-mail questions that the artists answer during the live broadcast.

If a school does not have the C-band satellite dish required for receiving programs, the Kennedy Center works with local cable television stations to set up the broadcasts. In 2003, DLI reached more than four million students. "As much as possible, we aim to connect to curriculum standards and hope that teachers can apply what they see to other subject areas," says Rogers. Teachers who agree to participate are notified in advance of the nature of the work to be presented by the artist or artists. For example, lesson plans distributed to teachers for a lecture-demonstration by Dayton Contemporary Dance Company connected the study of Langston Hughes' poetry with movement from DCDC's solo dance, *Mourner's Bench*. Schools interested in DLI may contact the Kennedy Center and, upon registration, receive satellite-positioning coordinates for viewing the entire season of arts programming.

Continuing Education: Teachers on the Learning Curve

In the 1970s, when videocassette recorders went mainstream, video technology began to seep into classrooms and became a favored tool for dance documentation. At that time, Karen Cowan, then a professor at the University of Wisconsin-Madison, developed a course by videotape for K-12 classroom teachers on how to incorporate dance into their curricula. In the 1990s, with the introduction of e-mail and the Internet, Cowan decided to take her popular course to the next level, spearheading the development of an online version called Movement Explorations Dance—Creative Dance for Children. Today, the course can be taken anytime from anywhere in the world.

"First, I put together a team of expert dance educators," Cowan explains. "We translated and designed the activity material into words and written assignments. Then we had to make sure that teachers could understand it. Plus, we

wanted those who took the course to feel movement as they progressed through it." It took Cowan and her team, which included K-12 dance education advocates Mary Elliot, Elizabeth Brown and Joan Mills, a lengthy collaboration with technical staff to create and refine the course. After three years of designing and redesigning, they introduced it to the public in 1996. Enrollment rates were slow at first, but have grown steadily as access to Internet and e-mail has become more mainstream.

"We wanted to keep tradition alive by basing a dance education program on the teachings of Margaret H'Doubler, the founder of the first university dance degree program," says Cowan. "We were illiterate in terms of computer technology, but we really wanted to reach more students with the H'Doubler philosophy."

Mills, who now teaches the course through the University of Wisconsin's Division of Continuing Studies, admits that funding limitations required the team to scale back some of their ideas. "We wanted to include streaming video to illustrate actual movement examples," she says, noting that she hopes this will be added in future years, along with videoconferencing and other technologies.

Unlike at the Kennedy Center, the online course does not reach a large group through a single satellite broadcast, but instead uses a one-on-one approach. "What's so special," Mills says, "is that each student gets complete individual attention from the instructor."

This is how the program works: A teacher (generally a K-12 classroom teacher) visits the website and clicks on a chapter on a certain concept (say, space). The teacher then returns to his or her classroom and teaches the concept to students using the provided exercises, such as "freeze," "melt as slowly and safely as you can" or "move into any open space." Afterward, the teacher e-mails a written assignment detailing how it went to Mills, who responds with a critique and suggestions. In other chapters, teachers learn how to create lesson plans of their own. Although the dialogue is not in real time, Mills believes the information exchange is valuable, allowing both her and the teachers time to absorb and reflect on the material.

The use of technology in dance education can be applied in innumerable ways. Dance teachers who are concerned that they need to speak the language of computer technology before approaching the daunting possibility of incorporating it into their work should not be intimidated. "You don't need to be up on the specifics of the latest technology," says Chapman. "Someday this information will be as easy and accessible to people as sitting down in front of the television is now." **DT**

Maureen Janson is a dancer, educator, choreographer and freelance writer based in Madison, WI.