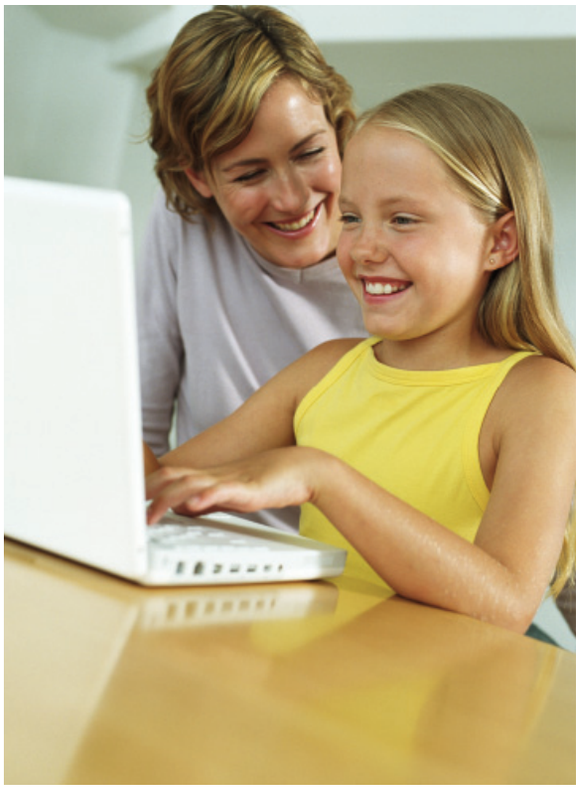
Transforming Learning and Transforming Lives

By Marci Powell and Wesley Fryer



Distance learning opportunities are surprisingly diverse but share a predictable common denominator: technology's transformative power to enable learning interactions that might otherwise be impossible for students and teachers alike.

For Dr. Cheri Toledo in the College of Education at Illinois State University, the opportunity to teach online has been personally transformative for over five years. This summer, although she lives in Illinois, the online learning environment allowed her to teach from Louisville, Kentucky, where her husband was competing in the United States Transplant Games www.kidney.org/transplantation/athletics), sponsored by the National Kidney Foundation. Conducting portions of her masters and doctoral level courses from Louisville allowed her to remain at her husband's side. Without the opportunity to teach online, she would have had a difficult choice to make.

The transformative power of distance learning isn't limited to higher education. It's increasingly present in elementary and high school settings. El Paso, Texas, while having large populations on both sides of the U.S./Mexico border, is still somewhat isolated from other cities. Interactive videoconferencing technologies are bridging enormous distances for students and teachers in the El Paso Independent School District. Teachers on over eighty campuses are using portable videoconference units to interact with other students and teachers, across town and across the continent.

One district has found using desktop videoconferencing to be transforming in serving their home-based students. Clint Independent School District, outside of El Paso, keeps students who otherwise could not participate connected to their regular classrooms. Whether the student is dealing with a serious illness or temporary situation, parents, students and teachers alike are glad to have a way to stay connected. Following a car accident, a district in Oklahoma provided seamless education without interruption to a high school junior in a full body cast. In a traditional learning environment, this student would have graduated one or two semesters behind his normal schedule and classmates.

Distance learning's cultural footprint is expanding. Many museums, zoos, science centers, corporations and libraries offer enrichment content programming for K–16 learners, allowing them to interact with content and content experts outside of the traditional learning environment. Through online, videoconferencing and video streaming technologies students are able to connect beyond the walls of a classroom. They can visit with a NASA astronaut on the International Space Station or dive into math in Lake Michigan with a diver from the Aquatic Research Interactive. Learners can travel virtually anywhere, shifting time and place as they wish.

Corporations like Eli Lilly, Coca Cola, and Lockheed Martin are providing workplace relevance and real-world applications in ways not traditionally available. A recent example involved middle school students in Paris, Texas. They read *Flight 93 Is Down*. Reflection on the book's content inspired countless questions. The students wanted to know how companies react to a flight disaster and how they use data gathered from a crash sight to implement improvements and preventive measures. Through a video conference connection to Lockheed Martin, students were able to explore those questions by interacting with research engineers who have real experience doing just that.

The likelihood of American students going to exotic or distant places like Petra, Rwanda, or Mozambique is not high, particularly for inner city students. But, through organizations like the Global Nomads Group or Empower Peace, distance learning technologies are allowing students to experience these places. Both of these groups have connected U.S. classrooms to students and remote locations worldwide through two-way interactive videoconferencing and video streaming technologies. Students in Iraq and Bosnia have been amazed at the mutual understanding gained by "visiting" with American students. Peering down on a great temple in Petra via satellite video conferencing technologies provided a much richer personal experience than one can get from an *Indiana Jones* movie. Students can gain cultural understanding from reading a book but not like they do when interacting with their peers around the world.

While policymakers may put faith in curriculum standards and mandated testing to improve educational outcomes, it is the conversations we have and our students have which stand the greatest chance of actually changing our perceptions about each other, about ourselves, and about the world in which we all live. Increasingly, distance learning technologies are being used to not merely access information and content, but to initiate interactive conversations that transcend time and space. As high speed connections to the Internet grow, the potential for these technologies to transform 21st century teaching will accelerate.

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