

3) Direct Student Services



In order to fulfill the BorderLink Project's Mission to remove barriers to post-secondary opportunities for students through technology, an assortment of activities were held and products were developed. The aim was to use technology to provide resources and services for students in remote and isolated schools, and the project successfully provided useful tools that helped overcome the barriers and challenges that students in our schools faced. The direct student services fall into seven categories: online courses, academic modules, test preparation, college culture, technology training, career preparation, and innovative projects.

Online Courses

We provided our students with two avenues for taking online courses: via videoconferencing and Internet. We developed and implemented several videoconferencing-delivered courses. BorderLink students took online courses, delivered via Internet, at regular high school, honors, and advanced placement levels. The courses ran the gamut from Music Theory to AP Physics. Our partners at the University of California College Prep Initiative covered the cost of Internet-based courses for students, and we provided support, as described below.

We learned valuable lessons from supporting students enrolled in the online courses, including the following points.

- ☞ It works best for the school to schedule a regular class period for students in online courses (as opposed to students taking the courses outside of the school day) and treat the online course as part of the regular school curriculum. The course drop-out rate can be very high when students take courses outside their regular class schedules, as a "seventh period."
- ☞ The school must be sure that students have the required prerequisites before enrolling in an online course.
- ☞ It is important to have an adult "mentor" at each school to keep students on track, help them with time management issues, and run interference with the online teachers.
- ☞ It is important to engage the parents, and inform both parents and students regarding the special challenges inherent in online courses.
- ☞ Some students need additional academic support from teachers at their schools.

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- ☞ The course drop-out rate is lower and the success rate is higher when students have certain characteristics:
 - Good time management skills
 - Self-starter
 - Independent learner
- ☞ Perhaps the main reason that students drop out of online courses is because they have fallen behind in their coursework.
- ☞ Be sure to check that students have basic skills required in online courses, such as knowing how to operate a fax machine.
- ☞ For online courses that are delivered via videoconferencing, several other points are also important:
 - Organizing the courses across schools and districts requires intensive planning (to solve bell schedule differences, etc.).
 - It is vital to have adequate adult supervision at the distant site.



- The appropriate peripheral equipment (such as a fax machine for handouts and a document camera for close-ups on illustrations) makes the job of the teacher easier.
- It is important to have a back-up for those days when the videoconferencing equipment does not work, such as a speakerphone at all sites.



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MATHVISION



Academic Modules

Besides providing online courses and support for online courses, the BorderLink Project offered a number of academic modules or lessons. These modules ranged from one-hour activities to repetitive programs, such as:

- ☞ **Virtual Field Trips.** Using videoconferencing, virtual field trips brought experts into classrooms. We worked with zoos, museums, and businesses to present special curriculum to which students and teachers would normally not have access, such as holding a conversation with a Holocaust survivor.
- ☞ **Conversation with an Author.** Students from a small BorderLink high school in California linked with published author, Mark St. Pierre, in South Dakota through videoconferencing. Students and author held a conversation about literature and what it takes to be a writer.
- ☞ **MathVision.** We brought a special interactive TV program produced by the San Diego County Office of Education to the Imperial County Office of Education using MPEG-2 technology that was then redistributed to

Imperial County homes through a local cable company. MathVision is an award-winning live television program with math teachers demonstrating how to work homework problems. BorderLink students called in to ask for help with their math homework. The next step will be to provide assistance in Spanish.

- ☞ **History Simulations.** Using LinkWorld, the BorderLink Project's unique three-dimensional website, students "met" Mexican President Benito Juarez, Empress Carlota, and the Emperor of France to discuss the events surrounding the Mexican holiday, Cinco de Mayo. Consultants played the roles of the people from history, and BorderLink students had the opportunity to ask them questions and learn about their lives.
- ☞ **Physics Presentations.** A class of AP physics students researched the cutting edge of science, created multimedia presentations, and met with scientists from California and New York in LinkWorld to describe what they had learned about black holes, an expanding universe, and other aspects or theories of physics.

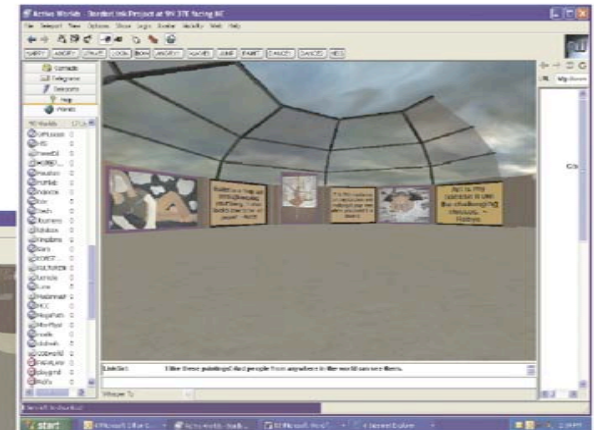
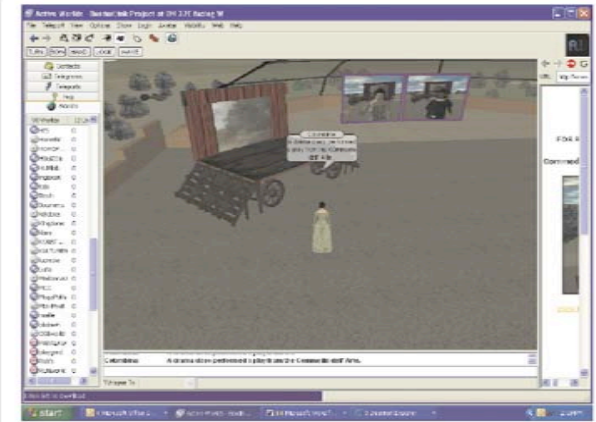
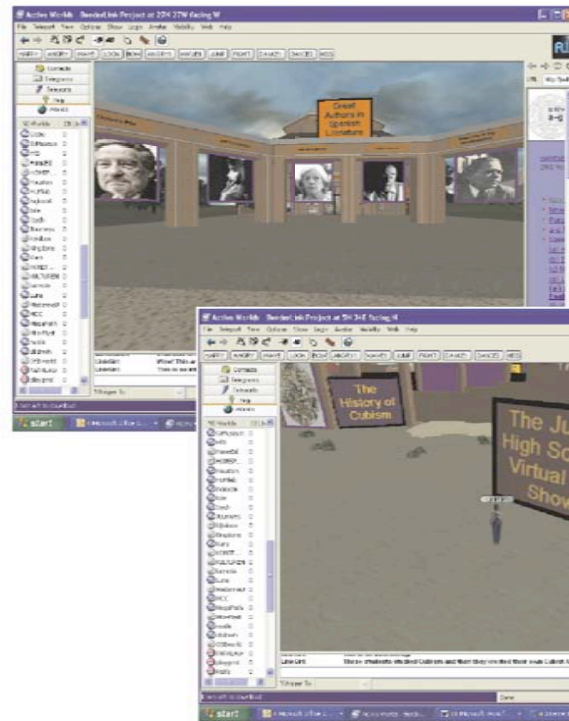
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☞ **Spanish Literature.** Another advanced placement class - this one in Spanish Literature - used LinkWorld to offer students a chance to visit with Latin American authors, living and deceased. The AP Spanish Literature students each researched one writer in great depth. Then they met in LinkWorld with other Spanish classes and played the role of the authors. The AP students were required to know their chosen writer so well that they could answer questions about their lives, times, and writings accurately.

☞ **Art Show.** Art students, who were studying Cubism, created their own paintings. Their art works were displayed in LinkWorld, along with a history and evaluation of the Cubist artistic movement. The students discussed their paintings with people who dropped into the art show, people from around the world including the Director of an important art museum in Amsterdam.

☞ **Ethics of Biotechnology.** Biology students researched the pros and cons of biotechnology and met in LinkWorld for a vigorous debate. The debate judges were in New York.

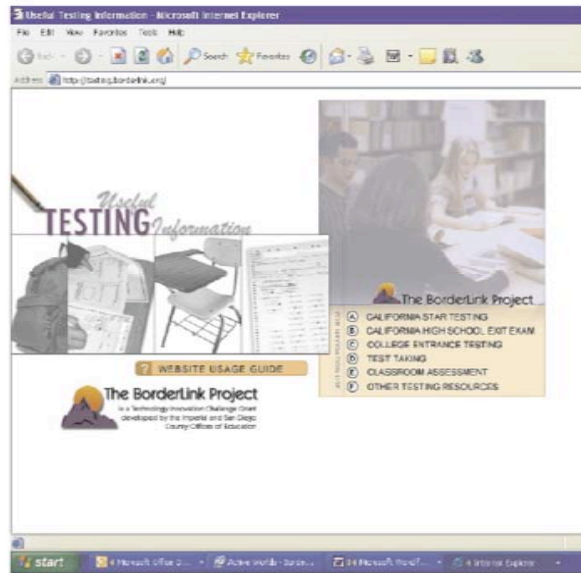
☞ **Dramatic Presentation.** Drama students researched the Commedia dell'Arte, a comedy form popular in Italy in the 16th and 17th centuries, created a script, and performed their play in the virtual world. The live audience included people who were physically in the United States and Europe, but virtually present at the drama presentation.



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Test Preparation

During the five years of the BorderLink Project, we have offered both “live” and online high-stakes test preparation. A description of approaches that we found to be effective appears below:



☞ **SAT Prep Course—Face-to-Face.** We offered “live” SAT Prep classes for three years. Students met with a teacher either after school or on Saturdays for approximately 20 hours. Students took a pre-test, a post-test, and then the actual SAT test at the end of training. The course was modeled after two sources: the SAT Prep designed by Dr. Jack Tierney of the San Diego County Office of Education and a now-defunct program from the California Department of Education called the “College Preparation Partnership Program.”

☞ **College Entrance Exam Mini-Course—Online.** We created a mini-course that features experts in the different components of preparation for college entrance exams and placed that mini-course online for easy and free access. This online mini-course helps students prepare for SAT I, SAT II, and ACT. The mini-course is available free-of-charge at www.borderlink.org to students anywhere

who need additional support to prepare for these important exams.

☞ **Useful Testing Information Website—Online.** Sensing that information about the important world of high-stakes testing would be of benefit to our students, parents, teachers, and counselors, we created a website that contains information about various types of tests. The Useful Testing Information website includes information about California standardized tests, the California High School Exit Exam, and college entrance exams. In addition, one section offers advice to students about how to prepare to take tests, and another section provides information to teachers about writing sound classroom exams. The website is at www.borderlink.org.

☞ **California High School Exit Exam Mini-Course—Online.** The California High School Exit Exam (CAHSEE) is surely a “barrier to post-secondary opportunities” for the students who do not pass it. Therefore, the BorderLink Project has created a 50+ lesson mini-course that includes workshops in mathematics and language arts. The lessons range from how to write essays to basic math concepts.

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The CAHSEE mini-course is available at www.borderlink.org for students anywhere to use free-of-charge.

College Culture

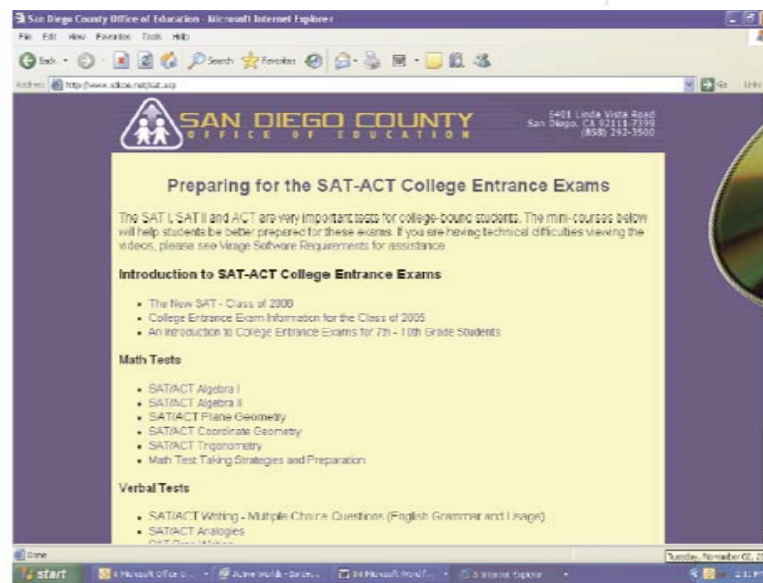
This is a series of activities and products designed to help foster a college-going culture among students (and parents). The products range from videos available on DVD to a 3D game in LinkWorld.

☞ **College Culture Videos.** This video series includes programs that feature college recruiters, students from BorderLink schools who have gone away to college, and parents of local students who are currently attending various universities. Some programs are in Spanish. The College Culture series airs frequently on cable in Imperial and San Diego Counties, and is available from the BorderLink website and on DVD, while supplies last.

☞ **College Activities in LinkWorld.** On a regular basis, a panel of college recruiters visited with BorderLink students to share information about their universities—and no one had to travel. That is good news, in an atmosphere of shrinking budgets. It also saves time for the recruiters, and allows the

students to talk with a greater number of recruiters. These recruitment activities took place in LinkWorld, with the students at their computers at school and the recruiters at their computers in Berkeley, Los Angeles, Merced, Davis, San Diego, and numerous other universities. In addition, many web resources are organized in LinkWorld to assist students in their college research - including links to 30+ college home pages. LinkWorld is available from the project website at www.borderlink.org.

☞ **Get Ready, Set, Go to College! Mini-Course.** The project has produced a mini-course about how to get ready for college. This mini-course is available at www.borderlink.org, and features video programs on the Internet starring college recruiters from numerous colleges and universities. The recruiters talk about their institutions and share information about how to get ready for college.



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☞ **Get Ready, Set, Go to College! Website.** The BorderLink Project has designed a website that connects school counselors, students, and parents with colleges and universities. The website includes links to college home pages and a process to connect with college recruiters through videoconferencing or LinkWorld.

☞ **CollegeQuest.** CollegeQuest is a 3D game for students. Its purpose is to help students know what to do each year between sixth and twelfth grades to prepare for college. The CollegeQuest game is located in LinkWorld, and consists of four game adventures. Students seek out tokens that are hidden in 3D mazes. When a token is found, the students pass their mouse over the token to collect advice about college and double click on the token to arrive at a website that deepens their knowledge about college preparation. CollegeQuest is accessible through LinkWorld at www.borderlink.org.



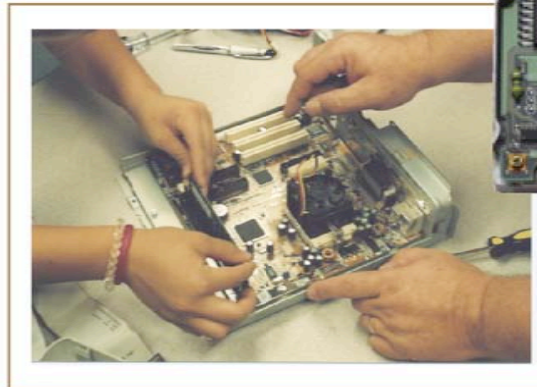
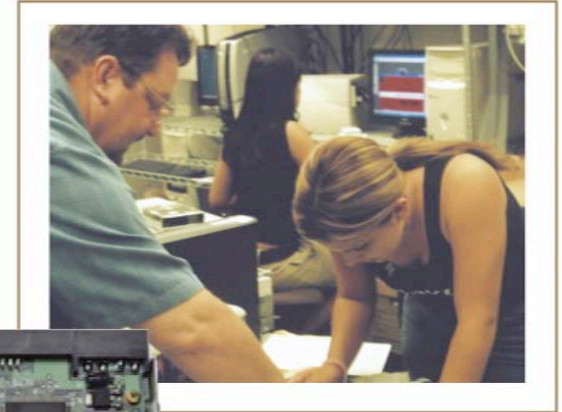
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Technology Training

During the last two years of the BorderLink Project, we provided Generation YES and Generation TECH programs in which our schools took advantage of student expertise in technology applications and tech support. The students were trained, of course, and their training included how to use various computer programs, from presentation software to video production. As their expertise developed, it was shared with a partner teacher with whom the student worked on a standards-aligned project. Not only did the students learn how to work among themselves in cooperative groups, but they also learned how to work well with adults. Student leadership skills developed as students were empowered with technology support and troubleshooting skills. Students trained in the Generation Tech program provided site computer and infrastructure support that helped keep the technology at the schools operational. See www.genyes.org for more information about the GenYES and GenTECH programs.

Career Preparation

One of the “links” in the BorderLink Project was career preparation. The BorderLink Project created a website that describes step-by-step how to go about getting a job. The Get to Work website contains five major steps including understanding yourself, conducting a job search, writing a powerful resume, creating a portfolio, and conducting a strong interview. The audience for the website is both secondary students and adult members of the community.



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Picture courtesy of Gloria Ungar and the Museum of Tolerance.

Innovative Projects

The BorderLink Project provided educators with the opportunity to use various technologies in innovative applications in their own classrooms with students. Participants put their new technology skills into practice to enhance their curriculum, professional development, or classroom instruction.

☞ **Innovative Videoconferencing Project.** The Innovative Videoconferencing Project was established to instill the use of videoconferencing in schools across the project. Over the course of two years, educators participating in this program implemented innovative curriculum projects in their classrooms using videoconferencing. The BorderLink Project provided the coordination and training on equipment to assist participating educators in implementing their projects. The activities included a French club participating in a class offered by a language institute in Paris, students participating in a Pow Wow taking place on an Indian reservation 50 miles away, and nursing students from two

high schools learning together through videoconferencing. In addition to these examples, multiple activities with science institutes, museums, zoos, and universities also took place.

☞ **Innovative LinkWorld Project.** Teachers and support staff in the BorderLink Project had the opportunity to participate in the Innovative LinkWorld Project to create a unit or lesson that was presented inside the virtual world or used the virtual world to share with other teachers and/or students.

☞ **Innovative Online Module Project.** This project gave educators the opportunity to create an online module featuring a lesson or activity for use in their classrooms or school. Activities ranged from developing good study habits to the physics of cannons. Participants received training in online curriculum development and the technologies used. Samples of the completed projects are located in the online Media Library at www.borderlink.org.



“The aim was to use technology to provide resources and services for students in remote and isolated schools.”