The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

Final Copy of Case Study

YEAR:
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STATUS:
Laureate

Organization name:
Stanford University Education Program for Gifted Youth (EPGY)

Organization URL:
http://epgy.stanford.edu/

Project Name:
Stanford University: Education Program for Gifted Youth (EPGY)

What social/humanitarian issue was the project designed to address? What specific metrics did you use to measure the project's success?

Originally, Stanford University approached computer-based classes with the aim to provide calculus classes for high school students who otherwise would not have access to the subject at their schools. They embarked on this project in the mid-1980s, supported by a National Science Foundation grant to expand student access to math and science courses. The curriculum was expanded over the following years to include other advanced math classes, and in 1992, these classes became the genesis of the Stanford University Education Program for Gifted Youth (EPGY), one of the nation's foremost distance-learning programs for gifted K12 students. In 2006, Stanford EPGY founded the Online High School (OHS), which brings together academically talented and motivated students from around the world. The school, which originally served students in grades 10-12 has since expanded into a fully accredited diploma-granting 7-12 independent school. The success of EPGY has been measured in accomplishments of the more than 60,000 elementary and secondary students who have enrolled in its various programs.

Please describe the technologies used and how those technologies were deployed in an innovative way. Also, please include any technical or other challenges that were overcome for the successful implementation of the project.

When Stanford started EPGY, its course offerings were all asynchronous, that is, self-directed, independent study courses in which students work on computers at their own pace, with support and direction from EPGY tutors. In 1996, Stanford EPGY became the first educational institution

program to use Saba Classroom, a complete online learning and Web conferencing solution that brings instructors and students together in a richly interactive, real-time, seminar-style environment. The online classroom environment has enabled EPGY instructors to teach in the same way they would in a physical classroom, while taking advantage of a number of innovative tools, including: Whiteboards: Instructors share the class lesson plans on Saba Classroom's electronic whiteboard, and markup tools encourage broad class participation. File Sharing: Handouts are distributed electronically. Exporting and Recordings: All classes are recorded, and course materials, including PowerPoint slides, text chat sessions, and any writing done on the whiteboard can be exported as a PDF for students to reference after class. App and Desktop Sharing: Allows for student collaboration, and electronic breakout rooms enable small groups of students to work together on projects. Multilayered communication: While an instructor is discussing a subject with students over the solution's audio and video channels, students can concurrently use Saba's text chat for related conversations.

Please list the specific humanitarian benefits the project has yielded so far.

More than 60,000 gifted elementary and secondary students have taken enrichment classes or earned their entire high school diploma through EPGY's programs. The Saba environment has been instrumental in allowing the growing Online High School to bring together a global community of learners that hail from 41 states and over 27 countries. "When our students attend school, they not only come from all over the world, they're in locations all over the world, coming together in real time," said Jovana Knezevic, Ph.D., director of information and communication at Stanford EPGY and also a history instructor at the OHS. "This allows them to contribute unique perspectives to discussions that are continually shaped by their experience of the world in their home context." The OHS creates an international learning environment that is accessible to students who would otherwise not be able to attend such a school, due to age, location, significant pursuits, health, or any other number of reasons.

Please provide the best example of how the project has benefited a specific individual, enterprise or organization. Feel free to include personal quotes from individuals who have directly benefited from the work.

There are many examples of how the Online High School has given students an education to which they otherwise would not have had access. The success of EPGY alumni at the college level is the best testament to the role that the OHS has played in their formation. Not only do our alumni go to top-tier colleges and universities, but they do well once they've arrived. Additionally, there are also a number of examples of how the Online High School serves to bring together students in a rich and vibrant intellectual community of like-minded peers of which they might otherwise not have had the opportunity to be part. The JETS team is a great example of what happens when like-minded peers are brought together in this way. In 2010, six students from OHS competed in the prestigious Junior Engineering Technical Society (JETS) competition in which students use their math and science skills to solve real-world challenges. Even though the six OHS team members were located in different geographic locations, Saba Meeting enabled them to work together to design a tactile adaptor that translates light signals from a telephone into vibrations a visually impaired receptionist could sense to help answer phones. The team won two awards: for outstanding engineering design and for the most innovative use of technology.