pathways to OUR future

A Multimedia Training Program For Youth That Works

September 2002

A Report of *The*
***Pathways to Our Future* Project**

Funded by the
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Administered by
Community Partners®

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In collaboration with
The Project's Participating Centers
and Partner Organizations

www.cctpg.org

Pathways to Our Future Sites

Break Away Technologies
Break Away Technologies is working to create access to the latest in Information Technology and computer training for low-income residents of Los Angeles.The program is developing employment linkages, increasing computer access for local residents, and creating a training academy.

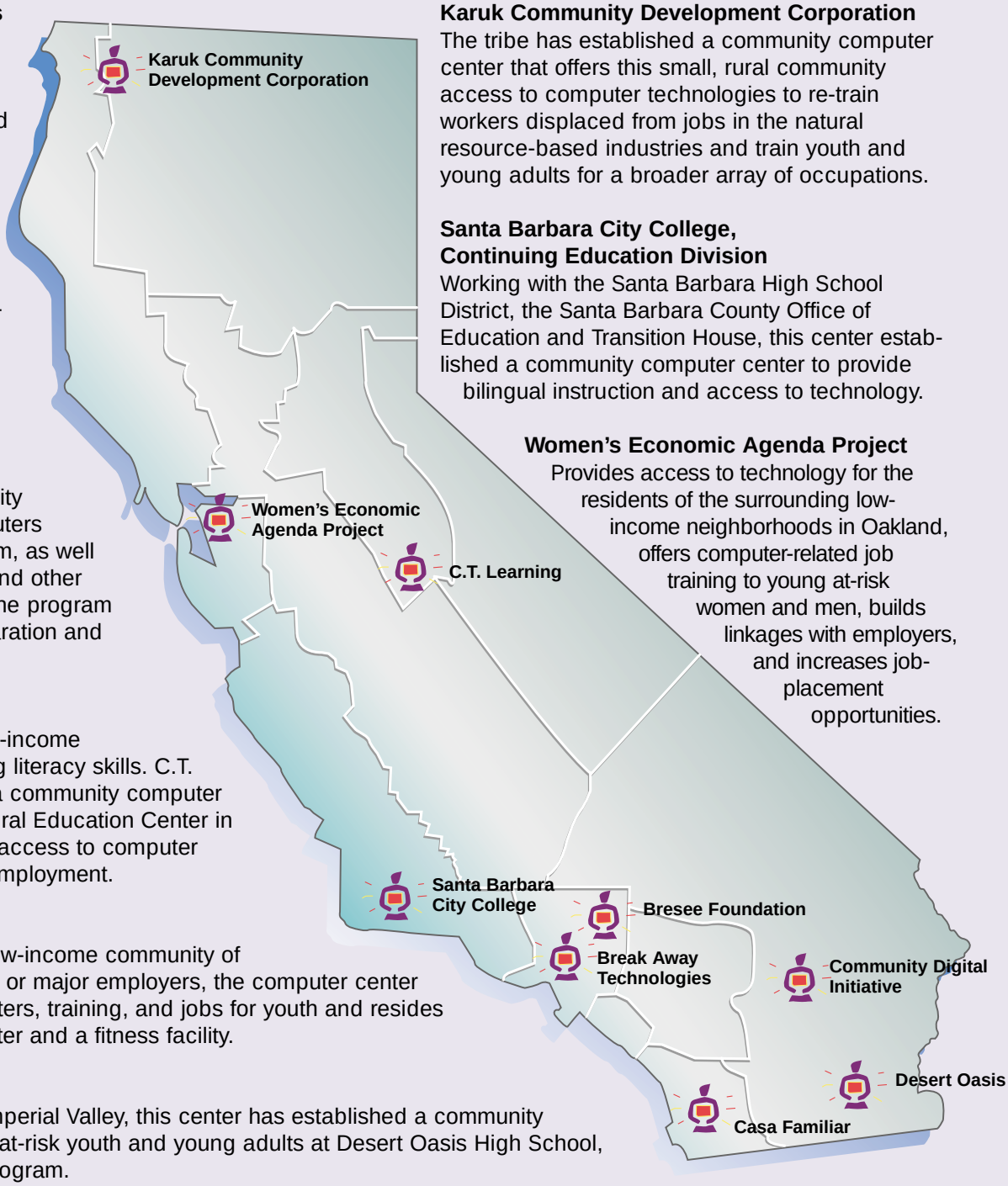
Bresee Foundation
Serving Central and South Central Los Angeles neighborhoods, this center offers low-income community members access to computers and the training to use them, as well as access to the Internet and other technological resources. The program also provides career preparation and employment opportunities.

C.T. Learning
Empowers residents of low-income communities by developing literacy skills. C.T. Learning has established a community computer center at St. John's Cathedral Education Center in central Fresno to increase access to computer technology, training, and employment.

Casa Familiar
Located in San Ysidro, a low-income community of 34,000 with no high school or major employers, the computer center provides access to computers, training, and jobs for youth and resides within an existing teen center and a fitness facility.

Desert Oasis
In a city of 39,000 in the Imperial Valley, this center has established a community computer center targeting at-risk youth and young adults at Desert Oasis High School, an alternative education program.

Community Digital Initiative
In collaboration with the University of California at Riverside, the center offers both structured computer classes and programs as well as open lab time. The center strives to improve the compositional and computational skills of students as they pertain to matters of civic importance, including youth development, drug prevention, and community well-being.



Karuk Community Development Corporation
The tribe has established a community computer center that offers this small, rural community access to computer technologies to re-train workers displaced from jobs in the natural resource-based industries and train youth and young adults for a broader array of occupations.

Santa Barbara City College, Continuing Education Division
Working with the Santa Barbara High School District, the Santa Barbara County Office of Education and Transition House, this center established a community computer center to provide bilingual instruction and access to technology.

Women's Economic Agenda Project
Provides access to technology for the residents of the surrounding low-income neighborhoods in Oakland, offers computer-related job training to young at-risk women and men, builds linkages with employers, and increases job-placement opportunities.

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Pathways To Our Future:
A Multimedia Training Program For Youth That Works

Cover artworks created by students of *Pathways To Our Future*.
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Executive Summary

At a time when employers in California are hard-pressed to find workers with the technology skills that jobs require, a pilot program called *Pathways to Our Future* is demonstrating how to successfully train low-income youth with marketable skills in technology and multimedia production. Funded by a grant from Governor Davis' Workforce Investment Act discretionary fund, *Pathways* provided job readiness and technology skills to 167 of the most "at-risk" youth from across California.

People who use computers on the job earn **43%** more than other workers.[1]

An estimated **60%** of all jobs require skills with technology.[2]

Through summer or year-round training offered in nine community centers across California, students learned graphic design, Web development, video production, and digital art.

After one year of operation — summer of 2001 to 2002 — *Pathways* has demonstrated the tremendous untapped workforce potential of youth in low-income communities and produced remarkable results:

- Participating students acquired marketable technology and multimedia skills.
- Participating students learned how to seek a job.
- More than half of the students secured internships or jobs through the program.
- Many are now considering college or a career in the multimedia field.
- Many students showed striking growth in maturity and self-esteem.
- Many students are now active in their community, directing their talent toward improving it.
- Every program provided a service to its community through projects students undertook or technology assistance they offered other community residents.

Pathways' design, curriculum and job component were jointly developed by staff at the nine community-based organizations. *Pathways* represents large urban as well as remote rural communities that, together, make up this statewide initiative.

Collectively, *Pathways* served students from the following background:

- ➤ The average annual family income for participants was approximately $13,350 annually.
- ➤ Few students had a computer at home.
- ➤ Many spoke English as a second language; some were referred to the program by the local juvenile justice system; and a number were single parents.
- ➤ Latinos comprised the bulk of participants (69%) followed by African-Americans (20%) with the remainder white, Asian Pacific Islander, and Native American.

Unfortunately, additional students may not have the opportunity to participate in *Pathways* because second-year funding has not yet been secured. Based on *Pathways*' track record during the first year, these nine centers should be supported to continue the program, and youth and employers in additional communities should benefit from this kind of youth-centered multimedia program.

The Governor, state policymakers, corporations, foundations, and civic leaders each have an important role to play.

This report summarizes how *Pathways to Our Future* works and its accomplishments. The final section of the report makes detailed recommendations for how public and private sector leaders can spread the program's benefits to more young people throughout California.

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[1] The Benton Foundation. "What's at Stake 2: Defining the Public Interest in the Digital Age". June 1997.

[2] Irving, Larry, as cited in Benton Foundation, *Losing Ground Bit by Bit: Low Income Communities in the Information Age*. June 1998, pg. 4.

Introduction

Imagine a program that successfully allows low-income youth to learn technology skills, increasing their commitment to education or vastly improving their opportunities in the job market. Imagine that this same program blends elements of after-school, academic enrichment, workforce training, digital arts media, gang diversion, and technology skills acquisition programs into one effort. In one short year, leaders from nine low-income communities across California built this program from scratch; taught 167 teenagers graphic design, Web development, video production and other multimedia skills that employers want; and prepared students for employment.

Pathways to Our Future, a pioneering statewide initiative, has produced a variety of positive results in the lives of at-risk youth. It has given youth who face tough life challenges both hope and solid prospects for education and job opportunities. And this initiative is providing a roadmap for how communities can prepare their young people for the jobs of today and tomorrow rather than yesterday's often dead-end jobs. Furthermore, thanks to the *Pathways* project, young people have been trained with the technology skills employers need.

This report summarizes both how *Pathways to Our Future* works and its accomplishments. It makes recommendations for how to spread the program's benefits to more young people throughout California.

How *Pathways* Works

Pathways to Our Future, funded by the Governor's discretionary portion of federal Workforce Investment Act (WIA) monies, began providing multimedia skills classes in the summer of 2001. Working with at-risk low-income youth between the ages of 14 and 18, these community technology programs trained young people to master sophisticated technology skills, as well as groomed the students for work in their local communities.

The program's design, curriculum and job component were jointly developed by the nine community-based organizations that, together, make up this statewide initiative. Representing large urban, as well as remote rural, communities, extending from the northern-most reaches of California (Karuk Community Development Corporation) and as far south as San Ysidro, just north of the Mexican border (Casa Familiar), technology instructors, job developers, program directors and executive directors from these centers pooled their expertise to develop a program to prepare young people for the jobs requiring multimedia skills and to enter the workforce. *(See inside front cover for a map illustrating the name and location of the nine sites.)*

The Model

The model is straightforward. Each *Pathways to Our Future* program site recruited students from the low-income community in which the center is located. Center staff determined student eligibility, applying the requirements developed by the State. To qualify, a student had to be low-income and meet one other hardship, such as having limited literacy skills, having dropped out of school, being pregnant or a parent, or facing other barriers to education or employment.

Using the jointly developed curriculum as a resource, each site determined exactly which multimedia skills to teach, as well as how long the training period extended. Some sites used two- to three-month modules. Others extended the training over a longer period, possibly up to nine months, with classes meeting every day, but with shorter class sessions. The sites taught a wide variety of different multimedia

skills that are relevant in today's economy, including Web site development and graphic design, digital photography and imaging, video production, and music creation. *(See Appendix 1 for the multimedia curriculum.)* The sites used project-based learning, which incorporated organizational and project management skills, supporting their students as they carried out projects of value to the community or to a specific business or local institution.

The sites also prepared students for employment by implementing a curriculum developed specifically for the youth by the centers. Students learned how to search for a job and write a résumé and cover letter; developed interviewing techniques through simulations; and gained knowledge of what is expected once they are employed. *(See Appendix 2 and 3 for the employment skills curricula.)*

In addition to classroom teaching, many of the sites gave their students a taste of the working world by arranging visits to local businesses where these skills were being used and by inviting guest speakers, which excited and motivated students.

Also, many of the sites developed partnerships with local businesses or agencies to provide students with internship opportunities so youth could apply their newly acquired skills, as well as gain further "on-the-job" experience. The program demonstrated that youth can provide a valuable technical resource to their communities and can be trained to be highly skilled workers.

By the end of the program, students demonstrated their proficiency in multimedia skills by creating a portfolio, or final presentation of their work, and completing an internship or community-service project. In addition, many students created Web sites, which display their grasp of and ability to apply different multimedia concepts.

Testimonial

After learning multimedia skills, Richard, a student from Riverside, demonstrated his multimedia skills acquisition by serving as a Web Master for the University of California, Riverside's Upward Bound Program. During his service, Richard created Upward Bound's Web site from scratch. Because of his creativity and discipline, the Upward Bound staff offered Richard a paid internship upon completion of this community project. His responsibilities as a paid intern include maintaining on a monthly basis the Web site he developed. Richard is living out his aspirations of being a Web Master.

Resources

Each center received approximately $65,000 to operate this program for 15 months. The WIA dollars were used by the centers for several purposes. The funds were essential to support the hiring of instructors and staffing of the programs. In addition, some centers bought state-of-the-art equipment, such as digital cameras and computers, and others acquired multimedia software. Several centers provided stipends for students to encourage regular participation and to simulate a workplace environment.

The Youth Trained by *Pathways*

Pathways' students represent some of the most at-risk youth in California. All of the students came from low-income backgrounds, requiring many of the students to have a job to help support the family. The average annual family income for participants was $13,644, nearly a quarter of the families received Food Stamps, and some of the families were on Temporary Assistance for Needy Families (TANF). Of the 167 participants who enrolled in the program, many students immigrated with their families to the United States, speaking English as a second language. A number of students were single parents. Some students were referred to the program by the local juvenile justice system.

The program also attracted a diverse group of students. The programs struck a near balance between males (51%) and females (49%). The age of the students was divided almost evenly between the ages of 14 and 17, while 18-year-olds enrolled at a lower rate. *(See Table 1.)*

Table 1

Age (Years)	Students Enrolled(%)
14	22
15	21
16	23
17	22
18	12

Latinos comprised the bulk of participants (69%), followed by African-Americans (20%), whites (7%), Asian Pacific Islanders (4%), and Native Americans (4%). (The percentages add up to more than 100% because some students indicated more than one race or ethnicity.)

According to instructors, many students did not have a computer or Internet access at home. Their situation mirrors that of other low-income households in the state. In fact, 71% of California households earning less than $15,000 annually do not own a computer, and 78% do not use the Internet at home.[1]

Program Results

After one year of operation, many young people, their communities, and local employers have benefited from *Pathways*. The program's achievements demonstrated the tremendous untapped potential of young people in low-income communities. Conversations with program staff and students alike from the nine sites showed the following outcomes:

- Participating students have acquired marketable technology and multimedia skills.
- Participating students know how to look for, and apply for, jobs.
- More than half of the students have secured internships or jobs through the program.
- Many are now considering college or a career in the multimedia field.
- Many students showed striking growth in maturity and self-esteem.
- Many students are now active in their community, directing their talent toward improving it.
- Every program provided a service to its community through projects students undertook or technology assistance they offered other community residents.

Skills Acquired

Through *Pathways*, students developed skills that could be used in the multimedia field or high-tech industry; they also learned job readiness skills. Students learned computer applications that included PhotoShop, Dreamweaver, HTML, Final Cut Pro, and many other multimedia software programs. Also, students experimented with text and fonts, manipulated graphic and digital images, and created original artwork, animation, and video. Students demonstrated their proficiency in these skills through the development of Web sites, slide presentations, videos, and digital portfolios.

[1] The Children's Partnership, special tabulation of U.S. Department of Labor, Bureau of Labor Statistics and U.S. Census Bureau, *Current Population Survey, Computer and Internet Use Supplement*, September 2001.

Testimonial

Students from Karuk Community Development Corporation, a rural community located within the Karuk Ancestral territory in Northern California, created a second Karuk Language Web site to preserve this vanishing language. The Web site serves to educate others as to its history, pronunciation, and cultural heritage. The site contains examples of greetings and leave-takings, feelings, directionals, daily activities, exclamations and interjections, and the outdoors.

— Karuk Community Development Corporation

Though multimedia work often requires advanced skills, it was not a requirement of the program that students had prior knowledge or familiarity with computers. In fact, many students who enrolled and participated in the program had little to no computer experience. Few had computers in their home. Although many students initially struggled to learn multimedia because they were simultaneously learning how to operate and use a computer, they soon gained proficiency in computer use. Creating multimedia projects provided the motivation and context to learn technology skills.

Complementing these technology skills, students learned the process of applying for and securing employment. Students learned how to find and research prospective jobs and develop résumés and cover letters. Students reported that these skills were especially valuable because few had ever utilized them before. In addition, the résumés provided an ongoing resource, which students could update and distribute as they gained new work experience.

Most sites tied their multimedia skills training together with sampling a career. For instance, at some sites, students were taught to be entrepreneurial and undertake the steps to start a new business. Their activities culminated in the creation of a Web site or Power Point presentation that "pitched" their services in their chosen field. Students began to see themselves not only as employees, but also as employers. They realized that they could work in technology industries as well as other fields that interested them.

Lastly, students gained job skills that can transfer to many different professions. Students learned to manage projects, seeing projects from their inception to their completion. In addition, students learned teamwork, working and communicating with their peers and employers to complete a project. Other skills students learned included problem-solving, identifying objective evaluation criteria, listening, offering constructive criticism, and thinking critically.

Internships, Jobs & Returning to School

Using the technology and multimedia skills acquired through *Pathways*, a number of youth secured paying jobs after the program ended. These included internships, jobs at the center where they received multimedia training, and consulting projects. Some students even secured a job when competing against experienced professionals. In these jobs, students developed and maintained Web sites, operated video cameras, instructed computer classes, and served as office assistants.

Although *Pathways to Our Future* developed job skills and prepared students for a career, the program was not designed primarily to place students in jobs. Because the program's target ages ranged from 14 to 18, many of the youth are required to be enrolled in school. However, for some students, education had been put on hold, in some cases to bring in income for their families. In other cases, students were not yet motivated to continue with school. The program subtly conveyed the importance of education for students of all ages. Older students saw first-hand that learning multimedia skills could lead them to well-paying jobs. This realization motivated some older students to attend college to further develop their skills.

For younger students, *Pathways* also proved to be very important. Many younger students are at the age of experimenting with risky or delinquent behavior. *Pathways* offered youth a positive and safe environment in which they could avoid risky behavior and tap into their potential. In addition, younger students learned skills that boosted their academic performance, which encouraged them to stay in school.

Multimedia production complemented what students were taught in school, especially in subjects such as English and math. For instance, creating a video required students to tell a story through writing a script. Similarly, students learned about math from the calculations that accompany editing a video.

Getting Involved in Their Communities

In addition to learning multimedia skills, students were required to complete a community service project or internship with a community organization or local company. Through these assignments the youth also experienced the satisfaction of seeing their multimedia skills help their community. Their services included: developing a Web-based community calendar; creating fliers and brochures that promote community events, such as health fairs; producing a promotional video that publicizes services offered by a seniors' organization; and developing agency Web sites.

Working on these projects, many students learned that their community has more to offer than they knew. Students who interned at a service agency learned about the services offered and the difference they can make. Some students became interested in a particular challenge their community faced, planned to continue their work on it and helped raise awareness about the issue with their peers.

As part of the curriculum, students often explored their communities to find subject matter and content for their photos, videos, or Web sites. They interviewed people on the street, attended parades and community events, took pictures of their neighborhoods, and traveled to the state Capitol to meet with their legislators. Many learned what was taking place in their communities, discovered the beauty that existed there, became interested in civic participation, or committed to making a difference in their community.

Personal Development

Acquiring technology skills and being enrolled in an exciting program often led to a positive change in attitude and behavior among students, as reported by both staff and youth themselves. Living in an environment in which gangs plague the community, where jobs are scarce, and where there is a shortage of positive role models, many students held little hope for the future.

Participation in the program caused some youth to change their perspective. Reported changes included being more helpful and cooperative at school, in their community, and at home; being more motivated to study so that they could attend college and continue learning multimedia or pursue other degrees; recognizing that they had talents, skills, and a future; and being more responsible in their day-to-day lives.

Testimonial

The following is a letter written by a multimedia employer regarding a *Pathways* graduate who has an internship as a video editor:

I just wanted to let you know that Jonathan is doing a really great job. It's really a boost to have his assistance on important video archival projects here in the Media Center. He consistently does well in every task I give him and has a great attitude. Today, for example, our CD burner was on the blink. He quickly contacted customer service, understood what they told him (which was complicated) and had the CD burner up and running within half an hour. Being able to overcome technical obstacles is very important in our field. Obviously he has received great training and experience from Bresee.

Although not yet out of high school, he would be a valuable asset to many employers here in Los Angeles.

Testimonial

Thanks to the work of the students at Karuk Community Development Corporation located within the Karuk Ancestral territory in Northern California, in the event of an emergency situation in the school, full-color photos and information of any room in the school are now available to rescue personnel to aid in assessing the problem.

Students created a photo journal of the Happy Camp High School, taking pictures of the entire school, including all rooms, hallways, entrances and exits, control panels, gas shut-off valves and mains. They then assembled and organized these photos, with clear labels and directions, and copied the entire journal into multiple binders with accompanying CD-ROM disks that contained the photos. The photo journal was then distributed to the high school, the school district, the fire department, sheriff's office, and medical clinic.

This concept has been so popular that many other schools in the county have requested the students' services to create a photo journal for their respective facilities.

Ingredients for Success

Community Roots

One reason why the centers have been able to attract and positively affect their students is because they have established themselves as trusted community organizations that serve the neighborhood. Through word of mouth and referrals, many hard-to-reach students decided to come to the centers to benefit from the high-quality programs and skillful coaching. Many centers tapped into their neighborhood networks to enroll students in the program. Through its ability to enroll students who are extremely hard to reach, the *Pathways* program has proved itself to be vital and effective as a youth program.

Established Track Record

The nonprofit organizations participating in *Pathways* had a history and record of effectively serving at-risk youth. These groups first joined together as a formal network in 1997, when the centers launched a four-year initiative to provide technology access and training to residents in low-income communities. By the time *Pathways* began, these organizations had collectively served over 25,000 low-income residents throughout California and produced well-documented results: those served reported developing job skills, finding jobs, acquiring skills that helped them in school, and improving their academic performance. Building on that record of success, the centers took on more complex and sophisticated technology training when they implemented *Pathways*.

Testimonial

Ricardo and Dario are 18-year-old twin brothers who started a very basic and simple Web site as a hobby. Through the Pathways *program, they learned the rules and composition for graphic design. As a result, they have since created a very professional, informative Web site that serves as a local entertainment guide for youth on both sides of the Mexican border.*

—Casa Familiar

Training That Matters

Another reason why the centers attracted so many young people is because they continually update the type of programming offered to keep current with what students want to learn and with what employers seek. Students saw the creative and marketable possibilities of Web site design as well as video and music production. When the first cycle of classes ended, many students indicated an interest in taking additional classes because there was so much more to learn about multimedia. In some centers, a waiting list has been set up for future classes. Even adults have asked to take the classes.

Pooling Expertise and Resources Across Sites

For some centers, teaching multimedia skills was a new experience. Fortunately, the network served as a peer-based learning community by pooling staffs' knowledge and sharing their experiences. Centers that were more advanced offered assistance and advice to center staff with less first-hand experience. Not only did center participants and their staff benefit from participating in the statewide program, pooling expertise from the different organizations meant that the curriculum developed for the program was a higher-quality product than any individual center could have developed independently. This occurred because the centers contributed their respective core competencies and range of expertise, which bolstered areas in which others needed help.

Also, the instructors convened several all-day training sessions to learn about software programs, where to find useful and free multimedia programs, how to use these programs, what works in teaching students, and how best to structure an effective class.

Effective Program Administration

In addition, the centers relied upon a single organization, Community Partners®, to administer the grant, work directly with WIA administrators, and ensure that the *Pathways* program met all WIA requirements.

A key lesson from this experience is that the WIA state agency needs to clarify and simplify the administrative requirements so site staff can focus the bulk of their time on working with the students rather than on paperwork. In fact, because of complex and ambiguous WIA program requirements, the centers initially enrolled ineligible students and have devoted considerable staff time to managing paperwork.

However, after serving the first round of students, and with help from the administering organization, the centers learned to work better with the WIA eligibility requirements and reduced errors in enrolling and tracking eligible youth.

Understanding Barriers Youth Face

Pathways staff felt confident that once students set foot in the center and could participate in the program, their lives would be positively influenced. However, issues such as family income situations, transportation needs, and parents' concerns sometimes made it difficult for students to participate. But program staff found resourceful ways to overcome these barriers. Many of the students needed to help their families earn money. To attract these students who normally would not have attended because they were busy working, some centers offered students stipends, which also served as an incentive for students to attend on a consistent basis.

Furthermore, because some students did not drive, they had difficulty getting to the center, especially if they had to pay for public transportation or if they were bused to schools far away from home. To overcome this barrier, some centers used their funding to provide public transportation reimbursements. Other times, program staff made sure students returned home safely.

Finally, there were parents who were skeptical about their children participating in *Pathways*. Parents sometimes felt an invasion of privacy because, for their children to qualify, they had to disclose how little they earned. In some cases, parents chose to keep their children out of the program rather than disclose their personal information. However, where staff felt students could benefit from the program, they sometimes made home visits to talk with parents about the program's value and to urge parents to supply necessary information for the students to enroll.

Testimonial

As a result of Pathways, *William, a student from the Bresee Foundation, altered his perspective and goals. Learning multimedia skills, discovering the potential to be employed in a well-paying job in the future, and being immersed in a positive center environment contributed to this change.*

He plans to attend Cal State Northridge — the first in his family to attend college — where he will major in computer science. He plans to open up his own graphic design company and to set the standard for his family that college is an option. He recently earned a scholarship for college from the Bresee Foundation.

Moreover, William now works as an employee for the center, providing assistance to younger students who come in to learn computers. Working with the students, he has gained patience and developed a problem-solving and helpful attitude, which have transferred over to his personal life, where he helps out his family as much as he can.

Recommendations:

Ways to Extend the Benefits of Multimedia Training to More Employers & Low-Income Youth

Based on their track record during the first year, these nine centers should be supported to continue the *Pathways* program, and youth and employers in additional communities should benefit from this kind of youth-centered multimedia program. Unfortunately, many students may not have the opportunity to participate in *Pathways* because second-year funding has not yet been secured.

The Governor, state policymakers, corporations, foundations, and civic leaders each have an important role to play.

GOVERNOR

The Governor originally funded *Pathways* through his 15% discretionary funding as part of the federally funded Workforce Investment Act (WIA). The Governor shares responsibility for, and should take pride in, the successes that *Pathways* has produced. These opportunities can be offered to additional youth through both WIA and other funding resources

First, the Governor should leverage the highly effective investment made in *Pathways* by again allocating a portion of the WIA discretionary funding to support this program. Funding *Pathways* again would yield a greater return on WIA's initial investment. *Pathways* staff now understand and know how to follow WIA guidelines and processes, allowing staff to focus greater attention on training their students.

Under the leadership of the Governor, state officials should simplify and streamline WIA's reporting and administrative requirements so that center staff can devote the bulk of their time to working with youth. Also, for students who do not have proof of low-income status, eligibility requirements for WIA should be considered met if the young person participates in other government programs that use similar income rules, such as the free school lunch program.

In the future, additional communities should be funded to offer the *Pathways* program so that additional "at-risk" young people and more employers can benefit from the program's outcomes.

In addition to his leadership through WIA, the Governor should support other workforce training efforts in technology for low-income youth through his budget and legislative authority. The Governor should create a budget line item to support programs like *Pathways* to ensure that low-income youth and California's economy can flourish.

Similarly, the Governor should support legislation that increases access to, and training in, technology. These measures could take the form of legislation like SB 1774 (Bowen, 2000) or AB 468 (Firebaugh, 2002), neither of which was signed into law but which would have created a grant program to fund technology programs.

STATE POLICYMAKERS

State policymakers can take on a variety of leadership roles to ensure that *Pathways*-like programs continue to exist and that youth receive technology training that will help them succeed in school and compete in the workforce. First, any investments in workforce development and job training should include an appropriate emphasis on teaching technology skills. Given the change in California's economy, employers are in greater need of highly skilled, tech-savvy job seekers than ever before. In fact, there are more high-tech jobs than people to fill them. Nationally, over 347,000 jobs are currently

unfilled. Over the next seven years, more than 1 million new jobs will be created in computer-related fields.[2] Seventy percent of business and Information Technology (IT) professionals say their companies — and the U.S. economy in general — need more IT talent, causing them concern about the Digital Divide.[3] The *Pathways* program has proven that it is possible to reach at-risk youth and prepare them for these in-demand jobs.

Policies should direct funding to trusted community-based organizations like those that provided services in the *Pathways* program. The funds should go to qualified nonprofit organizations that have a proven track record of working effectively with hard-to-reach youth and of providing technology training. Also, grants offered by the state should include as eligible recipients these types of community-based organizations. For example, the California Department of Education offers several types of grants that assist schools and school districts in using technology as part of their educational curriculum and for integrating technology in the classroom. Similar grants should be created for community-based organizations.

Policymakers should continue to create ways in which schools can tap community-based organizations as training centers where students can learn technology. Many schools face severe limitations in the supply of computers, space to house them, and staffing to adequately prepare youth in technology literacy. In fact, teachers in California are more likely to be "beginners" when it comes to technology compared to the nation as a whole (37% in California compared to 24% nationally); this figure rises in high poverty schools (42% in California compared to 29% nationally).[4] Programs like *Pathways* have qualified staff that can prepare youth with technology skills. Moreover, these types of programs can attract at-risk youth who may not choose to participate in a technology-training program at school, but would enjoy doing so at a neighborhood organization.

Policymakers should also offer incentives for businesses that provide centers with the latest in multimedia and technology equipment.

Lastly, policymakers should pass legislation that would support technology programs that train youth. Legislation could take the form of SB 1634 (Bowen, 2000), AB 1440 (Diaz, 2001), or AB 2501 (Diaz, 2002), all of which failed to pass the Legislature. SB 1634 would have offered financial support to create Internet centers. AB 1440 and AB 2501 would have created a grant program to train people in marketable technology skills.

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[2] Irving, Larry, Assistant Secretary of Commerce for Communications and Information, Remarks, "The Ed Tech Challenge: Training Our Youth for the 21st Century," at the Mississippi Educational Technology Luncheon, Jackson, Mississippi, January 27, 1999 [as prepared].

[3] InformationWeek.com, *Divided We Fall*, March 26, 2001.

[4] Editorial Projects in Education, *Education Week, Technology Counts 2002: E-Defining Education*, pg. 62, May 2002.

CORPORATIONS

Because corporations need qualified employees, corporations should partner with nonprofit organizations to provide support to *Pathways*-like programs. First, they should provide paid internship opportunities for students to continue developing the skills they gain through programs like *Pathways*.

Further, corporations that specialize in the multimedia field can also work closely with these centers to ensure that the computer programs are upgraded to meet industry standards. In addition, corporations can provide training sessions for instructors to learn about the latest multimedia programs so that the instructors are teaching "state-of-the-art" skills to their students.

Corporations can also donate or purchase appropriate computers, software, multimedia equipment, and other multimedia components for centers to use.

FOUNDATIONS

Foundations can encourage the development of innovative and effective multimedia youth training programs like *Pathways*. Because *Pathways to Our Future* cuts across many different program areas, foundations should consider funding these kinds of activities whether it is through a foundation focus on after-school programs, digital arts or media, workforce investment, academic enrichment, gang diversion, or technology skills acquisition. Valuable roles for foundations include funding for demonstration programs, development of curriculum, technology staff for after-school programs and other nonprofits, staff training, and program evaluation.

CIVIC LEADERS

Civic leaders can work to strengthen after-school and job training efforts locally by involving community technology programs to help accomplish these goals. They can contract for multimedia skills training with local programs like *Pathways* that have the expertise in technology training and the ability to recruit and train hard-to-reach youth. Civic leaders can also contract with these community organizations to provide technical assistance or training as they gear up the technology components of their own programs.

In Closing

The first year of the *Pathways to Our Future* program resulted in remarkable successes. *Pathways* offered at-risk students a safe after-school and/or summer environment where they could gain in-demand technology and multimedia skills training as well as the job preparation skills needed to obtain internships or paid positions. At the same time, the program provided youth with the motivation to continue their education or training with a sense of purpose. Staff who helped build and implement *Pathways* look forward to working with all interested parties to see that these important gains for at-risk youth and low-income communities are sustained and expanded.

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Multimedia Curriculum

A multimedia curriculum was developed by a team from the *Pathways*-funded projects, which included Jacalyn Lopez Garcia (Community Digital Initiative), Diane Oliver (Karuk Community Development Corporation), and Cathy Trout (Bresee Foundation). The centers used this curriculum as a foundation from which they taught.

The curriculum was designed to teach core skills required for a broad variety of multimedia projects. Furthermore, the training covered the application and integration of those skills into as many different media as possible, such as Web site design, video production, and graphic design.

Multimedia skills acquisition was demonstrated through a final project that integrated multiple media and incorporated the core skills.

CORE MULTIMEDIA SKILLS

1. Create a project from concept to completion by using storyboarding, production folders, and other organizational techniques.
2. Learn about the principles of layout and design, such as templates, tables, layers, backgrounds, borders, navigation, hyperlinks, threaded or linked text.
3. Use file formats appropriate for different media, such as .pdf, .jpg, .tif, .gif, QuickTime, .aif/f, .wav, .mp3.
4. Experiment with text and fonts, including formatting, styles, text boxes, and titles.
5. Understand color concepts and principles, such as color theory, hue, value, saturation, contrast, Web-safe colors, color schemes, color separation, and color modes.
6. Manipulate graphic and digital images: photography, original artwork, animation, and video.
7. Import media using techniques such as opening, inserting, placing, importing, scanning, downloading, determining resolution, and recording.
8. Edit media using techniques such as trapping, formatting, sequencing, ordering, trimming, filtering, inserting transitions, and creating special effects.
9. Save and export media using techniques such as saving, copying, burning, uploading, exporting, and printing.
10. Learn about project assessment by incorporating self- and peer-assessment skills, such as identifying objective evaluation criteria, listening, offering constructive criticism, articulating desired affect/outcome/rationale, critical thinking, teamwork, and problem-solving.
11. Discover different multimedia careers and the practical application of multimedia skills within those careers and the workplace.

Appendix 2

Employment Skills Curriculum

Employment skills are an important component in training students for any career. To develop these skills, a member of the *Pathways* network, Mike Thomas (Bresee Foundation), created a listing of needed employment skills for the centers to use as a complement to the multimedia skills the students learned. This tool tracks the basic skills necessary for any prospective job seeker. In addition, it provides a post-assessment worksheet to determine if the student successfully acquired these skills. The full employment skills assessment worksheet can be found at the network's homepage (http://www.ciof.org/toolkits/employment/pathways/index.htm).

JOB-GETTING SKILLS

1. Completing an application.
2. Making career decisions.
3. Using labor market information.
4. Preparing a résumé.
5. Preparing a cover letter.
6. Interviewing.
7. Preparing a letter of appreciation.
8. Learning appropriate telephone skills.
9. Understanding labor laws and rights as a worker.
10. Using job searching techniques with computer technology.

Employment Skills Toolkit

Building upon the employment skills listing, another member of the *Pathways* network, Diane Oliver (Karuk Community Development Corporation), developed an employment skills toolkit. The toolkit is a step-by-step guide and instruction manual to developing the job-getting skills listed in Appendix 2. Because this toolkit is quite extensive, only a summary is printed here. The complete toolkit can be found on the network's homepage (http://www.ciof.org/toolkits/employment/pathways/index.htm).

EMPLOYMENT SKILLS

1. **Application Completion:** Practical experience in applying for a job using the California Department of Transportation as an example. Includes links to employment applications and job listings.
2. **Career Decisions & Labor Market Information:** A research worksheet with links to multimedia-related careers, their occupational outlook, training requirements, and where to locate them on the Internet.
3. **Cover Letters & Résumés:** Special tips on writing that very first résumé and cover letter for those with little employment experience. Includes a practice worksheet and samples.
4. **Tips on Interviewing:** Practical advice using examples from the California Department of Transportation. Includes links to Caltrans Examination information and the California Career Planning Guide, as well as sample questions, an evaluation form and illegal questions interviewers cannot ask.
5. **Letter of Appreciation:** Information and advice about appreciation letters, with templates for creating your own.
6. **Telephone Skills:** Thirty-six tips to terrific telephone etiquette. Includes a link to an Internet telephone skills lesson by Workshops Inc., which offers practice in using these skills.
7. **Labor Laws & Worker Rights:** Quick answers to current laws and rights our students should know. Presented in a worksheet format with links to California Child Labor Laws and Occupational Safety and Health Administration.
8. **Job Search Techniques:** Enroll Online in CalJobs with step-by-step instructions. Once enrolled, locate local job listings, enter your resume or browse the national job listings.

Appendix 4

Contributors to This Report

Many organizations and individuals contributed to this report. Staff from the following organizations partnered to implement the *Pathways* program and contributed valuable insights and information:

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Community Digital Initiative
Community Partners®
C.T. Learning
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Karuk Community Development Corporation
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The Children's Partnership
Women's Economic Agenda Project

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