LEED-SACRAMENTO

Industry Skills Standards: Making the Education-Economic Development Link

By William Diehl

Since 1992, LEED-Sacramento has convened and organized senior and "front-line" staff from school-to-career partners in four counties with leaders from many businesses and industries, nine school districts, four postsecondary institutions, and several community-based organizations, as well as representatives from government, labor, and other key stakeholder groups.

LEED is the primary school-to-career intermediary in the Sacramento region. To foster a skilled workforce that supports the growth of a strong regional economy, it has three main education initiatives: 1) school-to-career; 2) technology in the classroom; and 3) advocacy for systemic change.

LEED oversees, and is fiscal agent for, the Sacramento Regional School-to-Career (STC) Alliance. The Regional STC Alliance promotes school-based and work-based learning, connecting activities, and collaboration among business, the community, and the schools to: 1) create relevant curriculum; 2) create valid and reliable assessment tools and procedures; and 3) create skill certificates that industry widely accepts.

According to Executive Director Brenda Gray, key to LEED's work is the belief that "industry skill standards form the basis upon which to understand economic development planning, to restructure educational curricula and programs, and to support entrance into careers." Industry-developed skills standards in high-growth, high-wage industries form the organizing element for developing and implementing school-based learning, work-based learning, and connecting activities. The standards lead to relevant curricula and learning experiences; valid, reliable assessment tools and procedures; and widely recognized skill certificates.

Key Lessons

- Industry-developed skill standards can be an effective organizing element for developing and implementing an array of school-based learning, work-based learning, and connecting activities.

- An intermediary organization that is viewed as an impartial broker and convenor is critically important.

- Public awareness and acceptance is critical to implementing school-to-career activities at a large scale and for the long term.

Background Information

- Mission: To develop and support partnerships with business, education, government, and the community to strengthen the Sacramento regional economy through dramatic improvement in education and training

- Structure: A 12-member Executive Committee manages LEED and provides direction, oversight, advocacy, and evaluation. Committee members represent business, K-12 education, and higher education. The chair is W. Bernard Bowler, Senior Location Executive for IBM. The secretary is Dr. David Meaney, Superintendent, Sacramento County Office of Education.

  The Executive Committee is drawn from a Steering Committee of 42 senior-level organization representatives—school superintendents, community college presidents, leaders of community-based organizations, business CEOs, government officials, and union leaders. The Steering Committee determines policy and provides direction, advice, and advocacy.

  The Sacramento Regional School-to-Career Alliance, a major LEED effort, is governed by a Management Committee. This committee is comprised of director-level representatives (e.g. director of personnel) who can help design and guide such efforts. The committee is accountable for meeting goals established in school-to-career plans and funded proposals; it oversees the process of hiring trainers and giving final approval, sets benchmarks and oversees evaluation plans and activities, and disseminates information.

  LEED also organizes and manages several regional industry consortia as part of school-to-career efforts.

- Funding and Staffing: Employers started LEED, originally funding it through contributions. As LEED establishes programs, it raises funds from a variety of sources. From 1996 until 1998, it received federal School-to-Work funding as an umbrella agency for the Sacramento Regional STC Alliance. LEED has state funding to continue these activities until 2000. Member contributions support the Industry Consortia. Its budget is approximately $1 million.

  LEED Executive Director Brenda Gray serves on and reports to the Executive Committee. LEED's seven other staff members are an operations manager, program analyst, bookkeeper, office clerk, and three industry education coordinators.

- Partners: Key partners include: the Sacramento Metro Chamber of Commerce, seven industry consortia, nine school districts, the Sacramento County Office of Education, Sacramento Employment and Training Agency, four colleges, California State Employees Association, California Teachers Association, Federation of Program Operators, Parents and Principals Council, Sacramento Urban League, and the City of Sacramento.

- Organization Type: 501(c)(3) non-profit organization

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Historical Summary

The Wake-Up Call

Several regional factors contributed to LEED's creation: economic and social churning, especially the closings of three military bases beginning in the late 1980s; the increasing diversity of the student population; and rapid changes from traditional to high-skill and high-technology career opportunities. The formative event was a 1991 Employers Forum, organized by the Sacramento Metropolitan Chamber of Commerce. Over 500 employers participated in discussions and identified problems facing the region. Education emerged as the major issue, especially its role in economic growth and preparing the future workforce.

IBM General Manager Bernard Bowler, Sutter Health CEO Patrick Hayes, and Dr. David Meaney, Superintendent of the Sacramento County Office of Education, convened a series of follow-up presentations focusing on education, and they secured the involvement of the Chamber's Education Committee. Using staff and resources contributed by their organizations, this group designed a one-hour public meeting on the problems and needs of education in relation to economic development, regional competitiveness, and the preparation of a skilled workforce. The "Wake Up Call," as the group termed its presentation, outlined the benefits of improving education, what needed to be done, and the price the region would pay for inaction. Dane Goodfellow, a loaned executive from IBM, provided assistance, drawing on experience designing presentations to help build interest in and commitment to school-to-career in Utah.

The group conducted several public meetings across the Sacramento region, asking business and community leaders to get involved, as volunteers and

with financial or in-kind contributions, in addressing the problems and issues described in the Wake Up Call. Positive responses, including financial commitments, enabled the four executives to form LEED, hiring Sharon Margetts, a former Pacific Bell senior executive, as part-time director and Brenda Gray as deputy director. (Gray became director in 1995.)

LEED-Sacramento's official launch took place in the fall of 1992, with the goal of addressing economic development issues in the Sacramento area. The partnership included high-level industry executives, labor representatives, school district administrators, and representatives of community-based organizations. In the first several months, they put LEED's organizational structures in place, selected a board of directors, appointed advisory committees, and incorporated as a non-profit.

"Solving World Hunger"

One of LEED's first activities was a board retreat that developed a mission statement, identified issues the new organization would address, and developed task forces for carrying out that work.

At the retreat, the board (which has evolved into the Executive Committee) adopted its mission: "To continuously strengthen the Greater Sacramento region's economic vitality by building a partnership among industry, education, community, and government that will improve each person's quality of life through education and opportunities to succeed in postsecondary employment, education, and training."

The retreat also identified issues that LEED might address—*157 in all*. Brenda Gray, who became executive director in 1995, calls this the "solving world hunger" phase. These issues fell into five families: social issues, standards, technology, resources, and education. The board established a task force for each family. Over 300 business, education, and community leaders served on these task forces, and the board charged them with developing both problem statements and proposed solutions. As much as possible, the solutions were to be innovative and systemic.

These groups met regularly for six to nine months, then assembled with the board and other task forces to report recommendations. From that, the board and task forces selected a number of recommendations, and LEED replaced the task forces with implementation teams.

In 1993 and 1994, the work of these teams led to a variety of programs. For example, Late Night Sacramento opened up many schools at night for a range of scholastic, career-development, and recreational activities. A Homework Hotline provided messages to parents in various languages. Teacher professional development was delivered in topics such as the SCANS skills,

curriculum integration, and Stephen Covey's *Seven Habits of Successful People*. Through Project Phoenix, businesses donated used computers, which were refurbished for schools. All of these initiatives were either short term or eventually spun off—for example, the city now operates Late Night Sacramento.

Developing a Regional School-to-Career System

In 1994, the board decided that LEED's separate programs and activities, while useful, tended to be short-term interventions that did not lead to needed systemic changes. The board decided to either disband LEED or focus it.

This decision coincided with the passage of the School to Work Opportunities Act (STWOA), along with mobilization in California in response to the possibility of federal implementation funding under the Act. The board used this occasion to focus LEED on three interrelated priorities:

- School-to-career and workforce preparation;
- Technology in schools; and
- Advocacy and partnerships for systemic change in education.

LEED had already been involved in school-to-career through its task forces and initiatives. For example, it had conducted outreach to teachers (including summer externships), brokered classroom speakers and school volunteers from the business community, and supported the creation of career academies, or "schools-within-schools," in several districts. Most important, LEED had begun to advocate that schools and businesses recognize the value of skills standards, and it had taken initial steps to use such standards itself as an organizing strategy for school-to-career activities.

Because of these activities, and because LEED had established itself as an impartial convenor and broker—as an organization that gave education and business an equal voice—two school superintendents asked LEED to convene the initial regional meetings to discuss the STWOA. "There were turf issues," Brenda Gray points out, "and the process of deciding how the region could best respond to the opportunities available through new funding for school-to-career was not painless." It was clear to both business and education that LEED was the appropriate intermediary to lead the regional school-to-career effort. It became the umbrella organization and the fiscal agent for the Sacramento Regional School-to-Career Alliance.

In 1996, federal funding began when the National School-to-Work Office selected this alliance for funding as a Local Partnership. A major aspect of

LEED's work since then has been to develop and deepen the alliance and its programs, most of which are organized around skill standards. LEED now devotes about 80 percent of its staff time and resources to school-to-career activities and views this initiative as the mechanism for the kinds of systemic change the region needs.

The Sacramento Regional School-to-Career Alliance is comprised of industry consortia and the K-18 Intersegmental Council, which collaborate on working groups and projects. It has six standing working groups: connecting activities, curriculum development, assessment development, work-based learning, outreach and collaboration, and continuous improvement and sustainability.

Core Approach: Skill Standards as an Organizing Strategy

Today, LEED maintains its 1994 priorities: school-to-career and workforce preparation, technology in schools, and advocacy and partnerships for systemic change. The school-to-career effort focuses on using skill standards in ten high-growth, high-wage industry clusters to develop appropriate school-based and work-based learning and connecting activities. For each cluster, LEED seeks to create: 1) relevant curricula; 2) valid, reliable assessment tools and procedures; and 3) widely accepted skill certificates.

The Banking Skills Standards

Industry skills standards provided the major impetus for LEED's decision to engage in school-to-career activities. "LEED got into school-to-career headlong when we saw the Banking and Telecommunications Skill Standards funded by the California Business Roundtable and the state Department of Education," explains Brenda Gray. "This was just what we needed to move forward." LEED staff first saw these skill standards in 1994, while the board was considering re-focusing or disbanding LEED, and while local schools were becoming more aware of the school-to-career movement.

Gray, along with Pat Stone, then education director at Bank of America and subsequently executive director of the National Employer Leadership Council, brought the standards to the Executive Committee early in 1995. According to Gray, "The superintendents loved it. Finally, here was something that described to them exactly what it was that employers wanted." After presenting the Banking Skill Standards to the full Steering Committee, LEED decided to focus its emerging school-to-career effort around such standards. Seven superintendents and their school districts joined LEED in this initial work. (These districts became the original members of the Sacramento Regional School-to-Career Alliance and were part of the grant application for federal School-to-Work funds.)

After the Executive Committee approved the school-to-career focus with skill standards as an organizing strategy, LEED convened representatives of 15 financial institutions, ranging from small banks to the Bank of America and Wells Fargo. This group endorsed the state-level Banking Skills Standards as appropriate for the Sacramento region. In the summer of 1995, with a $40,000 grant from the Walter S. Johnson Foundation to pay for teacher stipends and training costs, LEED brought teachers from four schools together to receive training about, and develop integrated curricula based on, the Banking Skills Standards. Also that summer, a $75,000 grant from the S.H. Crowell Foundation enabled LEED to hire its first industry liaison staff person.

The summer work with teachers—and business engagement made possible by the industry liaison—led in the 1995-96 school year to the establishment of Banking Academies at Hiram Johnson West High in Sacramento, San Juan High in San Juan, Laguna Creek High in Elk Grove, and Highlands High in the Grant Joint Unified School District. These academies, funded by the California Department of Education, became a model for using industry skill standards to create relevant curricula, courses, and programs.

Skills Standards as Central Strategy

The effort around the Banking Skills Standards led LEED to adopt other skills standards and laid the groundwork for the strategies it has adopted for all of its intermediary work. "We discovered that there were skills standards in 22 industries that were developed, or being developed, at the national level," Gray explains. "We got hold of about 15 of them, matched them with our major and emerging industries, and had a framework to go from."

It is significant that these efforts occurred *while* LEED was forming the Regional School-to-Career Alliance. They also came *before* it had received federal School-to-Work funding.

LEED's core approach to school-to-career revolves around industry-developed skill standards, as the Regional Alliance's objectives, as stated in its 1995 proposal for federal funding, reflect:

- Identifying high-skill, high-wage, high-growth industries in the region;
- Creating clear career pathways in and across industries;
- Developing skills standards for industries in which none exist;
- Using industry skills standards as the substance for developing integrated curriculum and performance-based assessments;

- Creating a clearly articulated, seamless system of education and training for young people—both in and out of school—and re-entering adults; and

- Producing full understanding and support for a school-to-career system in the entire community.

The range of intermediary functions that LEED now plays in connecting employers, schools, students, and teachers relates, directly or indirectly, to the use of skill standards. This includes: employer engagement and organizing work-based learning experiences; curriculum development; student assessment; and involving teachers and schools.

Employer Engagement and Work-Based Learning

LEED involves employers in school-to-career through industry consortia, each with one or more sets of industry skills standards. Over 135 employers serve on these consortia, with seven consortia in place: financial services, health, public safety, human services, retail and marketing, high-tech and communications, and bioscience. LEED is now establishing consortia in construction and development, hospitality and tourism, and transportation.

These consortia are organized into Core Economic Sectors, with a LEED staff person—an "industry education coordinator"—assigned to each sector. The core sectors are: Sacramento Regional Banking/Financial Services (financial services, retail and marketing, hospitality and tourism); Sacramento Health Employers and Educators (health, public safety, and human services); and Sacramento Regional High Tech (high-tech and communications, bioscience, construction and development, and transportation). The industry education coordinator recruits employers from LEED's four-county region to participate in one of the specific consortia and supports all the school-to-career activities related to the consortia.

The consortia review national industry skills standards, revising them based on local conditions and needs. These revised skills standards serve as the basis for the range of school-to-career activities. The consortia also utilize the skill standards to set policy and direction for workforce preparation activities. To accomplish those tasks, each consortium typically has working committees for curriculum, assessment, and work-based learning.

The industry education coordinator works with the consortia members on developing and promulgating skills standards, providing work-based learning experiences, and supporting employer involvement in career academies and career pathways in schools. For example, the work-based learning committee for each consortium develops outlines of activities and skills, including core employability skills and industry-specific skills, based on the appropriate industry skill standards, for employers to cover in the work-

based experience. LEED then recruits businesses to provide work-based learning experiences, matches businesses with schools and students, places students in internships and other work-based learning, and trains worksite supervisors. The industry education coordinators provide these services.

Curriculum Development

Curriculum development grows directly from locally adapted skills standards. LEED staff coordinate and deliver regional training for teachers and for training providers (such as staff from community-based organizations who work with out-of-school youth). These sessions cover curriculum integration techniques and the development of career academies and career pathways.

Each year, LEED conducts a five-day Summer Conference ("Today's Students, Tomorrow's Workforce") and three follow-up workshops as the springboard for curriculum development. The participants are industry consortia members, career education directors from LEED's participating school districts, and educator teams from the high schools. Educator teams range from three to ten members and generally include at least three academic teachers, one vocational teacher, one school counselor, and one school administrator. A community college faculty member or an employer already partnered with the school may also serve on the team. In addition, community-based organizations that work with out-of-school youth, such as the Urban League or the Asian Resources Center, send staff to the training.

Prior to the Summer Conference, school districts decide, based on emerging industries and the proximity of employers to the schools, which high schools will develop new academies and career pathways or strengthen existing ones. At the conference, the teams focus on developing programs and curricula for these academies and pathways, with the skill standards informing both program and curriculum development. For example, a high school will charge its team with developing a Health Services Academy. The team will use health services skills standards in designing the overall academy and developing curricula, both for new courses and to integrate the skills into core academic courses. The team will also look to the skill standards as it develops assessment batteries that academy students will take to receive certification.

LEED organizes and runs the Summer Conference, which is funded by grants (initially the federal School-to-Work grant and now state funds). LEED staff and consultants selected by the Regional Alliance's Management Committee deliver the training. Teachers receive stipends for attending.

School-to-Work grants pay the stipends for educators from the seven school districts in the original Alliance. LEED's two affiliate school districts pay for their teachers. The affiliates joined LEED after the original seven member districts. All nine receive the same school-to-career services, but the affiliates

must pay the stipends for their teachers themselves, as well as provide release time.

In 1995, 1996, and 1997, the Summer Conference provided intensive training in curriculum integration, such as how to integrate occupational skills and examples into academic courses. In 1998, LEED organized the conference into two tracks: intensive training in curriculum integration for new educator teams; veteran teams participated in topical workshops, such as recruiting employers, securing funding, or linking work-based and school-based learning.

After the Summer Conference, the teams return to their schools and serve as either planning or implementation teams. They carry forward work begun at the conference, which may include establishing a new career academy or career pathway, implementing new integrated curricula, or expanding existing programs. LEED's industry education coordinators continue to assist the teams by brokering work-based learning experiences and other types of employer involvement (such as classroom speakers) and by meeting periodically with teams to review progress and provide technical assistance. In addition, LEED staff provide support and additional training through three follow-up workshops.

Student Assessment Batteries

The industry consortia, working with LEED staff, consultants, and area educators, also design processes and create sets of student assessments to measure core skills. Based on the skill standards, these assessment batteries result in a "skills certificate," a certification system that students, employers, and education and training providers all recognize.

Human resource and training and development personnel from consortia companies serve on an Assessment Development Committee that develops these assessments. LEED has contracted with Strumpf Associates to manage the assessment process and with CASAS (the Comprehensive Adult Student Assessment System), a San Diego-based test-development organization, to create actual test items. Assessment batteries include: written math and reading tests, a critical thinking test, a problem-solving test, oral scenarios (authentic work-based problems presented and solved orally), and a presentation portfolio.

LEED is developing three levels of assessments. Level One measures basic employability skills (SCANS skills) using examples and problems from industries in one consortium and reflecting that consortium's skills standards. Level Two measures occupational skills common across a family of occupations in a single consortium. Level Three measures job-specific skills.

Currently, LEED is working on the Level One assessments, with batteries field-tested in financial services, health, high-tech, and telecommunications. (High-tech and telecommunications are in the same consortium but were initially organized separately and developed separate but similar assessments.) Level One batteries for the other four consortia will be pilot-tested by the end of 2000. LEED plans to begin work on Level Two assessments in 2001.

Students complete the appropriate battery and receive a certificate that reflects industry skills acquired. For example, a student may receive a certificate based on performance on Level One financial services assessments. This certificate would indicate mastery of a defined set of employability skills as measured using examples and problems drawn from financial services. Because the same employability skills apply to other industry clusters, a Level One certificate demonstrates mastery of skills transferable to any of the industry clusters. Level Two and Three assessments will result in certificates that reflect more specific industry or job skills.

As students in career academies or career pathways complete the assessments, they will earn the appropriate certifications. Currently, employers are at various stages of recognizing the value and use of the certificates. Some businesses have made a commitment to give hiring priority to students with certificates; others say they will waive basic entry-level testing; most employers in the consortia recognize the value of the certification process.

Involving Teachers and Schools

Skills standards are also LEED's main vehicle for organizing teacher and school involvement in school-to-career activities, including the formation of career academies and career pathways and the training that LEED staff conduct on curriculum integration techniques for educators. The major effort in this regard is the five-day summer conference and follow-up workshops described above.

Largely through LEED's guidance, and influenced by its emphasis on skill standards, the region's high schools have created over 60 career academies. These "schools-within-schools" focus on high academic standards and a career path of interest.

"There are various types of academies in our region," explains Gray. "Some are Academies with a capital A. These receive formal funding from the state Department of Education and are well established. Others are academies with a lower-case a. These are in early stages of planning and implementation."

In funded academies, students receive technical classes in their area (such as business computing) and an academic curriculum linked by a common

theme. There is an Academy Coordinator, one or more formal career courses, and senior projects related to the career area. Juniors and seniors usually have access to internships and mentoring. In many cases, academy students have a single team of teachers for three or four years.

Two high schools have reorganized into "wall-to-wall" academies, with all students and teachers involved in one of the academies. Each of the other high schools in the Regional Alliance's nine districts has at least one career academy and career pathways programs for non-academy students. Pathways are less formal than academies, with fewer technical classes. Like the academies, though, they integrate career-related topics and examples with rigorous academics. Academies range in size from 60 students (20 each in the sophomore, junior, and senior classes) to 600 (with 200 per class).

According to Gray, "Almost all schools operating funded academies have done a good job at recruiting a group of students into the academy that reflects the full diversity of the student body." She notes that the degree to which all students enroll in academies depends largely on how well the school has marketed the academy concept and the idea of skills standards to parents and students. While some academies serve primarily "at-risk" youth, most involve a range of students.

The academies provide a structure for integrating skill standards into school curricula. In the Sacramento region, they are also effective in improving student performance, as measured by higher average GPAs and lower drop-out rates. The U.S. Department of Education's New American High Schools Competition selected Encina High in Sacramento, with "wall-to-wall" academies, as one of ten model high schools nationwide for combining career preparation and academics.

Achievements

LEED has identified and responded to successes and challenges by continuously adapting to ensure that it allocates resources as effectively as possible. It has adopted a formal evaluation process and contracts with WestEd (formerly the Far West Laboratory) as a third-party evaluator. Gray estimates that LEED dedicates the equivalent of a full-time position to this third-party evaluation. The process addresses a number of areas, including: 1) the extent to which employers and educators understand and support the use of industry skill standards as a foundation for integrated curriculum and student assessment development; and 2) the extent to which the region is ready to implement skills standards for students.

LEED has successfully used industry skill standards to organize and implement the region's school-to-career activities.

From the beginning of its involvement in school-to-career, industry skill standards have provided LEED's framework for: organizing employers, setting up industry consortia, conducting professional development for educators, assisting in the establishment of over 60 career academies, guiding curriculum integration efforts, designing reliable assessment tools and procedures, and beginning to establish a system for awarding skills certificates that are widely accepted by industry.

LEED has used industry skill standards to successfully engage employers in school-to-career activities.

LEED has recruited over 135 employers to participate on industry consortia related to industry skills standards. For students in the career academies and career pathways, over 500 employers provide work-based learning opportunities that are tied directly to skills standards. LEED has trained over 60 worksite supervisors to manage and expand these work-based learning opportunities and placed over 6,000 learners in work-based learning opportunities, significantly increasing the number of work-based learning opportunities each year. LEED has also involved employers in working with educators on integrating school curricula and courses with skills standards.

Every high school in LEED's partner districts uses skills standards to establish academies and pathways and guide curriculum development.

LEED has trained over 600 education and training providers on curriculum integration methodologies and provided up to 10 staff development days or release days per year to over 300 educators for curriculum and assessment development. The educator teams in LEED's training have established or expanded career academies in every high school in the nine districts. Those high schools with only one or two academies have also organized students into less structured career pathways.

LEED has begun to create reliable assessment tools and procedures tied to the skills standards and leading to the creation of skill certificates.

LEED has developed and field-tested student assessment batteries for four industry sectors, with four more under development. These "Level One" assessments measure basic employability skills (SCANS skills) within the context of specific industry areas.

LEED has attracted, or influenced the use of, multiple funding streams in supporting and expanding the use of skills standards to focus school-to-career activities.

In addition to federal and state School-to-Work grants, LEED has attracted foundation and business funding. This has allowed LEED to increase its staff and budget as more employers and schools become involved in an increasing array of school-to-career activities.

LEED has also influenced the use of related funding streams. For example, the career academies in the Sacramento region established or strengthened through LEED's trainings and technical assistance have received funding from the California Department of Education.

The Future: Plans, Priorities, and Challenges

To impact more students, teachers, and employers, LEED will continue developing, implementing, and expanding the array of school-to-career activities and programs related to the use of skill standards.

LEED plans to expand its work with employer consortia, career academies and pathways, teacher training, development of integrated curricula, and work-based learning to bring the regional school-to-career system to a large scale. This priority raises a number of issues, common among intermediary organizations, of sustainability and scale. Having used skills standards as a basis for developing basic systems and procedures, LEED's challenges now are to devise cost-effective replication strategies and to secure the resources and commitments necessary for wider impact. More needs to be done to move school-to-career into schools' core activities and funding priorities. LEED must also maintain and expand vibrant, active, and successful collaborations across the region's many school districts, employers, and agencies.

LEED plans to develop and staff additional industry consortia in order to organize large numbers of employers in support of school-to-career and to developing regional skill standards, assessments, and certifications.

The industry consortia are a key element in achieving sustainability and scale. LEED intends to add three more industry education coordinators so that its staff includes two people for each of the three core sectors, each of which includes three or four industry consortia. One staff member would be an employment engagement specialist, focused on recruiting and supporting employers. The second, an education and training provider specialist, would assist and advise teachers on curriculum issues, supporting students, and other topics. This staffing arrangement is designed to help scale up the LEED activities. Funding these new positions is a challenge, with some

contributions expected from consortia members.

> *After developing and field-testing student assessment batteries, LEED will implement them, leading to the issuing of skills certificates.*

The batteries of Level One assessments for all LEED's industry sectors are scheduled for completion, field testing, and implementation by the end of 2000. A longer-term priority is to create, field test, and implement skill assessments in career clusters and in specific jobs. Industry consortia must identify the skills needed for their clusters or specific jobs and then, assisted by testing experts, create assessment batteries. Completing and implementing all these batteries is time-intensive and expected to take five or more years. LEED faces the challenges of funding this work and maintaining employer and educator involvement over the long haul. In addition, more needs to be done to build support among employers and educators for using skills standards in developing relevant curricula, student assessments, and skill certificates.

Key Lessons

> *Industry-developed skill standards can be an effective organizing element for developing and implementing an array of school-based learning, work-based learning, and connecting activities.*

Industry skill standards are the cornerstone of LEED's work. "The skill standards—not in theory, but the tangible documents—were easy to focus all the stakeholders around, especially employers and educators," says Gray. "They made the goals of our work clear and measurable."

LEED has shown that skill standards are a powerful tool to engage substantial employer involvement, restructure educational curricula and programs, establish career academies and pathways, organize work-based learning opportunities, develop valid and reliable assessment tools and create skill certificates. Skill standards give employers and educators equal, critical, and mutually understood roles in the school-to-career system.

> *An intermediary organization that is viewed as an impartial broker and convenor is critically important.*

As the primary school-to-career intermediary, LEED has organized multi-stakeholder groups, built and sustained a common vision and agenda for school-to-career, and moved the vision to reality in the Sacramento region. It could do this because it had a track record as an impartial broker and convenor—as an organization giving education and business an equal voice. With skills standards as its central organizing concept, LEED could build a vision and agenda shared by education and business partners. This enabled LEED to effectively plan and implement school-to-career activities.

Public awareness and acceptance is critical to implementing school-to-career activities at a large scale and for the long term.

LEED works to strengthen public awareness of the importance of skill standards and its own critical role in the school-to-career system. It also organizes annual high-profile events that heighten public awareness of the value of skill standards, school-to-career activities, and LEED itself. The challenges in building such support are many.

First, a public perception persists, especially among parents, that skills-attainment, career academies, work-based learning, applied curriculum, and so on are old-style "vocational education" and are not appropriate for "all students." While some career academies are geared to "at-risk" students, most now enroll a spectrum of students. This suggests that as LEED continues to implement and strengthen school-to-career programs, the public perception will change. The schools in the school-to-career network are also active in informing parents and building understanding and support.

In a related issue, LEED has engaged many educators from a number of schools in programs and workshops related to the use of skill standards, yet many more educators need to be involved to get to scale. The annual summer conference is one LEED strategy to engage more educators, both in the training itself and in developing take-home plans that include program implementation and teacher engagement.

Finally, an essential component is strong employer support for the skill certificates awarded to students based on performance on the battery of assessments. The involvement of the employer community needs to be sustained and enlarged, and LEED is developing additional industry consortia and plans to increase the number of staff working with the consortia to help address this challenge.

Acknowledgments/For More Information

This case study was prepared by William Diehl of the Corporation for Business, Work, and Learning in part based on interviews with Brenda Gray, Executive Director of LEED-Sacramento. Other sources of information include: LEED brochures, the LEED Web site, and *Sacramento Regional School-to-Career Alliance Presents Industry Skills Standards Initiatives for Sacramento's Economic Future* (November 1995).