How to Build Bridge Programs that Fit into a Career Pathway

A Step-by-Step Guide Based on the *Carreras en Salud* Program in Chicago

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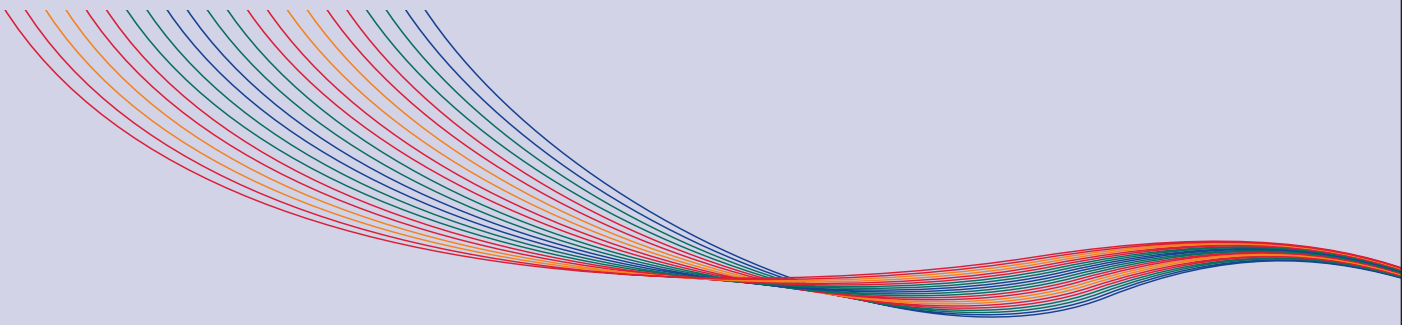
INSTITUTO DEL PROGRESO LATINO

Carreras en Salud
Leadership Partners



Founded in 1968, the **National Council of La Raza** (NCLR) is the largest national Hispanic civil rights and advocacy organization in the United States. Through its network of nearly 300 affiliated community-based organizations, NCLR reaches millions of Hispanics each year in 41 states, Puerto Rico, and the District of Columbia. To achieve its mission, NCLR conducts applied research, policy analysis, and advocacy, providing a Latino perspective in five key areas: assets/investments, civil rights/immigration, education, employment and economic status, and health. In addition, it provides capacity-building assistance to its affiliates who work at the state and local level to advance opportunities for individuals and families.

Instituto del Progreso Latino (Instituto) was founded in 1977 to meet the needs of Latino immigrants to learn English, find employment, accustom their children to the U.S. educational systems, and adjust to life in Chicago in a myriad of ways. Since its inception, Instituto has been a story of hope, perseverance, and community triumph. Today, Instituto is a recognized leading city and state educational center serving more than 14,000 participants annually to advance their basic academic skills, obtain a high school diploma, pass the GED exam, become U.S. citizens, increase their job skills, and provide assistance with employment opportunities. Its goal is to instill that sense of hope, motivate perseverance, and provide the tools for success.

Association House of Chicago (AHC) is a 110-year-old settlement house in Chicago that serves a multi-cultural community through programs in English and Spanish that promote health and wellness, and create opportunities for educational and economic advancement. The agency offers over 30 programs in five divisions: Child Welfare, Behavioral Health, Out of School Time Programs, El Cuarto Año High School, and Community Services, which includes a Center for Working Families, income support, job readiness for youth and prisoner re-entry populations, adult education, technology, and citizenship. AHC partners with over 21 public schools and is a co-founder and fiscal agent for the Greater Humboldt Park Community of Wellness, a coalition of more than 50 organizations that work together to promote community health.

The Humboldt Park Vocational Education Center (HPVEC) of Wilbur Wright College, one of the City Colleges of Chicago, is a community-oriented adult learning center whose primary mission is to provide training in business, health, and manufacturing that teach the skills necessary for employment and career advancement. HPVEC is accredited through Wilbur Wright College by the North Central Association of Colleges and Schools and is approved by the Illinois Community College Board and the Illinois Office of Education Department of Adult, Vocational, and Technical Education. HPVEC opened in spring 1995, offering adult basic education (ABE) and some limited vocational training to at-risk youth and underserved adults. The neighborhood population it serves is two-thirds Latino and predominantly young and low-income. Most do not have a high school diploma. The percentage of people in this neighborhood who never reached the ninth grade is nearly three times higher than in Cook County as a whole. Besides needing specific job skills training, many community residents also face a language barrier and lack the economic resources to pursue a vocation.

Instituto del Progreso Latino would like to thank the Illinois Community College Board, the Illinois Department of Commerce and Economic Opportunity, and The Joyce Foundation for making this report possible.

Dear Reader:

Congratulations for picking up this guide! If you have come across this resource, I am guessing you know firsthand about the enormous challenges and opportunities for preparing adult workers for better jobs.

There are not enough educated workers to fuel the economy today and into the future. And while it may seem like a paradox when unemployment figures are so high, there are employers who cannot fill jobs right now because they do not have qualified applicants. Education continues to be the gateway for individuals to advance their economic status and for the nation to improve its economic competitiveness. Yet the current system for educating and preparing low-skill, low-income adult workers does not meet the majority of employer and worker needs. Too often workers who pursue skill upgrades get stuck in courses that never lead to a credential or better jobs, and too often employers find that workforce programs are not able to adapt quickly enough to their changing skill requirements.

In 2006, staff members at The Joyce Foundation asked over one hundred practitioners, researchers, advocates, and policymakers in the Midwest what philanthropy could do to tackle this problem. What we found was inspiring. There is already a tremendous amount of programmatic experimentation underway. Education and workforce leaders are partnering in new ways with employers, offering accelerated educational pathways for workers, articulated programs with credit for prior learning and work-based learning, and academics coordinated with internships and other work experience in the relevant field of study. Financial aid is being rethought and partnerships are being developed to address the academic and career counseling needs of students. One of the most cutting edge organizations in our region is Instituto del Progreso Latino and the work being done to bridge low-income Latinos and others into manufacturing and healthcare careers and into jobs with good wages.

Although we found pioneers like those at Instituto, their programs are serving relatively small numbers of workers. We believe that significant policy and institutional changes are required to bring good practices to scale and support a career pathways approach that leads to credentials of value to employers. With this in mind, The Joyce Foundation launched the Shifting Gears Initiative. This multi-year, multi-million dollar policy and systems change effort in six states (Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin) is intended to strengthen state post-secondary adult basic education and skills-development systems so that more low-skill workers gain the education, skills, and credentials they need to advance and succeed in our changing economy.

Over the past three years, the Illinois Shifting Gears effort has resulted in the creation of numerous state policies that are already enabling adult education, workforce, and post-secondary institutions to develop occupationally-focused bridge programs like the ones Instituto and its partners operate. Now that these policies are in place, state leaders are turning toward implementation. Through learning communities, regional forums, and this "how to" guide, Illinois hopes to see bridge programs offered in every Illinois community within the next two years.

If you would like to follow the progress of the efforts in Illinois or any of the other states, visit Shifting Gears at www.shifting-gears.org. I wish you great success as you consider creating or growing a bridge program in your area.

Whitney Smith
Program Manager
The Joyce Foundation

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Overview

In December 2009, the Illinois unemployment rate was 11%, an increase of 3% over the 9% unemployment rate of December 2008. The poverty rate for the state is 9%. Unemployment and poverty are much higher in the City of Chicago, where the overall poverty rate is 17%. These statistics become even more dramatic when focusing on low-income communities and communities of color within the city.[1]

Latinos account for one in four Chicago area residents.[2] An analysis of 2006 U.S. Census data by the Chicago Community Trust in 2008, based on data from a period of national economic growth, found that the labor force participation rate of Latinos was 68%, just slightly below the 70% rate for White non-Hispanics, yet Latinos had a median household income of $43,266, which is 40% below the White median income of $71,440, and 22% lived in poverty compared to 10% of Whites.

Occupations that are in demand increasingly require higher level skills that are acquired through post-secondary education and training.[3] In 2008, there were 88 million adult workers nationally who were not prepared for these positions, including 25 million adult workers who lack a high school degree or its equivalent.[4] Of those who do have a diploma, 45% score "Below Basic Prose" in literacy, which means they have "no more than the most simple and concrete literacy skills."[5] This population represents a huge potential reservoir of workers to meet the workforce needs of employers. How can this potential become reality? Career pathways and their "bridge" programs have been developed as one possible solution, providing low-skill adults with a realistic opportunity to attain post-secondary education and family-sustaining levels of employment.

A career pathway consists of a connected series of education programs, with integrated support services, work experience, and on-the-job learning that enables adults to combine work and learning. Bridge programs move people along this pathway by preparing adults who lack adequate basic skills to enter and succeed in post-secondary education and training, leading to career-path employment. Bridge programs seek to enable students to advance both to better jobs and to further education and training, and thus are designed to provide a broad foundation for career-long learning on the job and for formal post-high school education and training.[6]

The Illinois Community College Board provides a compatible definition of a bridge program: Bridge

This manual is useful to anyone interested in the challenge of tapping into the reservoir of talent represented by low-skill adults, whether the skills they need are English as a Second Language (ESL) or adult basic education (ABE).

programs prepare adults with limited academic or limited English skills to enter and succeed in credit-bearing post-secondary education and training leading to career-path employment in high-demand, middle- and high-skill occupations. The goal of bridge programs is to sequentially bridge the gap between the initial skills of individuals and what they need to enter and succeed in post-secondary education and career-path employment. Bridge programs assist students in obtaining the necessary academic, employability, and technical skills through three required components — contextualized instruction, career development, and support services.

The Shifting Gears Initiative, initiated and funded by The Joyce Foundation, is a multi-year, multi-million dollar state policy initiative to promote regional economic growth by improving the education and skills training of the workforce in five Midwestern states, including Illinois. Shifting Gears was formed, in part, to facilitate the further development of effective adult education approaches, including career bridge programs. Successful bridge programs across the country helped fuel the determination to do this. Examples include the Automobile Career Pathways Project in Seattle, Washington; Capital IDEA/ACC Partnership in Austin and Round Rock, Texas; Flint Healthcare Employment Opportunities Project in Flint, Michigan; Logistics/Transportation Academy in Los Angeles, California; NOVA-NVFS Training Futures "Steps to Success" Model in Fairfax County, Virginia; and one in particular that is home grown — *Carreras en Salud*. These programs demonstrate that the career pathway/bridge model is a particularly effective strategy to improve the employment potential of low-skill adults.[7]

Carreras en Salud (English translation is Careers in Health) is an early bridge prototype that has achieved significant outcomes. With seed funding from the state's Critical Skills Shortage Initiative,[8] this model has been operating since April 2005. As of summer 2009, *Carreras* had a cumulative completion rate of 94% across all its bridge programs, which together served 1,197 participants, had a licensing/certification rate of 95% for its 358 Licensed Practical Nurse (LPN) and Certified Nursing Assistance (CNA) graduates, and a placement rate of 100% for the 343 LPNs and CNAs. LPNs had an average wage gain of 150%, from an average annual salary of $18,720 as a CNA to $46,800 as an LPN.

The purpose of this manual is to provide the tools and information needed to develop successful bridge programs, drawing on the specifics of the development and implementation of *Carreras en Salud*. This manual is useful to anyone interested in the challenge of tapping into the reservoir of talent represented by low-skill adults, whether the skills they need are English as a Second Language (ESL) or adult basic education (ABE). This can range from administrators of adult and vocational programs to instructors, employers, and others. This manual summarizes the key elements of the *Carreras en Salud* program experience in order to assist others to adopt similar initiatives. Every situation is unique, but analysis and learning from prior experience is essential for future successes.

Carreras en Salud as a Model

By the beginning of the new millennia, it was well established that focusing economic and educational energy on a carefully selected set of industries and communities is a valuable strategy for economic and workforce development. Sectors chosen for focus demonstrate strong projected growth in the region based on labor market analysis and employer focus groups, have good quality jobs (i.e., provide a family sustaining income and good benefits), and are a good fit with the community's available workforce. With strong participation by employers, education and training can be demand-driven, incorporating specific competencies for positions that fit employers' requirements. With a sector focus, workforce development providers can build the in-depth knowledge of the industry that is a critical asset to link employers with community organizations, community colleges, and local government.

Instituto del Progreso Latino (Instituto) began one of the first of these sector initiatives in 1997 with a focus on the demand for skilled positions in manufacturing and the concentrated participation of the local Latino population in lower-skilled manufacturing positions. This program, called the Manufacturing Bridge, was developed with critical technical assistance from Dr. Davis Jenkins, then based at the Great Cities Institute at the University of Illinois at Chicago. Dr. Jenkins helped to design this program to "bridge" limited English speaking immigrants into higher levels of both employment and education. The model was based on the "tech prep" experience of linking two years of high school to two years of community college, with a seamless pathway focused on careers in a particular industry. This model included contextualized learning in applied academic courses taught simultaneously with technical specialty courses.[9]

In 2000, the Workforce Strategies Initiative (WSI) of the Aspen Institute published an analysis of existing sector-based programs, finding strong outcomes in terms of program graduates' earnings and entry into positions with higher than normal job quality, as measured in terms of benefits like health insurance, vacation, and career ladders.[10] At the time, the National Network of Sector Partners was conducting "Sector 101" training sessions across the country, including in Chicago. Then in December 2002 the Workforce Boards of Metropolitan Chicago, based on an extensive industry analysis, sponsored the Healthcare Workforce Summit. There, Dr. Jenkins presented "Creating Pathway Maps for Healthcare: Models and Templates," which drew on the experience of several programs across the country, including Instituto's Manufacturing Bridge program. Among several templates in his presentation was the Nursing Services Career Pathway Map that illustrated the possible progression from Certified Nursing Assistant to Patient Care Technician to Licensed Practical Nurse to Registered Nurse. The State of Illinois was also in the process of conducting a labor market analysis and, drawing on the experience of workforce boards and community colleges across the state, launched the Critical Skills Shortage Initiative.

All these activities created a body of knowledge and growing momentum, which led the National Council of La Raza (NCLR) to initiate a sector analysis and program design project with two of its Chicago affiliates — Instituto del Progreso Latino and Association House of Chicago — to discover local training gaps for Latinos in high-growth sectors. The partnership to develop and offer the *Carreras en Salud* program grew out of this effort.

How to Conceive of a Career Pathway

The first step in conceiving of a career pathway and developing a successful bridge program is to identify an employment sector and a suitable target population. These steps are to be taken together, because the needs and skills of the population must be compatible with the chosen sector. Additionally, in selecting a sector to focus on, employment growth, possible career paths, demand for workers, and existing training or educational programs are important considerations. While you may identify several potential sectors, consider the one that presents the most opportunities for growth and career pathways.

Although *Carreras en Salud* began as an idea for a specific bridge program, this process could also begin with developing the career pathway concept. In *Carreras*, a consultant conducted the labor market data analysis, drawing on multiple data sources. Initially, three sectors (healthcare, transportation, and construction) were considered because of their positive growth projections, good paying career path opportunities, and because they do not require advanced degrees. Construction showed strong growth and high earnings, but much of the employment is seasonal and has high barriers to entry into the skilled trades. Transportation had strong projections over the 10-year period, but showed a consistent decrease in the number of employees over the previous couple of years. Healthcare presented the following unique characteristics:

1. **Employment growth projections were stronger and more consistent** than in any other growing sector in the local economy. This was driven not only by overall population gains, but also by the aging of the population.

2. **Possible career paths existed** with entry for low-skill employees and opportunities to advance. Not only would hospitals need growing numbers of new employees (as driven also by the aging of their workforce), but there was a projected increase in the number of long-term healthcare facilities and home-based healthcare — both requiring increasing numbers of Certified Nursing Assistants (CNAs) and Licensed Practical Nurses (LPNs).

3. **A significant demand for bilingual healthcare professionals** existed with the large and growing Spanish-speaking population to be served in the metropolitan Chicago area.

4. **High quality healthcare training was available** at the local community college, but it was not meeting the industry need for higher numbers of graduates, nor the higher numbers of bilingual healthcare professional graduates. Moreover, it was not meeting the community's need for residents to be able to enter the higher level skills training programs. The most significant finding of the sector analysis was the training gap between the Humboldt Park Vocational Education Center's CNA training program and Wright College's approved advanced certificate LPN program. While Latino residents entered, completed, and were hired from the CNA program, virtually no Latinos entered Wright College's highly respected and very successful LPN program.

These characteristics of the healthcare industry offered the most opportunity for a successful bridge program that fit within a distinct career pathway, so healthcare was selected as the target sector for the new program.

Target Population

The target population may be driven by the community area represented by your college or organization. For Instituto and Association House, the target population seemed to be the Latino community in general, given

the missions and programs of these organizations. But it was necessary to dig deeper, with questions such as "What are the trends within our community?" Just as the partners needed to examine the trends within particular employment sectors (the demand side), these organizations also had to examine the trends within the Latino labor force and population in general (the supply side).

The partners quickly determined that Latinos represent an enormous untapped labor pool that is already involved in healthcare occupations in significant numbers, but is not able to take advantage of post-secondary or higher-skill occupational opportunities. In Chicago, according to the 2000 U.S. Census, Latinos made up a full 25% of the low-paying health aides, with 20% of them in healthcare support occupations, yet there were no reported Latino Licensed Practical Nurses (LPNs).[11] And, according to the Metropolitan Chicago Initiative of the Institute of Latino Studies at the University of Notre Dame, this pronounced job gap existed while the six-county region was experiencing a 60% growth in Latino population (from 836,905 in 1990 to 1,405,116 in 2000). During this time, all six Chicago area counties experienced substantial growth in their Latino populations.[12]

In addition, the characteristics of the *Carreras en Salud* student population go beyond those of the typical nontraditional student. These students have several of the characteristics listed in Figure 1.

FIGURE 1
***Carreras en Salud* Students**
Nontraditional Student Characteristics

- Has GED or high school diploma
- Is 25 years of age or older
- Is returning to school after many years of not taking classes
- From a disadvantaged group (minority)
- Primary language is Spanish
- Family income is at or below poverty level
- Is head of household, with dependent children
- Has a full-time, low-paying job
- Is a public aid recipient
- Is a single parent
- Is a first generation college student
- Is a commuter using public transportation

How to Identify and Develop Successful Partnerships

Building successful partnerships is essential to the success of any bridge program. *Carreras en Salud* was formed by a group of partners and was based on the tech prep partnership model that linked high schools (in the *Carreras* case, adult education through a community organization) with a community college. As explained earlier in this manual, *Carreras* was initiated by two community-based organizations, Instituto del Progreso Latino (Instituto) and Association House, that worked with a national Latino advocacy organization, National Council of La Raza (NCLR), to conduct the initial research. Once the healthcare sector was selected, the two community organizations reached out to the local community college to determine if there would be an opportunity to partner with them, building on their existing education and training programs and Instituto's experience with the Manufacturing Technology Bridge Program model. The college, Wilbur Wright, was very interested in increasing local Latino participation in its healthcare programs. The basic structure of the pathway, along with the basic roles of the partners, was born out of a brainstorming session with representatives from each of the partners — based on the knowledge and experience that they brought to the table the pathway was literally "mapped" on a blackboard.

Identifying Partners and their Roles

Once the sector and population are identified, partners need to be identified and recruited to fill the various roles in implementing a successful bridge program. Based on the *Carreras en Salud* experience, Instituto recommends the following steps to form the partnerships required for a successful program, although they may not always be taken in the order presented below. Also included below is a description of the roles of each partner.

1. **Build on existing successful partnerships** to take the initial steps of identifying the target sector and population. In this case, Instituto and Association House were both affiliates of the same national organization, NCLR, and had worked together on previous projects. The existing relationship was important to initiating the partnership, because over time these organizations built a trusting relationship. These organizations had mutual respect for each other and their work, and all understood that they could benefit by working together. Partners also understood that it was important for each partner and its target population to benefit from the program.

   Where there are no pre-existing partnerships, any one organization can initiate the needed relationships and build a successful bridge program, as long as they apply the basic partnering principles described in this report.

2. If not already a partner, **identify a higher education institution** to provide the required education and to grant certificates and degrees in the selected sector. Community colleges tend to be the most accessible type of education partner. It is important to select a college with a strong track record in licensing and certifications, meaning that its graduates pass the state licensing and certification exams at a high rate. In *Carreras en Salud*, Wilbur Wright College and its Humboldt Park Vocational and Education Center (HPVEC) are the higher education partners. Their LPN programs are highly ranked in the State of Illinois, with the majority of their graduates passing the state licensing exam.

3. If not already a partner, **identify an organization to prepare students for college-level work and address academic barriers to job entry**. The college must maintain its academic standards, so there must also be a partner to prepare students for college-level work. Academic barriers, such as low basic skills and poor study and test-taking skills, should be addressed by a partner organization with the expertise to effectively prepare students for college. This is a key role for a community-based organization, as they offer a comfortable community-based setting for those unfamiliar with the education system to adjust to attending classes and studying while they build their basic academic skills. In *Carreras en Salud*, Instituto prepares students with limited academic and English skills for college level courses.

FIGURE 2: Role of Higher Education Partners

Degrees and Certifications: Higher education partners are accredited to award degrees and certifications. They will provide the accredited courses that are recognized by the industry and required by state and national certifications.

Support Services: Higher education partners provide academic assistance to students who fall behind, and make labs available to students to practice their skills. Financial aid resources and assistance are also available at the higher education sites.

Adult Education Program Operators: In some cases, the higher education partner also operates adult education programs.

Academic Assessments and Student Data: Higher education partners assess enrolled students academically and collect important data on their progress.

Schedule of Classes: Nontraditional students usually cannot attend the regular class sessions, so higher education partners will create a schedule of classes that is more convenient for these students and will provide experienced instructors to teach those classes, even though they are outside of the regular schedule.

Articulation Agreements: It is very important for the higher education partners to arrange for their program and courses to accept academic credits students earn from the courses offered by other partners ("articulation"). These courses can be recognized via proficiency exams and total or partial acceptance of credits. Basic certificates can articulate with advanced certificates, for example, the CNAs should articulate with the LPN, etc.

Advisory Council: Higher education partners have an important role in putting together an advisory council that will advise not just the college, but the entire partnership of the program. The advisory council should have representatives of the industry, other educational institutions, and community organizations. The council should review the curriculum and make recommendations on class content.

4. Determine non-academic barriers and identify partners to address them. Identifying and understanding the target population will help determine the barriers preventing this population from gaining employment in the target sector. These barriers will determine the need for chosen specialized resources and expertise aimed at helping the target population to enter the sector. Non-academic barriers, such as family problems, lack of work experience, and personal issues, should be addressed by an organization with social work and case management experience. This is another key role for a community-based organization. In *Carreras en Salud*, Association House plays this important role.

5. Management partners develop and sign a Memorandum of Understanding. The specific roles, rights, and obligations of each partner that is a member of the management team should be listed in a Memorandum of Understanding (MOU). Two important items in the MOU are how to share data among partners and the students' right to confidentiality. The MOU should be signed by the president or executive director of each organization and authorized by their legal offices. Because of the complexity of these programs, multiple MOUs may be needed to specify the roles and responsibilities of each organization that contributes to program implementation. For example, a data sharing agreement was signed between Instituto and Wright College to facilitate the development of reports to grantors and for research purposes. A sample MOU is included in Appendix A.

6. Recruit employer partners and industry associations to provide up-to-date information about job requirements, clinical sites and internships, and post-program placement. Employers must be involved to set the competencies to be achieved through the training, to provide internships (or clinicals) during and/or immediately after the training, to hire program graduates and assist them to continue to learn through incumbent training, and to potentially provide tuition reimbursement programs. Industry sectors are often organized

in associations, councils, or coalitions. These associations serve as a source of information about new policy and overall updates in the industry, and members look to them for advice and information. The most efficient way to engage employers is through these associations, so instead of having one employer partner, the program can reach multiple employers. *Carreras en Salud* partners with the Metropolitan Chicago Healthcare Council (MCHC). With over 49 hospital members, MCHC ensures that member hospitals stay current with new regulations and produces information relevant to new practices in the healthcare industry. By partnering with this association, *Carreras* can participate in activities organized by the association and at individual hospitals. Negotiations for clinical sites and internships are easier if the program is recommended by the association. MCHC and individual employers provided feedback on the program and curriculum through one-on-one sessions and through group employer breakfasts. Employers are regularly involved on the advisory council for the LPN program, and more recently on an advisory committee for the overall *Carreras en Salud* program. Employers and MCHC have also been particularly helpful with ideas and letters of support for funding proposals, and with graduation ceremonies for participating students.

7. **Reach out to other potential active partners** that can contribute a specific role or expertise needed by the program. Figure 4 provides a comprehensive list of types of organizations and their potential roles. These include other departments of the community college (if the program is initiated by, for example, vocational skills, then other relevant departments, such as adult education, should be brought in and an internal team developed). Other partners can be one-stop career centers and chambers of commerce.

FIGURE 3: Role of Employers

Data: Employers play an important role in providing data regarding job readiness requirements, employment behavior expectations, and advancement opportunities.

Curriculum Review: Employer review of the curriculum and advice on relevancy of the courses is essential to a successful program. The employer view will help the classroom and lab learning to relate better to practice in the workplace.

Advise on Technology: Employers are current with industry technology and can keep the training provider up-to-date with new trends and new equipment. Employers can also donate equipment to be used in the labs at the training institution.

Workplace Learning: Employers act as clinical or internships sites, facilitating learning in the workplace. During the clinical practice, students demonstrate the knowledge they acquire in the classroom and labs. Employers can directly observe whether or not students are learning the skills they need on the job.

Project-Based Assessment: Employers provide reports on student performance to the training institution that can be used in student assessment and evaluation.

Employment: The main purpose of the training is employment, representing the employers' most important role. Employers recognize graduates' knowledge and skills by hiring them and providing them with a salary, benefits, and appropriate employment conditions.

Support in Career Advancement: Employers can provide career advancement. They team with the trainers to increase the skills of incumbent workers for future promotions. For example, CNAs can be sponsored to become an LPN, and LPNs are supported to become RNs.

Participate in Program Advisory Council: An advisory council is an important forum for employers to contribute their industry knowledge to the program.

FIGURE 4: Sample Partners and Roles

ORGANIZATION	POTENTIAL ROLES
Adult Education Programs (community colleges, community-based organizations, public school system)	Techniques for teaching lower-skill adults; Basic literacy, math, and computer skills training; English as a Second Language (ESL); Assessment tools
Community-Based Organizations	Marketing and recruitment; Case management; Support services and support services navigation; Work readiness and job placement; Vocational and occupational skills; ESL and vocational ESL; Adult education (reading, writing, and math); Computer skills; Job training
Community Colleges	
■ Career Services	■ Orientation to post-secondary education; Interest and capacity assessments; Educational and career advising; Support service navigation
■ Continuing Education/ Workforce Development	■ Sector-specific occupational programs; Specific courses that may be adapted to the bridge program framework, e.g., computer applications, customer service basics
■ Adult Basic Education Programs	■ Adult basic education; GED preparation
■ Corporate Training	■ Capacity to customize training for specific employers and industries; Employer connections; Adjunct faculty and trainers
■ Degree and Credit Departments	■ Associate's and applied associate's degree programs; Occupational certificates, licenses, and other industry-recognized credentials
■ Developmental Education	■ Basic literacy and math skills
■ Financial Aid	■ Information and application assistance
Employer Associations (Chambers of Commerce) and **Industry Associations**	Program review and feedback; Industry and career ladder information; Skill information; Labor market data; Marketing; Employer recruitment and coordination
Employers	Skills identification; Job advancement information and requirements; Program review and feedback; Jobs, internships, and project learning; Instructors, role models, mentors; Referrals to program; Training facilities, equipment; Funding (tuition reimbursement, etc.)
Labor Unions	Identification of competencies and industry information; Employer outreach; Program review and feedback; Referrals to program; Skills training; Apprenticeships; Certifications; Funding
One-Stop Career Centers	Job search skills; Job information; Training vouchers
Social Service Agencies	Support services; Case management; Financial assistance (e.g., food stamps, dependent care, transportation); Referrals
State Agencies and **P-20 Councils**	Labor market information and analysis; Economic and workforce trend analysis; Identification of target industries; Connection to employers; Resource development and allocation; Evaluation
Universities	Labor market information and analysis; Curriculum and instructional design; Evaluation and continuous improvement
Workforce Boards	Identifying sectors of importance to regional economy; Mapping job requirements and advancement paths; Planning and budgeting; Policy development
Workforce Intermediaries	Program design assistance; Best practice models; Advocacy; Resource development; Conducting focus groups; Evaluation

Source: Women Employed, Chicago Jobs Council, and UIC Great Cities Institute, Bridges to Careers for Low Skilled Adults. 2005. p. 29. With minor modifications.

FIGURE 5: Roles of Community-Based Organizations

Recruiting and initial screening. Community-based organizations (CBOs) have significant networks within communities that can be used to recruit and screen participants.

Offer an easily accessible location. Located in the neighborhoods where potential participants live, CBOs offer geographic, psychological, and cultural accessibility that makes recruitment, orientations, and classroom-based training easier.

GED training and other pre-college academic preparation. CBOs can offer education programs tailored for adult learners and working students.

Counseling/case management services. CBOs can provide non-academic support services to participants, before personal issues interfere in their academic progress.

Job readiness training and placement assistance. CBOs play an important role in the placement of program graduates. Once participants complete their classes, the CBO offers job readiness training which includes interview skills, resume preparation, and job searches. Some CBOs also receive government funds for placement, which is the case of Instituto del Progreso Latino, which receives Workforce Investment Act (WIA) funds to place participants in jobs.

Fundraising assistance. One advantage of CBO partners is their ability to bring funding to the table. This can pay college tuition for low-income students, through Individual Training Account (ITA) vouchers under WIA, for example. They can also raise private corporate and foundation funds to support the program.

8. Include a state and national advocate that helps to disseminate best practices and publicize outcomes to develop funding opportunities. The National Council of La Raza (NCLR) is the national advocate and a funding partner in *Carreras en Salud*. NCLR advocates for program funding and helps promote the model with various public agencies and private foundations.

9. Reach out to potential supporting partners. These partners provide very specific, yet essential, services to the program, such as student outreach and political support. For example, they can include faith-based organizations, which can help disseminate information about the program. Local churches play an important role in announcing the *Carreras en Salud* orientation sessions. The local ethnic media is also an effective way to inform the community of the program and its orientation sessions. The best approach to media coverage tends to be to present success stories to TV or print media, as these promote enrollment while also showcasing community residents on a successful career path. Local elected officials can also be helpful supporting partners in promoting the program and in fundraising.

10. Share information among partners. Stability and organizational commitment are essential to a successful program. In *Carreras en Salud*, partners committed to the program for the long-term. Rather than the familiar approach of partnering simply for one grant opportunity, these partners wanted to work together to offer a program that could make a long-term difference in the community. Regular communication is a key ingredient to maintaining stability. All partners need full information about the status of each element of the project, including recruitment and marketing, placement, staff hiring and training,

fundraising, and budgeting. With comprehensive information, the management team can discuss (and debate) key issues to make appropriate management decisions. In *Carreras en Salud*, each of the key partners has had a consistent representative on the program management team over the past five years.

11. **Secure program staff**. A program coordinator or lead administrator is another vital program partner. *Carreras en Salud* initially only had funds to support a part-time administrator, and then, as funds became available through the Critical Skills Shortage Initiative, that position became full-time. Responsibilities include program management, building partnerships, and raising funds. The partner organization that employs the administrator is determined by the partners and the funding source. In *Carreras*, the administrator is employed by Instituto and reports both to the program management team and to the organization that employs him. Dual reporting can be the source of some tension, but good communication can avert many issues.

12. **Develop and follow a policy and procedures manual**. Management partners should develop a manual that describes in detail the procedures for recruiting, enrolling, assisting, and graduating students throughout the career pathway. The *Carreras* manual also includes all the forms that applicants have to complete and a format for internal reporting.[13] Meeting agendas and minutes documenting decisions and recommendations are kept on file for each monthly management team meeting.

13. **Be flexible**. Flexibility is an important quality for a bridge program. Responding to new situations, new problems, new opportunities, and program feedback require communication and decisions to make changes. In some cases, the program may need to add a new partner to strengthen the program. For example, the team may add an employer partner for more placement opportunities, or a partner may change a staff person working on the program. When this happened in *Carreras en Salud*, it changed the chemistry of the team, but good communication allowed for adjustments. The new energy can make positive contributions to the project. It is important that the new partner organization or staff person be informed of the way the management team makes decisions and recommendations, and of past decisions and the mechanisms to implement those decisions. A good way to get up to speed is through a review of past meeting minutes.

14. **Share program promotion and good press**. One of the biggest challenges faced by *Carreras en Salud* has been "handling" the press. Each partner has had different opportunities to represent *Carreras en Salud* and has made an effort to represent the program as sponsored and managed by a set of partners. It is not "Instituto's project," or a "project of HPVEC," etc., rather, it is a partnership made up of multiple organizations and is promoted as such. Together, partners should agree that individual partners can take the lead in any promotional or public representation, as long as the leading partner of that specific activity highlights the fact that the program is in partnership with and names the other partners. Therefore, it is important that each of the partners be able to present the *Carreras en Salud* model the same way. To ensure this, the director of *Carreras en Salud* developed a PowerPoint presentation that all the partners can use in their presentations at conferences, educational panels, and other events.[14] A media policy should be included in the policy and procedures manual or the MOUs.

15. **Share fiscal responsibility according to program needs**. Another potentially sensitive issue regarding partnerships is that of fiscal agency. It is important to be clear that the fiscal agent can be any of the partners, depending on the type of funds and the funder requirements. Collaborative proposal writing is common in the *Carreras en Salud* partnership. Each partner can apply for the funds they are most likely to be awarded. The organization taking the lead is the fiscal agent for that particular grant; the rest of the partners will support the lead partner and cooperate in whatever is needed to successfully write the proposal. The fiscal agent will disburse funds to other partners per the awarded budget for their work. In Chicago, the community colleges usually insist on being the fiscal agent for most grants. However, in *Carreras en Salud*, the president of Wright College showed complete support of the partnership when he agreed to work with Instituto as the fiscal agent for several grants. To avoid inadvertently competing for the same funds, the topic should be a standing item on meeting agendas so partners can keep each other informed of their fundraising activities.

Rather than the familiar approach of partnering simply for one grant opportunity, these partners wanted to work together to offer a program that could make a long-term difference in the community.

How to Design a Career Pathway and Its Bridges

Defining a Career Pathway

A career pathway consists of a connected series of education programs, with integrated support services, work experience, and learning on the job, that enables adults to combine work and learning. Career pathways are characterized by clear connections within and across education and workforce institutions and programs. The outcome standards for each level are aligned to the requirements of education and employment at the next level and beyond and may result in state- or employer-recognized credentials. Thus, career pathways create explicit connections and clear roadmaps to educational and career advancement. Bridge programs are an essential component of a career path, as they play a key role in preparing low-skill adults, who would otherwise be stuck in low-wage jobs, for post-secondary education leading to well-paying, career-path jobs.[15]

Elements of a Career Pathway

There are several essential elements to a career pathway:

- Partnerships
- Career ladder
- Academic ladder
- Social ladder
- Career bridges
- Credit and teaching articulation
- Academic and non-academic support
- Financial aid for participants

Partnerships/Collaborations

A single organization cannot effectively and efficiently provide all the services and resources needed to implement a career pathway initiative or even an individual bridge program. Rather, multiple organizations with differing areas of expertise are required to offer all the components. Therefore, a career pathway initiative should bring together organizations with the capacity and experience to deliver a specific need. Partners will be easily identifiable based on the needs of the population to be served. Partners include a higher education provider for education and credentials, an organization with a strong track record in delivering basic skills training (probably a community-based organization), an expert in technical training specific to the industry chosen for the career pathway initiative, a social services agency to provide case management, and a provider of employment services.

Career Ladder

With input from the industry, a career pathway must describe all the points of employment from an entry level to a high level position in the industry. Required credentials and compensation should also be clearly stated.

Academic Ladder

A career pathway must include the academic requirements needed to satisfy each point on the career ladder, and describe the knowledge required to acquire the credentials needed to work in a specific job within the industry. The academic ladder should not be confused with the career ladder. For example, a person moving from an associate's degree to a bachelor's degree is advancing on the academic ladder, while a person being promoted from a coordination position to a directorship position is advancing on the career ladder. In the field of nursing, points on the career ladder coincide with those on the academic ladder, since each job promotion requires a new academic credential or certification.

Social Ladder

A career pathway should also help in understanding the role of participants in society. As they reach higher positions on the academic and career ladders, these students develop a greater sense of self and their roles in their communities grow. Typically, as people gain technical skills, academic knowledge, and greater income, their position in their families and communities expand and they become more engaged in their communities. They also develop communication and "people" skills that are indispensable in the workplace. People at a lower skill level tend to be less vocal and less social, and as they advance in the career and academic ladders they become more involved in their children's schools and activities, and more interested in participating in community events.

This applies to all learners — ABE and ESL — and is apparent in Instituto's experience with ESL learners. The immigrant's process of learning a second language includes several stages, each affecting the student's social and community engagement. Students enrolled in the beginning levels of ESL demonstrate fear of their environment, and as a consequence limit their interaction with neighbors and their children's schools. At work they avoid communication with management and are fearful of breaking work rules and procedures because they may not understand them. As ESL learners improve their English, these fears of engaging decrease.[16]

Career Bridges

Career bridge programs are the most important element of a career pathway. The goal of a career pathway is to facilitate the advancement of participants from low levels to high levels of employment and education specific to a sector or industry. All advancement is accomplished through bridge programs, which link each level through practical learning and experience so people can progress along the career ladder. Bridge programs are described in detail in the next section of this manual.

Credit and Teaching Articulation

Credit articulation agreements allow students to accrue credits that are later accepted towards a higher degree or certification. Program articulation agreements are common in academia. For example, Instituto students who are enrolled in the bridge program at HPVEC will complete all the Illinois Community College Board (ICCB) requirements to earn credits. These credits are kept in escrow until the student decides to pursue a higher degree or certification, then those credits count toward the new degree or certification. Another way to earn credits without taking a full class is by taking a proficiency exam. Student who pass the exam earn the credits, which are counted towards the new degree or certification. Teaching articulation is also important, and refers to correlation of what is taught by two or more instructors within the same program. In *Carreras en Salud*, students completing the CNA do not need to take the clinical for the first module of the LPN because these programs articulate. Basic skills instructors know and incorporate materials from the technical skills instructors in their lesson plans and class activities.

Academic and Non-Academic Support Services

The nontraditional student needs support in addressing academic and personal issues that arise during training and education. In *Carreras en Salud*, students advance at least two basic skill levels per quarter, requiring intensive tutoring to help these students advance. In the college modules, classes are complemented with intensive and mandatory contextual tutoring and test-taking skills, so these students are prepared to compete with more traditional students. In addition to needing academic support, many of these students are vulnerable to personal, family, and work problems. These situations directly affect academic performance and attendance. *Carreras en Salud* offers case management and support services to help retention.

Financial Aid for Participants

For a low-income population to be able to participate, programs must be free or nearly free of charge for students. *Carreras en Salud* constantly seeks new sources of funds to subsidize student tuition and educational materials. Over the last four years, no student has had to pay to participate, a result of a combination of public and private funding. The pre-college bridges are mostly funded by private funds, while students at the college levels must apply for federal and state financial aid. If they do not qualify, then they are asked to apply for Workforce Investment Act (WIA) funds. Those who are unable to secure WIA support apply for support from the private foundation funds administrated by *Carreras en Salud*.

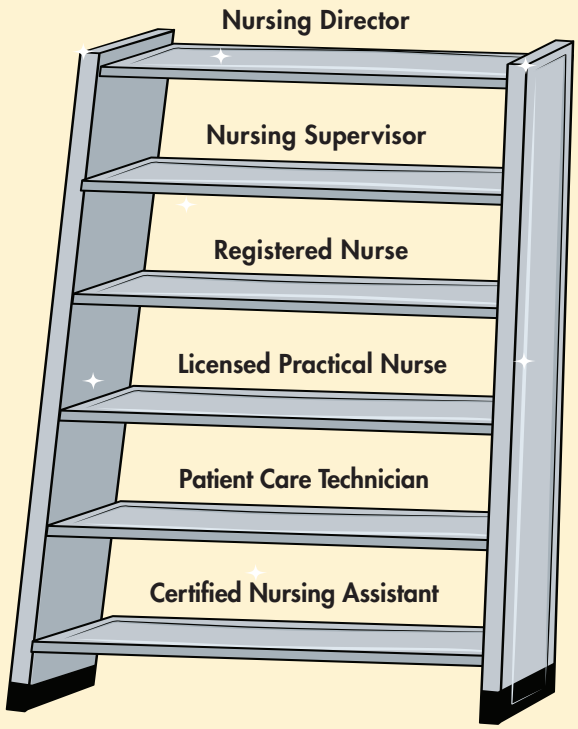
The Carreras en Salud Career Pathway

The Healthcare Career Ladder

The healthcare profession is divided in five occupational clusters: Therapeutic Services, Diagnostic Services, Health Informatics, Support Services, and Biotechnology Research and Development (see Appendix B for career-specific jobs in each pathway). *Carreras en Salud* focuses on Therapeutic Services, and more specifically, nursing. The progressive points of employment within the nursing industry are: Certified Nursing Assistant (CNA), Patient Care Technician (PCT), Licensed Practical Nurse (LPN), and Registered Nurse (RN). The career ladder can be expanded to include high level administrative positions that require additional academic credentials, such as a Bachelor

of Nursing (BDN) for a job as Nursing Supervisor, or a Master of Nursing (MDN) for a job as a director of a unit, Nursing Director, or a Vice President.

FIGURE 6
Healthcare Career Ladder



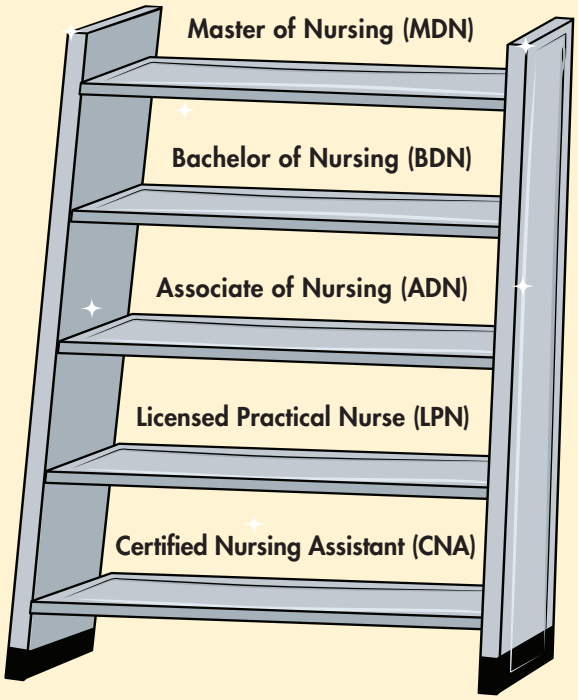
The Healthcare Academic Ladder

The academic ladder shows different points in the career pathway where certain knowledge and competencies are necessary to acquire the credentials required for a job or to advance to the next level of education. The academic ladder is usually measured by certifications, licensing, registrations, and degrees. The *Carreras en Salud* academic ladder includes the credentialed levels shown in Figure 7.

The Healthcare Social Ladder

As the students progress in the career and academic ladder, they also experience greater social integration and progress on the social ladder. As they attain better jobs and academic titles they gain standing among members of their family, their friends, and the community.

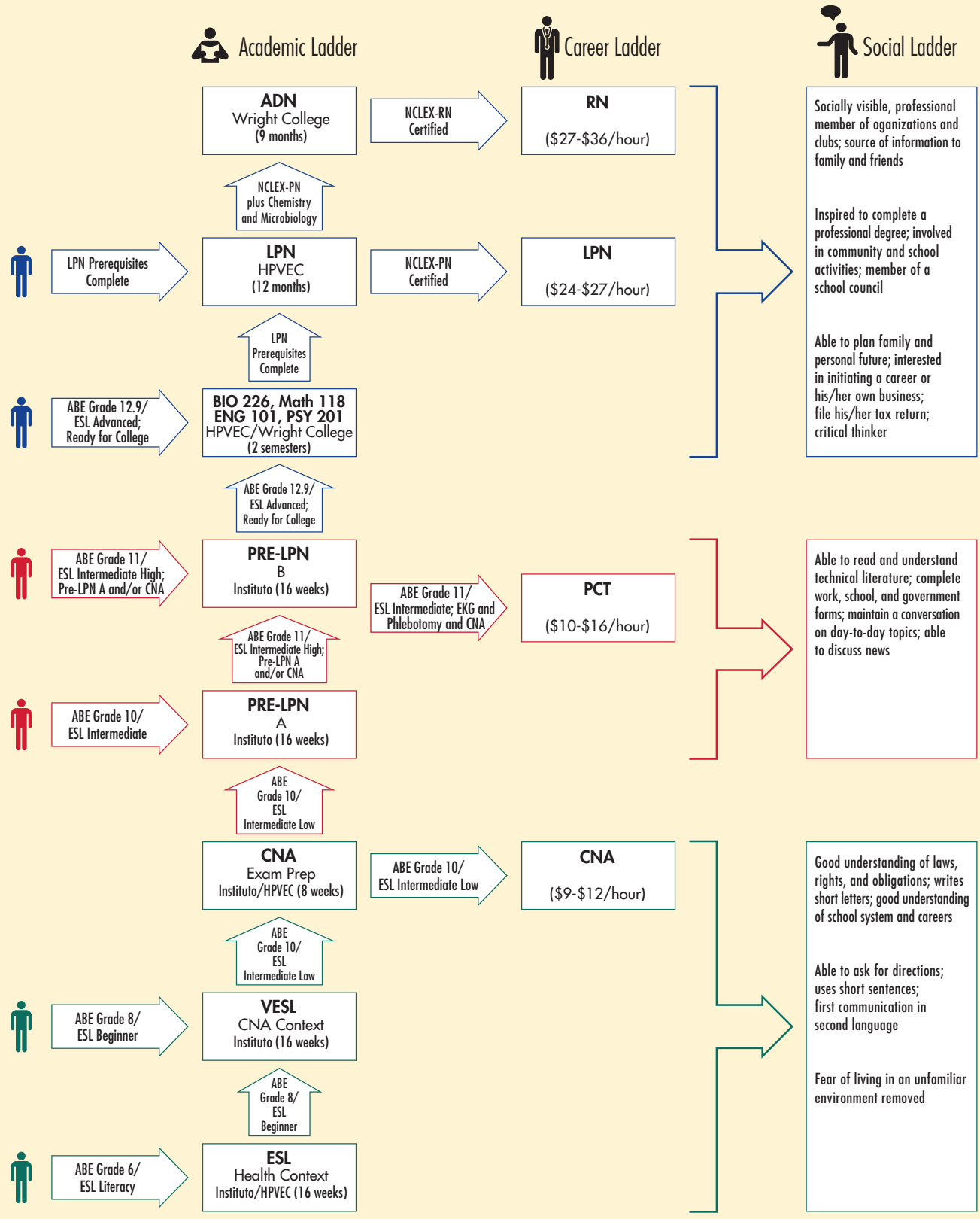
FIGURE 7
Healthcare Academic Ladder



Map of the Entire Career Pathway

A flowchart or map of the career pathway is a visual representation of the career pathway captured in just one page. It should visually represent with clarity the points on the academic and career ladder and the bridges that connect these points. It should show how many modules are in each bridge and how they connect. It should spell out the entry and exit requirements of each bridge. The career ladder should indicate the points of employment and the technical skills or industry credentials needed for each job, along with the salary or wages for each job. It can also display the social ladder. This is an important tool for building in new program components and for explaining the career pathway initiative and its particular bridge programs to prospective students and community partners and stakeholders. The *Carreras en Salud* Career Pathway is shown in Figure 8. This flowchart begins at the bottom and climbs up through each bridge, showing each possible point of entry and exit. It includes the academic, career, and social ladders.

FIGURE 8: *Carreras en Salud* Career Pathway Model



The *Carreras en Salud* model is a comprehensive career pathway that includes two pre-college bridges and two college level degrees. The pathway has multiple points of entry depending on the basic skill level of the student. Designed primarily for ESL students, the minimum academic level to enter the pathway is language grade level 6, as measured by the Test for Adult Basic Education (TABE). Student with lower scores can take traditional ESL classes to prepare them for the pathway.

Pre-CNA Bridge

The Pre-CNA Bridge program includes two 16-week modules and a review class. The first module advances students from language grade level 6 to 8, and classes are contextualized with general concepts related to the healthcare industry. After this module, students test to determine if their skills are at the eighth grade level. If so, they proceed to the second module, the VESL-CNA. This module is called VESL for Vocational ESL, because it is contextualized with information from retired State CNA exams. This module raises student reading and math scores to the tenth grade level, as measured by the COMPASS test. Next, students enroll in an eight-week review class, which they can take at the Humboldt Park Vocational Education Center, the Wilbur Wright College main campus, or Richard J. Daley College, which is another one of the City Colleges of Chicago. The review class includes 40 clinical hours at healthcare provider sites. Once students satisfactorily complete the review course, they are authorized to take the State CNA Certification Exam. Passing the State exam allows students to work as a CNA in a healthcare institution, where they typically earn $9 to $12 an hour. This completes the Pre-CNA Bridge. Students are encouraged to continue into the next pre-college bridge program while they work as CNAs, which will prepare them to enter a college level LPN program.

Pre-LPN Bridge

The Pre-LPN Bridge is designed for students who are at the tenth or eleventh grade level in reading and math. Many students have completed the Pre-CNA Bridge. This bridge consists of two 16-week modules. Students entering at the tenth grade level begin in Module A, which raises their academic level to 11. Students who are already at grade level 11 and need to prepare for college entrance exams begin with Module B. Both modules contextualize language and math classes with material from biology classes required to enter the LPN program, including Anatomy, Physiology, and Psychology. This bridge includes EKG and Phlebotomy classes, which, when completed, make students with a CNA certification eligible for jobs as a Patient Care Technician (PCT). Once students complete Module B, they take the COMPASS test and are expected to score at the college entry level in math and English.

College Courses

Before being admitted to the LPN program, students must complete six college courses: English 101, Math 118, Anatomy, Introduction to Biology, Physiology, and Psychology. Students can take all of these at HPVEC except for Biology, which is only offered at the Wright College main campus. Most students can complete these courses in two semesters. With these pre-requisites satisfactorily completed, students can be admitted to the LPN program.

Licensed Practical Nurse College Program

Students take a full year of classes toward the LPN degree at HPVEC and then complete their clinical requirements onsite at local hospitals. Once they complete these courses and the clinical requirements, they take a NCLEX-PN review course. The final step is to take the State NCLEX-PN exam, which licenses LPNs and authorizes them to work at hospitals and long-term care facilities.

Registered Nurse College Bridge Program

The Registered Nurse Bridge program at Wright College, also part of the *Carreras en Salud* pathway, admits students with the LPN degree and certification, and the completion of two additional college courses: Chemistry and Microbiology. Students attend a year of classes that prepare them to take the NCLEX-RN State exam to become Registered Nurses. After passing this exam, students are licensed and authorized to work as Registered Nurses, which are in high demand at hospitals around the country.

Understanding the Essential Elements of a Bridge Program

Define Career Bridges

Bridge training programs are an essential component in a career pathway. They prepare adults who lack adequate basic academic and/or English language skills to enter and succeed in post-secondary education and training, leading to career-path employment. Bridge programs seek to enable students to advance both to better jobs and to further education and training, and thus are designed to provide a broad foundation for career-long learning on the job and for formal post-high school education and training.[17] The Illinois Community College Board provides a compatible definition of a bridge program: Contextualized learning within a career framework to prepare adult education students to enter and succeed in post-secondary education and employment. Bridge programs assist students in obtaining the necessary academic, employability, and technical skills.[18]

Elements of a Bridge Program

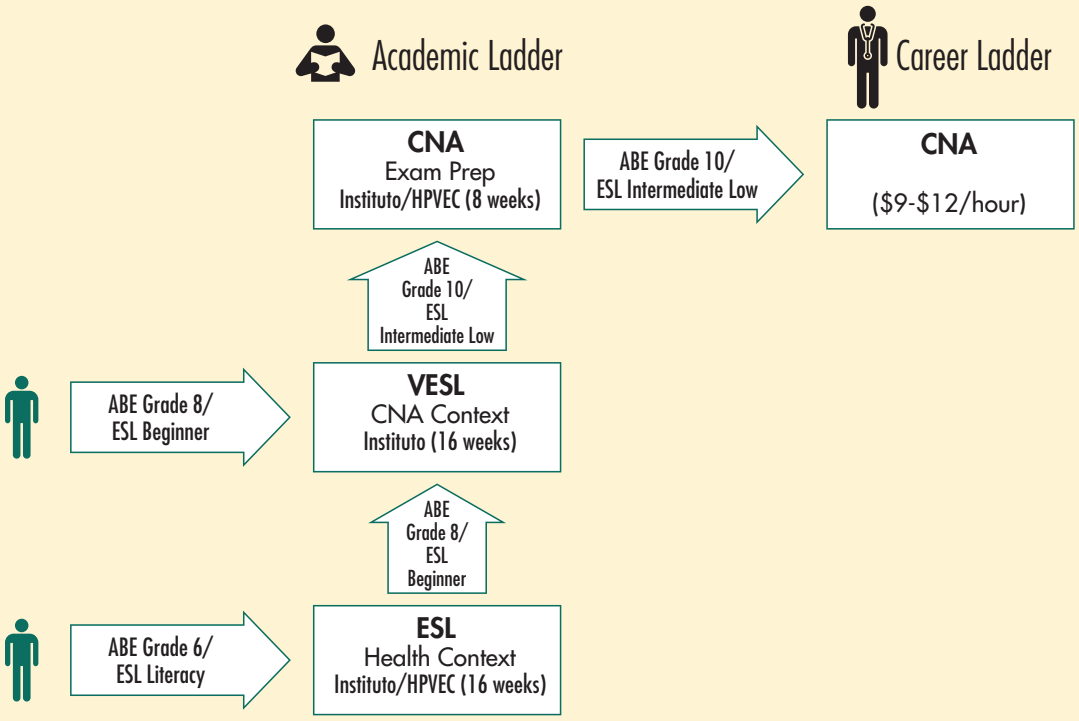
The essential features of a bridge program are:

- It has a modular curriculum
- It connects points on a career ladder
- Industry certification articulates with academic degrees
- Curriculum is contextualized
- Learning assessments are project-based
- It has specific criteria to enter and exit
- It articulates to other bridges and to post-secondary education
- Academic support is incorporated into lesson plans
- It offers career counseling
- It offers non-academic support services as part of the regular schedule

Modular curriculum that is specifically tied to a step in the career ladder and academic ladders of a career pathway. *Carreras en Salud* has two pre-college bridges, the Pre-CNA Bridge that transitions students academically from a grade level 6 in basic academic skills to a grade level 10, and transitions ESL students from Literacy or Beginning to the Intermediate level in English. At the same time, it transitions participants along the career ladder by moving people who do not work in the healthcare industry into the industry with a CNA certification and job. The second is the Pre-LPN Bridge that transitions students academically from a grade level 10 to college level math and language, and ESL students from "intermediate" to "advanced" English. Participants move along the career ladder from a job as a Certified Nursing Assistant to a Patient Care Technician (PCT). This is done by including courses in EKG and Phlebotomy to the CNA certification, as part of the Pre-LPN Bridge. This way, participants are qualified for a job promotion from CNA when they are half-way through the Pre-LPN Bridge.

Bridges connect points in the career ladder. In developing bridge programs, it is important to determine how many modules each bridge will contain. The number of modules depends on the levels of basic and technical skills needed by the participants to qualify for a specific job on the career ladder. A module is the equivalent of a term. Each module should have a goal of up to two grade levels of basic skill improvement, and bridges should have up to three modules, for a maximum improvement of six grade levels per bridge program. So students who enter the bridge program with a level six in math and language can bridge academically to a grade level 12. Bridges with more than three modules

FIGURE 9
***Carreras en Salud* Pre-CNA Bridge Flow Chart**

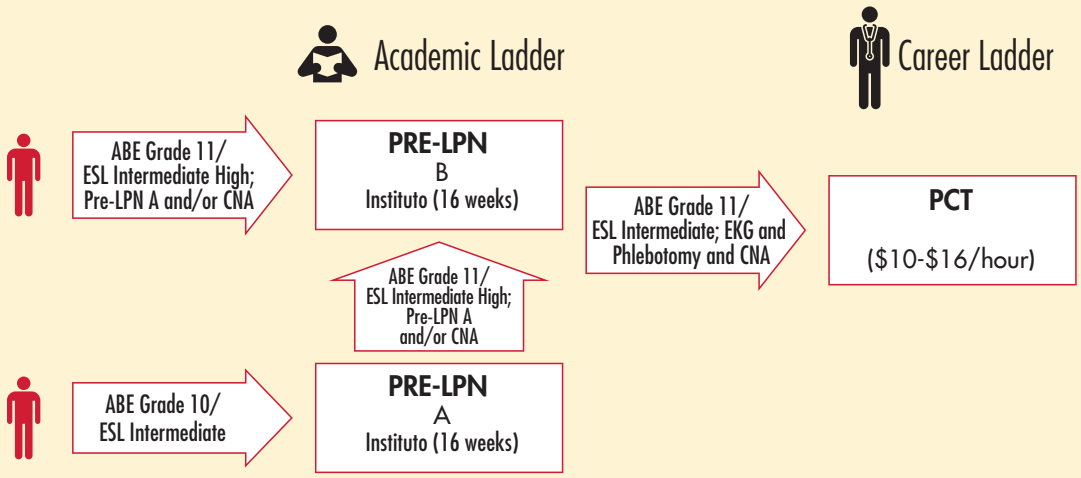


may discourage students, since the time to reach the next level — or job — in the career pathway is too long. *Carreras en Salud* has two bridges.

The Pre-CNA Bridge has three modules: the first is ESL for healthcare that advances student English language and academic skills from grade level 6 to level 8, and the second advances students from level 8 to level 10. The third module prepares students for the CNA exam. In terms of a career pathway, this bridge advances students from no prior work in the nursing field to becoming a CNA in a hospital or healthcare provider institution. The bridge program is diagrammed in Figure 9. This, in turn, fits into the career pathway as shown in Figure 8 on page 18.

The second bridge program, shown in Figure 10, is a Pre-LPN program with two modules: Module A academically advances participants from basic skill level 10 to level 11, and Module B advances participants from level 11 to level 12.9, which is college level. Participants in Module B also take EKG and Phlebotomy, learning technical skills they need to get a job as a Patient Care Technician (PCT), which is an advancement from a CNA position. ESL students advance from Beginner level to Intermediate. Students graduate this program ready for college-level work. Again, this bridge fits into the overall career pathway, as shown in Figure 8 on page 18.

FIGURE 10
***Carreras en Salud* Pre-LPN Bridge Flow Chart**



Industry certification articulates with academic degrees. When bridging students, it is important to have a good sense of the skills and credentials the industry requires of its employees. Effective bridges guarantee that a person with a degree or certification will have the competencies (skills) needed to secure and perform well in the corresponding jobs. *Carreras en Salud* students who secure the CNA certification and LPN degree are capable of performing and often over-perform the duties assigned in their jobs with knowledge and professionalism. The curriculum is developed in a way that guarantees that students are acquiring technical skills as they improve their academic skills. To ensure this, an advisory council with strong industry representation advises on the curriculum content. This council advises the program of new trends in the system and changes in processes and technology. Students are exposed to these changes and processes during their clinical and internship sessions at the employer site. Acquiring industry certifications and licensing confirms the presence of knowledge and skills, making the holder of these certifications more employable.

Curriculum is contextualized. Contextualization is the methodic incorporation of technical materials into the basic skills curriculum. Bridge curricula need to be contextualized based on the skill level of the students and the requirements of the industry (technical skills). The context to be used varies depending on these two elements (contextualization is explained in detail later in this manual).

Project-based assessments. Bridge programs must guarantee that students acquire the technical skills required by the industry. To ensure the presence of these competencies, the bridge programs must include in their curriculum a set of project-based activities that prove whether or not students have the required knowledge and skills. The *Carreras en Salud* curriculum includes in-class activities through which students apply the skills they learn. Students are introduced to the management of instruments like the stethoscope and high pressure equipment very early in the career pathway. In math class, for example, students are assessed based on the numerical analysis of vital sign charts. Project-based assessments are an important part of daily lesson plans. These activities are later re-affirmed in the clinical sessions at the hospital or healthcare provider sites.

Specific criteria to enter and exit the bridges. Clear criteria on the requirements to enter and exit a bridge program must be determined when first developing the program. These requirements should be in both academic and technical skills. Academically, to enter a bridge program students should be at a required basic skill grade level. In *Carreras en Salud*, students must be at the sixth grade basic skill level and at the Literacy or Beginner level in ESL to be accepted into the Pre-CNA Bridge program Module One (ESL for healthcare), and at the eighth grade level to be admitted in the Pre-CNA Bridge program Module Two (VESL-CNA). To completely cross the bridge (that is, exit the program successfully), students must be academically at the tenth grade level and at the Intermediate English level for ESL students. This requirement also satisfies the career goal this bridge program, which is to qualify to for a CNA job. With the tenth grade skills and technical knowledge gained in Pre-CNA, students can take and pass the State Certification Exam. Once it is passed, students are certified to work as a CNA in a healthcare institution.

In a career pathway with multiple bridges, exiting one bridge means fulfilling the requirements to enter the next one. This is the case in the *Carreras en Salud* pathway; when students exit the pre-CNA Bridge by reaching a basic skill level 10 and by entering a job as a CNA, they also meet the requirements to enter the Pre-LPN Bridge, which, in turn, prepares students for college level math and language, and at the same time prepares them to move up the career ladder from CNA to Patient Care Technician (PCT). Each career bridge program should be designed to help students transition from one point on both the academic and career ladders to higher points on those ladders.

Bridges articulate to other bridges and to post-secondary education. An important element in a career pathway is that each bridge in the pathway articulates to the next one. The articulation between pre-college and college bridges is of special importance to adult students. The curriculum should be developed in a way that the basic academic skills and ESL material are proficiently accepted at the next level or bridge, and that the technical material covered perfectly articulates with the requirements of the next bridge or college degree. In *Carreras en Salud*, students completing the Pre-CNA Bridge have the basic skills (math, language, and computer) needed to enter the Pre-LPN Bridge, and the technical skills needed to become a CNA. The CNA certification also articulates with the first module of the Pre-LPN Bridge program (LPN A) by recognizing the value of one credit for the practicum taken at the CNA level. The entire LPN program articulates with the Associate of Nursing at HPVEC, which accepts over 40 credit hours from the Pre-LPN Bridge towards this degree. In a traditional, not articulated program, only the general education courses would be accepted toward the Associate of Nursing. In addition, Pre-LPN Bridge program completers are qualified for jobs as Patient Care Technicians (PCT).

Academic support is incorporated into each lesson plan. Given the characteristics of the nontraditional and limited English students who need a lot of academic support, bridge programs must offer effective academic support, especially tutoring and advising. *Carreras en Salud* offers tutoring to students in each module. In addition, students can consult with their instructors before and after classes. In extreme circumstances, where several students are falling behind academically, they are invited to spend an extra day a week with an instructor until they catch up. *Carreras en Salud* also piloted a program that provided student support in a blended online format, where students communicated their questions regarding academic material to their instructors by e-mail and instructors respond by e-mail. If needed, they discussed the issues in more details in class. While Instituto's experience with this approach was successful, it requires additional funding.

Students receive career counseling. All students entering the career pathway are required to meet with a job developer or employment specialist. The students take a skills inventory survey and develop a career plan based on the results. This career plan includes basic, technical, and transferable skills development activities. All the information is shared with the academic advisor, who works with the instructors to ensure these needs are addressed in the lesson plans and class activities. At the end of each bridge, and when students secure a certificate, they meet again with the employment specialist to verify they acquired the skills and credentials needed. The employment specialist coaches them in resume writing, job search, and interview skills, and assists with placement.

Non-academic support services are part of the class calendar. With nontraditional students especially, retention and class performance can be affected by the life of the students outside of the classroom. Changes or problems with work, family, and children can result in a student dropping out. A good bridge program offers quality non-academic support services that can help address a multitude of problems. *Carreras en Salud* offers free childcare while the students are in class. Children get help with their homework and toddlers learn from a curriculum designed just for them. *Carreras en Salud* also partners with other community-based organizations that offer licensed family counseling and domestic violence and drug addiction counseling. Students are referred to these organizations when they need these services. Through Instituto's Center for Working Families, all *Carreras en Salud* students are scheduled to see coaches and counselors periodically as part of their school load in three basic areas:

- Finance: students are coached on how to save money, repair and maintain a good credit record, maximize their income, and (eventually) become homeowners. They receive assistance in opening checking and savings accounts when needed.
- Employment: students are coached on how to find a good paying job with the skills they presently have, how to write a resume, and how to prepare for an interview.
- Income support: students learn of all the public benefits that may be available to them and their requirements. Students receive help applying for these benefits.

Bridge programs enable students to advance both to better jobs and to further education.

How to Contextualize a Bridge Curriculum

Contextualization is key to the effectiveness of a bridge program. Teaching basic skills to under-prepared adult students within a specific context promotes student retention in the program by engaging their interest, and it advances them more quickly than other methods. It also ensures that they gain technical and transferable skills in addition to the academic skills. When contextualizing curricula, it is important to determine the basic skill level of the student, whether in terms of ABE, ESL, or both. This will determine the type of context (general context, macro context, micro context, and vocationalization, explained later) to be applied at each level. The basic skill level will also guide the instructor in the teaching methodology to use (pedagogy or andragogy, also explained later). Another element influenced by the basic skill level is the type of assessment (standard text or project-based) used to measure each student's content knowledge acquisition. Technology use in the learning process is also determined by each student's level of basic skills.

Skills

Basic Skills

Basic skills are the foundation needed to learn technical and professional material. Traditionally there are two basic skills, language (listening, speaking, reading, and writing) and mathematics. Today, with the inclusion of computers in nearly every profession, computer skills are also considered among the basic skills necessary to more advanced learning. In the contextualization model, the basic skill levels indicate which of several learning strategies should be used. In ABE, the skill levels correspond to grade levels. So, for example, basic skill grade level 6 is the same academic level attained at the completion of the sixth grade. In adult ESL education, The Illinois Community College Board identifies five skill levels: 1) literacy, 2) beginning, 3) intermediate low, 4) intermediate high, and 5) advanced. The competencies required for each of these levels are described in Appendix C.

Technical Skills

Technical skills are work-related skills that will qualify a person to perform a specific duty or activity in a job. Technical skills are detected only on the job, and are not related to credentials or certificates. Credentials or certificates indicate that the person has the knowledge (theory), but they do not necessarily indicate that the person has the technical skills to perform a job. Theory and technical skills can be taught simultaneously by incorporating project-based activities, assessments, and internships in the curriculum, which are evaluated by both the educational institution and by the industry.

FIGURE 11
Industry-Required CNA Technical Skills

- Recognize abnormal vital signs
- Observe abnormality in patients and report problems (bleeding, drainage, machine malfunctions, safety situations)
- Understand and implement patient care plan
- Collect, label, and transport specimens to the appropriate area
- Provide comfort to patients by positioning, bathing, straightening linens
- Regularly prepare patients for meals and assist in feeding them if necessary
- Observe established policies and procedures for proper patient treatment
- Demonstrate knowledge and safe use of equipment
- Appropriately and safely transport patients to required areas in the hospital or institution

In *Carreras en Salud*, each bridge program is designed to allow participants to acquire the technical skills to perform well at the next level in the career ladder. The Pre-CNA Bridge prepares students to become a CNA. By the end of the bridge program, students are able to pass the State written exam, which indicates they have the required knowledge, and the industry certifies that they have the technical skills by giving a passing grade in the practicum or clinical. While CNA job descriptions vary depending on the employer, there is a required set of industry skills, listed in Figure 11.

Transferable Skills

Transferable skills are those skills that, when applied, enhance the effectiveness and efficiency of technical skills and are not job-specific. In *Carreras en Salud*, the industry recommends that each healthcare professional trained demonstrate the following transferable skills.

- Critical Thinking/Common Sense
- Analytical Skills
- Problem Solving
- People Skills
- Communications
- Time Management
- Study Habits

Contexts

In the pre-college bridges, the technical skills become the context in which the basic skills are taught. Both are taught at the same time. The type and amount of context to be included in the curriculum depends on the basic skill level of the student. There are four types of context that progress from the least context to the most context: general context, macro context, micro context, and vocationalization. These types of contexts should be integrated in the contextualization of the curriculum as follows.

General Context

General context refers to no industry content or context. This is the context used in most traditional ESL and ABE classes. Basic English skills, reading, and/or math are taught in scenarios related to daily life situations, such as going to school, the doctor's office, or the supermarket. Teaching in a general context can be effective for students at the literacy ESL level, which is the lowest level, and up to the sixth grade academic level. These ESL students are just beginning to learn English words and are being introduced to numbers. At this level, the goal is for students to learn as much information as possible so they can build a database of terms that will serve as a foundation for future learning. Emphasis should be placed on basic skills (language, math, and computers) and very little on an industry context. If an industry context is used at this level, the industry information should be limited to very general aspects of the industry. As students progress from the literacy level to beginning, the general context is less motivating and instead the macro context should be introduced.

Macro Context

Macro context focuses on a sector such as manufacturing, health, transportation, insurance, or hospitality, without concentrating in a particular profession within the sector. The use of the macro context in the curriculum is very effective for students at the beginning level of English. At this level students understand sentences and paragraphs, can solve basic numerical operations, and understand the functions of a computer. With these skills, students can process data related to a specific sector or industry. The macro context will bring students the opportunity to learn more details on the industry where they want to work. They learn about the rules and laws of the industry, the different professions within the industry, and specific jobs with their descriptions. Students enjoy the fact that they are covering material related to the industry they are interested in pursuing.

The healthcare industry macro context is integrated into the curriculum and lesson plans in the *Carreras en Salud* Pre-CNA Bridge. Students improve their basic skills in a macro context by learning the general

concepts of the healthcare industry, laws, regulations, and especially the different career tracks in the healthcare industry (therapeutics, diagnostics, health informatics, and biomedical) and professions within each of those tracks. As the students increase their English proficiency and/or basic academic skills, they will demand more details on the profession, which warrants the micro context. If the instructor does not switch to a micro context, students may lose interest and even withdraw from the class.

Micro Context

Micro context focuses on a particular profession within an industry or sector. For example, in the healthcare sector the micro context focus can be therapeutics, diagnostics, health informatics, biotechnology research and development, or support services. Micro contextualized curricula are very effective with students at the intermediate ESL skill level. These students are able to process technical materials related to a particular profession. They have the capacity to use computers for research and to solve simple mathematical problems. At this level the students are looking for a more focused class with more detailed information in a particular profession and the skills needed to successfully perform the duties required by the position.

In *Carreras en Salud*, Pre-LPN Bridge students are at the intermediate ESL level and are introduced to the specific technical skills needed by a LPN. Students improve their ESL and ABE skills within the context of Anatomy, Physiology, and Health Psychology, and are introduced to EKG and Phlebotomy skills. The micro context at this level helps students relate their more general skills acquisition to the specific job they want.

Vocationalization

Vocationalization focuses on aptitudes required to develop or improve skills needed for a specific job, emphasizing academic and vocational education, as well as the higher order of thinking and interpersonal skills demanded in that job. The use of project-based learning is a good example of vocationalization.

Bringing real work situations and projects to the classroom helps students to enhance their vocation for a particular profession. Vocation includes the use of methods, techniques, regulations, and assessment of a profession. An employee with a good vocation is synonymous with a productive employee. Vocationalization works well with students at the advanced ESL and basic skills level. These students are deeply interested in a specific job within a profession and understand its requirements, skills, and demands. These students understand and feel comfortable with the profession, and want to learn as much as possible about it.

The most common mistake in contextualizing curricula occurs when the wrong context is used. Using a micro context with students who are at the beginning basic skill level will confuse and frustrate students, who may quit because they cannot understand the technical material. On the other hand, if the general context is used with students at a high basic skill level, they can lose interest and motivation.

Teaching Paradigm And Instructor Qualities

When contextualizing curricula, it is very important to take into consideration the teaching paradigm to be used in instruction. Pedagogy and andragogy, summarized in Figure 12, need to be tactically applied, depending on the basic skill level of the student. Andragogy is most effective for adult learners, although pedagogy can be applied at the "literacy" basic English skill level. The pedagogical method assumes that students have no knowledge of the basic skill being taught, and that they need to learn the fundamentals before they can process technical materials. Here, the student depends on the direction of the instructor to learn new materials.

In teaching with a contextualized curriculum, instructors design lesson plans in which students move from engaging in pedagogical in-class activities at the low basic skill levels to progressively more andragogical exercises and applications as their English language and/or basic academic skills improve. By the time students are advanced ESL speakers and ready for college-level work, the teaching paradigm should be an andragogical one. See Figure 13 to see this progression.

Teaching Paradigm

Use of Standard vs. Project-Based Assessment

The contextualized model also advises curriculum developers about the importance of appropriately using the different assessments tools available. The best use of standard assessments and project-based or problem-based assessments depends on the skill levels of the student. As described above, the contextualized model advises the use of general context and pedagogical activities to teach students at low basic skill levels, and to increase the use of context and andragogical activities as students improve their skills. Similarly, in terms of assessments,

FIGURE 12
Pedagogy vs. Andragogy

	PEDAGOGY	ANDRAGOGY
The Learner	**Dependent.** Teacher directs what, when, and how a subject is learned and tests that it has been learned.	**Moves towards independence and is self-directing.** Teacher encourages and nurtures this movement.
The Learner's Experience	**Of little worth.** Hence teaching methods are didactic.	**A rich resource for learning.** Hence teaching methods include discussion, problem solving, etc.
Readiness to Learn	**People learn what society expects them to.** So that the curriculum is standardized.	**People learn what they need to know.** Learning programs are organized around life applications.
Orientation to Learn	**Acquisition of subject matter.** Curriculum is organized by subjects.	**Learning experiences should be based on experiences.** Because people are performance-centered in their learning.

Source: Knowles, M. S. (1970, 1980) *The Modern Practice of Adult Education. Andragogy versus Pedagogy.* Englewood Cliffs: Prentice Hall/Cambridge 400 pages.

the model advises the use of standardized testing instruments (such as true and false, multiple choice) to evaluate student knowledge at the lower levels of basic skills, but as students improve their basic skills the assessment instruments should become more applicable to real life issues with the use of project-based or problem-based assessments. In *Carreras*, by the time students reach the advanced English literacy level, they are assessed with project-based or problem-based assessments to better evaluate the presence of the expected competencies at that level.

Use of Technology in Context-Based Learning/Teaching

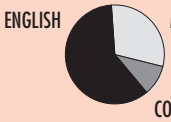
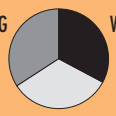
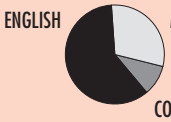
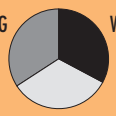
The use of technology in teaching basic skills can be a motivating factor, but can also be a distraction that interferes with the students' learning process. Technology use should be appropriate to the skills of the students. At the lower skill levels, traditional teaching tools, such as blackboard exercises, use of posters with figures, textbooks, and workbooks, are more effective. At this level, technology should be limited to short sessions covering the general context used in class with a small touch of real life application, such as very short videos and audio presentations.

Students are only beginning to learn how to work on computers, and if computer applications are a major part of the curriculum, students may become intimidated. On the other hand, students at the high basic skill levels are very motivated by the use of technology in a daily lesson plan. Technology brings real life applications to the classroom, and students can use technology to enhance material covered in class. The use of job-related computer simulations can close the gap between what is learned in the classroom and what happens in a real work setting. Students at the advanced basic skill level will see clearly the relation between the skills learned in class and their work and life experiences.

The relationship of basic skill levels to the progressive use of context, credentials, teaching/learning paradigms, and assessments strategies are presented in Figure 13. This table presents the degree to which contextualization, interaction, technology, the androgogical learning paradigm, homework, and project-based assessments are used in relation to students' basic skill levels.

Technology brings real life applications to the classroom, and students can use technology to enhance material covered in class.

FIGURE 13: Adult Education Curriculum Contextualizing Model

LEVELS: ESL ABE	LITERACY ACADEMIC GRADE 2-3	BEGINNING ACADEMIC GRADE 3-6	INTERMEDIATE ACADEMIC GRADE 7-10	ADVANCED ACADEMIC GRADE 10-12.9
CONTEXT & BASIC SKILLS	 GENERAL CONTEXT	 MACRO CONTEXT Transferable Skills: Study Habits, Test-Taking Skills, and Time Management	 MICRO CONTEXT Transferable Skills: Critical Thinking, Personal Skills, and Time Management	 VOCATIONALIZATION Transferable Skills: Critical Thinking, Personal Skills, and Time Management
INTERACTION & TRADITIONAL CLASS SETTING	TRADITIONAL CLASS INTERACTION	TRADITIONAL CLASS INTERACTION	TRADITIONAL CLASS INTERACTION	INTERACTIVE CLASS
TECHNOLOGY & TRADITIONAL CLASS MATERIALS	 USE OF TECHNOLOGY	 USE OF TECHNOLOGY Transferable Skills: Study Habits, Test-Taking Skills, and Time Management	 USE OF TECHNOLOGY Transferable Skills: Critical Thinking, Personal Skills, and Time Management	 USE OF TECHNOLOGY Transferable Skills: Critical Thinking, Personal Skills, and Time Management
LEARNING PARADIGM	PEDAGOGY ANDRAGOGY	PEDAGOGY ANDRAGOGY	PEDAGOGY ANDRAGOGY	ANDRAGOGY
MANDATED HOMEWORK & VOLUNTEER HOMEWORK	MANDATED HOMEWORK VOLUNTEER HOMEWORK	MANDATED HOMEWORK VOLUNTEER HOMEWORK	MANDATED HOMEWORK VOLUNTEER HOMEWORK	PROJECT-BASED HOMEWORK
TESTING & EVALUATION	STANDARD PROJECT-BASED	STANDARD PROJECT-BASED	STANDARD PROJECT-BASED	PROJECT-BASED

This table shows the intensity of contextualization and other important course features in relation to the ESL or ABE skills level of the students. The progression shows the least contextualization at the most basic education levels, with it increasing as students improve their skills.

Developing a Contextualized Curriculum

Contextualized curricula are difficult to find. Traditional adult education programs tend to teach in a general context, and use a pedagogical teaching paradigm, standardized testing, and technology without consideration for students' basic skill level. To develop a contextualized curriculum, the curriculum developer must be aware of the elements shown in Figure 13 and understand how each element plays a specific role in the learning process of the adult student depending on the basic skill level of the students. The curriculum developer must be familiar with the contextualized model and the different levels of basic skill competencies at the literacy, beginning, intermediate, and advanced levels. The curriculum developer needs to have access to resources specific to the industry or sector to be contextualized and be clear as to the technical context to be incorporated in the curriculum at each skill level. If the curriculum developer is not an expert in the industry or sector, s/he should team up with a practitioner or technician in the sector. It is also important that the curriculum developer, if not in the sector, become familiar with the tasks involved at each point in the career ladder, the specific credentials needed to perform those tasks, and the competencies needed to acquire the credentials and certifications required by the industry.[19]

The best scenario in developing a contextualized curriculum is one in which a basic skills (math, language, computer, and/or ESL) specialist teams up with an industry or sector practitioner, and both work on the lesson plans and class activities. Similarly, the most effective way to teach a contextualized curriculum is by teaming a basic skills teacher with a sector practitioner, both of them coordinating the implementation of the lesson plans, corresponding activities, and assessments. It is important to note that at the lower basic skill levels the contextualized curriculum can be effectively taught by a basic skills teacher who only has information on the general context of the industry, but as the students advance in their basic skills the need for greater context, technology, technical materials, and project-based assessments increases and the need for team teaching becomes more evident.

Lesson Plans

A curriculum is made of lesson plans. The lesson plan describes the class objectives, the materials needed to carry out the different activities, the assessment tools, the evaluation tools and methods, the learning inventory (which serves as an indicator that the objectives have been achieved), and the connection with the next class. Lesson plans should be developed by day and coded by week and day (for example, week one, day two is coded lesson 1.2). The lesson plan needs to clearly show the activities related to the learning of the basic skills and the use of a context. A sample lesson plan from the *Carreras en Salud* Pre-LPN Bridge is provided in Figure 14.

Program Evaluation

Bridge curricula need to be evaluated based on their outcomes and according to how well they meet the demands of the industry at the specific points of employment. Students are evaluated to determine the presence of the expected competencies, using a combination of in-class and workplace activities. The use of project-based assessments in the classroom, with the help of technology, determines the level of knowledge of the student, but it is in the workplace, via internships, job shadowing, or practicum, that the industry itself assesses the presence of the technical skills demanded by the industry. Industry participation is essential to student evaluation in a bridge program.

Beyond evaluating student performance within a particular course, bridge programs need to be evaluated in terms of their overall effectiveness in moving low-income, low-skill individuals into better paying jobs. Aspects that should be examined include student rates of retention in the program, advancement,

FIGURE 14: Sample Lesson Plan

Pre-LPN I – Language Arts
Lesson 2.2
LANGUAGE THEME: Vocabulary Skills, Understanding Sentences
CONTENT: Introduction to Human Body Systems

OBJECTIVES
- Use roots and suffixes to analyze medical terms
- Identify subjects and predicates
- Differentiate between whole sentences and sentence fragments
- Strengthen critical thinking and problem-solving skills

MATERIALS
- Index cards with suffixes from Chapter 3 of *The Language of Medicine* in a bag or hat
- Index cards with root words from Chapter 3 of *The Language of Medicine* in a bag or hat
- List of mixed sentences and sentence fragments from Human Biology, Chapter 4
- Blank index cards
- Dictionaries

ACTIVITY A: Introduce noun and adjective suffixes for word analysis
- Review list of root words in Chapter 3 of *The Language of Medicine*, Section II Combining Forms, p. 76. Write each root and each definition on the board. Have different students explain each meaning.
- Review entire list of suffixes from Chapter 3 of *The Language of Medicine* with class. Explain the meaning of each suffix and give examples of how it can be combined with the roots on the board.
- Have a student pick a root word out of the bag or hat and a suffix from the bag or hat.
- Ask the student to combine them and give a definition of the combination based on the meaning of the root and the meaning of the suffix.
- Ask the students if this is a real word – one that actually exists. If they do not know, ask them to look for it in a dictionary. If the word does exist, ask students to add it to their medical terminology notebook. If the word does not exist, remind the students that this game is meant to help them learn that learn roots and suffixes are often the key to understanding complex medical terminology.
- Repeat this until all the roots and suffixes are used.

ACTIVITY B: Identify subject and predicate
- Hand out the list of mixed sentences and sentence fragments and have students mark which sentences are full sentences.
- Ask: What is a sentence? What is a subject? (the noun the sentence is about) What is a predicate? (the rest of the sentence) What is always in the predicate? (a verb) What are the two things a sentence has to have in order to be a sentence? (a noun and a verb).
- Go over these questions again and have students repeat the answers aloud together.

ACTIVITY C: Differentiate between whole sentences and sentence fragments
- Ask a student for a full sentence from the list. Write the sentence on the board. Have students identify the subject, the predicate, and the verb within the predicate. Write the skeleton sentence.
- Continue with these procedures to identify all the full sentences on the list.
- Give each pair of students a set of six blank index cards and have them write three full sentences and three fragments on the cards.
- Have a representative from a pair choose a card from the pair to their left's deck and write it on the board.
- Ask the student: Is this a sentence? How do you know?
- Give a point for each correct answer.
- Ask the class to reply in unison: What are the two things a sentence has to have to be a sentence? Does it have a noun for a subject? Does it have a verb in the predicate?
- Repeat these procedures until it is clear that all students can diagram a basic sentence.

LEARNING INVENTORY
- Understanding the use of suffixes to analyze word meaning.
- The ability to identify the subject and predicate of a sentence.
- The ability to distinguish between a whole sentence and a sentence fragment.
- Use problem solving and critical thinking skills to analyze medical terms and find their roots and suffixes and to distinguish between whole sentences and sentence fragments.

HOMEWORK
- Define 10 more terms from original list.
- Write definition and pronunciation in medical terminology section of notebook.
- Create flashcards for all the vocabulary words that are not familiar to you already.

academic progress, completion, graduation, licensing and certification, job placement, job retention, and earnings. *Carreras en Salud* has been very effective in demonstrating success in these areas, with a retention rate of over 85%, advancement rate of over 80%, graduation rate of over 80%, a licensing rate of over 90%, and a job placement rate of 100%.

Employer Feedback on Curricula

An important component of contextualizing curricula is to have approval from the industry. Even if the curriculum is developed by a sector or industry practitioner, it should be reviewed by a group of employers in the sector for recommendations and feedback. Each program should create an industry advisory council. These are the best vehicle for employer feedback and advice on the basic and technical skills, credentials, and attitudes and behaviors students need to acquire to become employed in the industry. A contextualized curriculum cannot be effective without significant input from the industry.

Instructor Qualities

A successful contextualized bridge program must be taught by a nontraditional instructor who believes in and is able to use the many techniques described here. Characteristics of the nontraditional instructor are contrasted with those of the traditional instructor in Figure 15.

FIGURE 15: Traditional vs. Nontraditional Instructor

NONTRADITIONAL INSTRUCTOR	TRADITIONAL INSTRUCTOR
■ The teacher believes each student owns enough life experience to contribute to the learning process of the students in the class	■ The teacher is always educated, the student becomes educated
■ The teacher asks advice from students based on the students' experiences	■ The teacher has the knowledge, the student does not have any knowledge
■ The teacher is always open to questions	■ The teacher is the thinker, the subject of the process, the student is the thinking object
■ The teacher prepares classes using everyday situations, rather than simply following a textbook	■ The teacher has the voice, the student listens
■ The teacher uses real life and work-related materials in class assessments	■ The teacher disciplines, the student gets disciplined
■ The teacher uses project-based and problem-based evaluation methods	■ The teacher decides and prescribes the options, the student follows the prescription
■ The teacher shares control, is adaptable and respectful, and provides leadership	■ The teacher is the one who acts, the student has the illusion of acting by seeing the teacher
	■ The teacher selects the content for the curriculum, the student must adapt
	■ The teacher identifies the authority of the knowledge with his functional authority, the student must adapt to all decisions and determination of the teacher
	■ The teacher is the subject of the process, the student only the object of the process

Source: Paulo Freire, 1974

Instructor Development

It is difficult to find nontraditional instructors with experience in applying the contextualized model as describe here, therefore instructor development is critical to program success. Instructors new to the contextualized model should be able to implement it, mastering the learning paradigms, the different assessment tools, the level of context, and the use of technology. It is also important that the instructor become familiar and stay current with the industry, watching for new trends that might affect the curriculum. Contextualizing a curriculum, as in *Carreras en Salud*, demands that the instructor constantly add new materials and activities to the lesson plans in response to the demands of the students and the industry. Professional development activities also help instructors understand the requirements of the certifications and licensing exams and the competencies needed to pass them.

In *Carreras en Salud*, the majority of instructors were new, with little teaching experience but great potential, open minds, and flexibility in trying new concepts in adult education. Ongoing professional development and frequent meetings on the application and evaluation of the contextualized program promoted instructor effectiveness, as indicated by the advancement, retention, and completion of students in the program.

Instructional Meetings

Bridge program curriculum changes as the industry changes, so it is important that bridge instructors meet frequently to exchange information related to new developments in the sector or industry. These developments can be new equipment, new technical skills needed, new regulations, or new requirements for licensing and certifications. The contextualized bridge curriculum needs to be flexible enough to be able to incorporate this new material into the lesson plans as needed. It is also important for instructors to meet to discuss student progress and the need for improvements in the teaching paradigms, materials, and other class elements. In *Carreras en Salud*, instructors meet monthly.

How to Develop Bridge Program Logistics

Student Recruitment

The characteristics of nontraditional adult learners and the limited time they have available for activities outside of their work and family responsibilities make this population difficult to reach. Bridge programs must go beyond traditional educational marketing tools to recruit students. *Carreras en Salud* has been effective promoting its programs within the adult immigrant Latino community, using multiple strategies described below. These strategies are applicable to a wide variety of bridge programs from different sectors.

Internal Recruitment

Instituto offers an adult education program for ESL learners at the literacy level. The first entry point in *Carreras en Salud* requires students to be at the fifth or sixth academic grade level and at the literacy ESL level to enter, so students completing the ESL program become excellent candidates for the program. These students hear about the program in their ESL class and are invited at completion to take the TABE test required to enter the program. Students interested in the program who meet the entrance requirements are encouraged to register and continue their ESL classes within the healthcare context.

Instituto's Center for Working Families (CWF) is responsible for all student and participant intake and offers services in three main areas: financial coaching, applications for income supports and public benefits, and employment. A large percentage of CWF clients who are seeking employment lack the skills needed by employers, so the CWF employment coach advises them to enter a training program offered at Instituto or by other providers. Those applicants interested in healthcare are referred to *Carreras en Salud*.

External Recruitment

Adult learners, especially immigrants, are hard to reach through traditional channels of communication. They do not have the means to read newspapers and magazines, and flyers distributed in their living or working areas are not very effective for recruiting. *Carreras en Salud* uses three main outlets to reach this community: religious institutions, local ethnic festivals, and ethnic television.

In reaching out through religious institutions, *Carreras en Salud* contacts the priest or minister of the local churches and asks them for five minutes to present at the end of the services. The religious leader will introduce the academic counselor, giving credibility to the program. The announcements are general, but emphasize program benefits and how it differs from other education or training programs. The message ends by inviting parishioners to a more detailed information session at a specific day, time, and location, and to meet with the advisors who are also at the church that day for one-on-one information about the program. This strategy is especially important because it enables *Carreras* to reach many people at once in a situation that gives the program credibility. In just one Sunday, for example, the program can reach over 3,000 people (six services of 500 parishioners each).

Local ethnic festivals offer the opportunity to inform a large number of people about the program at one time. Nonprofits can usually set up an information table free of charge. Bringing marketing materials and success stories of graduates who continue to do well, wearing their professional nurse's uniform, will attract people to the table. The strategy at these events is to invite the interested people to an information session at a specific day, time, and location.

Another channel to communicate the program and to promote the information sessions is ethnic television announcements. They will be even more effective if a story is aired about the program and its successes.

Information Sessions

Information sessions are held in the community, at the Instituto site. They cover multiple topics, including background, the career pathway, entrance requirements, and placement opportunities.

In the background presentation, prospective students learn how the program was created and its purpose, with special emphasis on the sustainability and continuity of the program, reassuring prospective students that the program is secure. They hear statistics demonstrating the need for bilingual (English/Spanish) nurses in the metropolitan area and about opportunities to get good jobs in healthcare.

Prospective students watch a PowerPoint presentation on the *Carreras en Salud* career pathway. It includes a flowchart showing the different bridges and modules of the career pathway that clearly demonstrates how the bridges connect with each other, the requirements to enter and exit each bridge, the technical skills and competencies required to become employed at each point of the career ladder and its compensation by function, and the time required to become a LPN and RN, depending on the level of the student when entering the program.

Prospective students learn how to qualify and apply to the program, what documents they need to submit to the academic advisor, and what documents are needed for financial aid. Students are invited to schedule an appointment to take the placement test and to see a counselor at the CWF.

An important part of orientation is the discussion on job placement, as potential students are most motivated by their need to gain better employment. Any effective program must end with a job for each graduate, and *Carreras en Salud* has a 100% placement rate, in part due to the shortage of nurses nationwide, but also because *Carreras en Salud* is one of the few programs in the region graduating bilingual/bicultural nurses. The majority of the *Carreras en Salud* students receive offers from hospitals and nursing homes a semester before they even complete the class load. During the orientation session, the students learn of the industry trends in hiring program graduates.

Scheduling Classes for Nontraditional Students

Contact Hours

In traditional adult education and basic skill courses, students meet four days a week for two hours a day, and in some courses two days a week for two hours a day. Administrators of adult education programs with those schedules believe that adult students do not have time for more than eight hours of classroom learning per week, and rely heavily on homework assignments to cover all the materials required by the curriculum. However, adult learners with the characteristics described in this manual do not have time for extensive homework assignments, so they need more time in class and little or no homework.

A study by *Carreras* administrators determined that to teach the three basic skills — math, language, and computers — the students need to be in class a minimum of 256 hours per term. Therefore, in the pre-college bridge programs, students meet four days a week for four hours a day for a total of 16 weeks for a total 256 hours per term. *Carreras en Salud* students advance a minimum of two grade levels in math and language per term, and become computer literate in one term, versus the one level of advancement in a traditional adult education program. *Carreras* has found this heavy reliance on class time (versus homework) to be quite successful.

Class Frequency and Schedule

Classes should be scheduled at a time of day when nontraditional, usually working, students are available. They should be at a location most appropriate for the students. Responding to the availability of students and because most of them are working, *Carreras en Salud* classes meet from 5:30 to 9:30 pm weekdays and on weekends, which works especially well for students who are on variable work schedules.

Carreras en Salud does not follow a traditional semester format and starts new classes whenever a group of students are ready to begin. As students advance in the *Carreras* pathway and reach the college levels, they attend classes in a more traditional format and the schedule depends on the college class schedule.

Out-of-Class Activities

Contextualized career bridge curricula should recognize the limitations on adult learner time for activities out of the classroom. Adult learners with work and family responsibilities have little time left for homework and other activities. The contextualized curriculum must motivate students to look for additional materials in what little time they have and to voluntarily participate in out-of-class activities. As classes progress from a general context to a macro and micro context, students will feel more and more that they are learning material that will help in their work and real life, and will become more motivated to voluntarily look for out-of-class assignment and activities. Similarly, the progression from traditional assessment tools to project-based assessments will also motivate students to prepare for their exams by doing out of classroom work. Under the appropriate conditions and with the appropriate contextualized curriculum, nontraditional students will participate in out-of-class activities even with their very limited time.

Clinicals/Internships

Bridge program curricula should include real workplace experience. Clinicals, internships, and job shadowing provide students the opportunity to gain experience in a real work setting with industry equipment and the standards mandated by the industry and its clients. It is important that the employer participates in the evaluation of the internship or clinical by sending a report on student performance during the workplace learning period to the bridge program director. These activities will also strengthen the relationship between employers and the program, and employers will be able to observe more closely the skills and competencies of the students and advise the program of any needed curriculum adjustments. Employers that serve as clinical or internship sites tend to be more active on the program advisory council, adding value to the program.

Student Retention

Program Orientation

A thorough orientation period is important to student retention in any bridge program. In *Carreras*, the first two weeks of classes are used to orient students to the program and its resources. Students meet their faculty, advisors, and case managers, and have appointments with the coaches in the CWF. Instructors have the opportunity to reassess the students' abilities for accuracy in their placement, to review the career pathway and each of the bridges, and to allow students to plan their advancement and achievements with respect to the academic and career ladder in the career pathway. Instructors also talk about the contextualized model and how they will conduct class, following the contextualized components of the model.

During the orientation period, *Carreras* students are introduced to the academic support resources available at Instituto. They meet the tutors and learn the plan for tutoring. They learn about the computer resources and how they can improve their computer skills independently. They are also encouraged to use peer-to-peer tutoring or academic help, by teaming up with classmates to help each other with academic issues.

Non-academic support services are crucial for the retention of the nontraditional adult student. Based on the characteristics of Instituto's student population, family, work, and personal issues are common and can directly affect the learning process of adult students. *Carreras en Salud* was developed to include the resources needed to tackle these problems.

Association House, a *Carreras* partner, provides case management to students as needed.

Other Supports

Instituto provides other non-academic support services to the students:

Emergency Funds

Instituto and the CWF secured funds from a private foundation to provide help to students in desperate financial situations, needing to pay past due rent or utilities, or in a food emergency. Students can receive up to $300 for any emergency that may interfere with their learning.

Transportation

The CWF administers a public grant that provides bus passes and gas incentives to qualified students to get to and from class.

Job Readiness Classes

The CWF provides pre-employment training to students who are looking for work, helping them to prepare their resumes, practice job interviews, and to dress professionally.

Housing

The financial coach helps students in need of housing to find affordable or subsidized housing, and to help negotiate affordable rents with landlords.

Substance Abuse, Family, and Domestic Violence Counseling

Instituto has partnership agreements with professional providers of counseling. Students in need of these services are referred accordingly.

How to Budget for a Bridge Program

Multiple Cost Center Budget

To sustain a career bridge program and the career pathway initiative, partners have to develop a multiple cost center budget. A multi-cost center budget provides flexibility for the institutions to pay expenditures directly related to the career pathway and comply with all funders' conditions, as mandated by the grant awards and/or government contracts. Funding a program through multiple sources is challenging, especially when each source comes with its own unique requirements, restrictions, and expected outcomes. Each source of funds represent a cost center. This cost center must reflect the funds coming in (revenues), and the expenditures approved by the grantor. The lines in the budget represent portions of the expenditures allocated to each grant, based on the direct impact of the expenditure to the program aspect funded by each funder. For example, the salary of a program director can be allocated to multiple grants based on the percentage of time the director dedicates to the outcomes promised to each grant award. Of course, these allocations must all be approved by the funder in advance. See Figure 16 for a sample cost center budget. When preparing a budget, be sure to also include a detailed narrative explaining the need for each item and the calculations that lead to each line item amount.

Accounting for In-Kind Contributions

Operational budgets do not reflect the costs of services or resources that are contributed by partners and not charged to the program budget, such as the cost of time spent by management in meetings, use of office supplies or space, and outside services funded through other sources (such as the domestic counseling services mentioned earlier). These costs and others should be reflected in a comprehensive program budget. This budget will show the real cost of the program and the real cost per unit, if needed. This can be useful for grant proposals, as private foundations in particular are often interested in seeing other financial and community support for a program before funding it.

A multi-cost center budget provides flexibility for the institutions to pay expenditures directly related to the career pathway and comply with all funders' conditions.

FIGURE 16: Example of a Multiple Cost Center Budget

Item Description	Total Item	Grant "A"	Grant "B"	Grant "C"	Grant "D"
Revenues					
Grant A	50,000	50,000	—	—	—
Grant B	30,000	—	30,000	—	—
Grant C	20,000	—	—	20,000	—
Grant D	50,000	—	—	—	50,000
Total Revenues	**$150,000**	**$50,000**	**$30,000**	**$20,000**	**$50,000**
Direct Program Costs					
Program Director	70,000	30,000	10,000	—	30,000
Fringe Benefits	5,355	2,295	765	—	2,295
Instructor (part-time)	25,000	—	5,000	15,000	5,000
Fringe Benefits	1,911	—	382	1,147	382
Educational Materials	2,000	1,000	1,000	—	—
Student Support Services	3,000	—	—	2,000	1,000
Student Stipend	5,000	5,000	—	—	—
Staff Development	2,000	—	2,000	—	—
Local Transportation	1,500	1,000	—	—	500
Out of Town Travel	3,000	—	—	—	3,000
Office Supplies	2,000	500	500	500	500
Total Direct Program Costs	**$120,766**	**$39,795**	**$19,647**	**$18,647**	**$42,677**
Indirect Costs					
Administrative Support	29,234	10,205	10,353	1,353	7,323
Total Direct and Indirect Costs	**$150,000**	**$50,000**	**$30,000**	**$20,000**	**$50,000**
Balance	**$0**	**$0**	**$0**	**$0**	**$0**

How to Sustain a Bridge Program

Positioning for Funding

Funders are interested in funding successful programs — those programs that are recognized by the industry and workforce development community as providing effective training that produce qualified workers with high job placement rates. Positioning the program to be attractive to public and private funders is as important as the program itself. Having a good program is not enough; a positioning plan needs to be in place to ensure the sustainability of the program. *Carreras en Salud* engages in the following activities to position itself for funding. These strategies are applicable to all types of career pathways programs.

Data and Evaluation

It is important to collect and analyze comprehensive data on the program and its outcomes to demonstrate its effectiveness. As discussed in the evaluation section of this guide, particularly important are student rates of retention in the program, advancement, academic progress, completion, graduation, licensing and certification, job placement, job retention, and earnings. Together, these can tell a success story to funders. *Carreras en Salud* has been very effective in demonstrating success in these areas, with a retention rate of over 85%, advancement rate of over 80%, graduation rate of over 80%, a licensing rate of over 90%, and a job placement rate of 100%. Tracking this type of data is also essential in reporting to current funders and recruiting new students.

Community Impact

Funders are especially interested in funding programs that benefit the community as a whole. The program that impacts a community economically, educationally, and socially is very attractive to foundation funders. *Carreras en Salud* contributes to the community's economy by helping residents to move from low-paying jobs of around $9.00 per hour to jobs with annual salaries of over $55,000 as a Licensed Practical Nurse and over $70,000 as a Registered Nurse. These salaries stabilize families, enabling them to pay for housing, food, and other amenities purchased in the community. The program also increases the educational level of residents who participate, producing more community residents with college degrees, licenses, and certifications. Socially, *Carreras en Salud* promotes the idea of "giving back" to the community. Students are encouraged during their academic journey to be socially active and responsible, participating in voting campaigns, immigration rights activities, and in taking leadership on community issues such as safety and neighborhood clean-up and beautification.

Partnership

Funders support programs that are developed collaboratively. Collaborative programs are less likely to duplicate services already available in the community and they have access to many more resources than programs run by a single entity. Participants benefit from the expertise of several partners. Funders are especially interested in seeing nonprofits partner with the private sector (industry). Employer partners guarantee that students are trained within the industry standards and that they will find a job at the end of the training. *Carreras en Salud* is recognized as a national model for community college, private sector, and community-based organization partnerships.

Participation in Conferences

A good strategy to position a successful program is by presenting it at local, state, or national conferences. Funders and other professionals in the field become familiar with the new and best practices at these conferences. Creating and developing a good presentation with live representation of successful graduates will help in the recognition of the program. *Carreras en Salud* has been presented at several national conferences and received several awards for its effectiveness. These include the Family Strengthening Award from the National Council of La Raza (NCLR) and the Annie E. Casey Foundation, Program of the Year from the National Council for Continuing Education and Training, Program of the Year from the Illinois Council for Continuing and Higher Education,

top ten finalist for the Bell Weather National Award in Workforce Development, top six workforce development programs by the Aspen Institute, top five career pathway programs by the U.S. Department of Education Office of Vocational and Adult Education, and the Recognition of Excellence from the U.S. Department of Labor.

Marketing and Promotion

Once the program is positioned, it is easy to promote. Quality marketing materials, such as a professional brochure with current data on participant success and industry satisfaction, are essential. A well positioned program is more likely to be invited to professional summits and expert panels, which are good marketing opportunities. Foundations, industry representatives, media, and elected officials can be invited to program graduation ceremonies. However, the best marketing tool is a satisfied student. Satisfied students talk about the program with family members, friends, and coworkers. A student satisfaction survey can also add important information to a marketing plan and demonstrates a commitment to program quality. Because marketing can increase enrollment and funding, a good marketing plan is important to the sustainability of the program.

Collaborative Proposal Writing Among Partners

Having partners from different organizations with varying status and missions also contribute to the sustainability of a program. Collaborative proposal writing is effective when different organizations apply for grants that fund their particular mission. One organization will not qualify or meet the requirements for all the grants available, but multiple organizations writing proposals will target a larger variety of grants. However, constant communication among partners about funding efforts is essential to avoiding competing proposals. In *Carreras en Salud*, the partner who meets the requirements of a grant takes the lead in writing the proposal and becomes the fiscal agent for that particular grant. A recent example is a proposal that NCLR prepared for the U.S. Department of Labor to help fund *Carerras*. NCLR provided the lead writer and would be the fiscal agent if awarded, while each partner — especially Instituto and Association House — provided drafts of the proposal sections that discussed their parts of the program.

Program Approval for Public Funding

Programs that are authorized to receive public funding are far more sustainable than those that only receive private funding. Government funds can be continued for many years, as long as the program meets its performance contracts, while private funders usually only fund programs for one to three years. It is important that each bridge program in the pathway apply for approval in a separate application. This way, students can request financial aid for the portion they want and are eligible for. *Carreras en Salud* is authorized to receive funds from the Workforce Investment Act (WIA), The Department of Human Services (DHS), and other city, state, and federal funders.

Searching for Multi-Year Funding

An effective way to become sustainable is to secure multi-year funding. This type of funding is difficult to obtain, but when a program is well positioned and highly recognized by the community and its constituents, foundations are more willing to invest in it with a multi-year grant. Another way to obtain multi-year funding is by applying for national research and demonstration funds. If the program data demonstrates that the program is unique and can be replicated in other state or sectors, it becomes a good candidate for a demonstration grant, which are usually multi-year. But be wary of additional requirements — especially around data collection and evaluation — with demonstration grant awards. It is important to understand how much of the actual program one of these grants will fund before embarking on a demonstration program. *Carreras en Salud* participates in two national demonstration grants, one from the Aspen Institute's Workforce Strategies Initiative and funded by The Mott Foundation, and the other from the U.S. Department of Education and administered by MPR Consultants. But the best way to sustain a career pathway initiative is by securing authorization to receive funds from state and federal educational funds, such as Adult Education and Family Literacy. These sources pay the educational institution based in the number of credits taken by eligible students. *Carreras en Salud* is working towards this.

How to Expand the Bridge Program Model

Career pathways present opportunities for three types of expansion: a vertical expansion, a horizontal expansion, and a total program replication.

Vertical Expansion

A vertical expansion is an addition at the top or bottom of the pathway. This addition can be one module or a completely new bridge that offers additional opportunities for students to engage in the pathway program. *Carreras en Salud* is considering adding a bridge at the bottom of the current career pathway, so students at the fourth grade level can begin their careers. In addition, the *Carreras* pathway was initially developed to bridge students from lower levels of basic skills and ESL to college levels, and for students to complete the program at the LPN level. Recently, the pathway was expanded vertically by connecting to a RN program. With this expansion, students completing the LPN have the opportunity to get a job as a LPN and return, if they wish, to complete the RN program or an Associate of Nursing in just one more year at HPVEC. A future vertical expansion will be when the program articulates with a four-year educational institution to provide the opportunity to RN graduates to pursue a Bachelor of Nursing.

Horizontal Expansion

A horizontal expansion consists of adding new tracks to the existing pathway. In workforce development this is known as *lattice*. The healthcare sector has several tracks, such as therapeutics, diagnostics, health informatics, and support services. *Carreras en Salud* concentrates in the therapeutics and diagnostics tracks, bridging students from jobs as CNAs to PCTs to LPNs to RNs. Recently, *Carreras en Salud* horizontally expanded by adding a new track. Once students complete the Pre-CNA Bridge, they can choose between the nursing track and the health informatics track, obtaining a Certified Medical Assistant (CMA) certification.

Replication

Replicating the entire model is another type of expansion. This can be a replication in the same industry in a different geography or with a different population (ABE rather than ESL, for example), or it can address and entirely different industry. This requires duplicating all the components of the model, including type of partners, agreements among partners, procedures and policies, budget formats, program elements, and instruments and curricula, and implementing it in a different region or location. For a replication to be successful, it is important to have the technical assistance of the staff from the original model to ensure that the replication truly reflects the original pathway with its successful characteristics and best practices. This manual is an important tool for this process.

Conclusion

Education, training, and good paying jobs give immigrants and others with barriers to employment the power to provide for their families, ensuring a better quality of life. In the last five years, Instituto has worked with sector partners to align industry needs with the continuum of services provided through its workforce development department. These partnerships identified skills gaps and labor shortages that provided a basis for tapping the talents of what was generally understood as an unskilled immigrant population. In the case of manufacturing and healthcare, the assumption is that each industry demonstrates the opportunity for significant long-term financial impacts for participants. As wages increase, opportunities to save, invest, and build an asset base arise, all of which sustain a participant's exit from poverty. In the recent study, "Building Tomorrow's Workforce: Promoting the Advancement and Education of Hispanic Immigrant Workers in America," published by the Lumina Foundation, Instituto was noted for its ability to develop complex pathways from education to job training that are articulated through multiple levels of entry. Such studies support the rationale that as participants gain new skills through training and increase their English fluency, their potential to secure and retain higher paying jobs increases. By doing this, participants increase their ability to strengthen their understanding of the U.S. society, effectively plan for their future, better adapt to life in Chicago, become civically active, and ultimately achieve self-sufficiency.

This manual provides information on how the *Carreras en Salud* career pathway model positioned itself as one of the top career pathway initiatives in the nation, attracting the attention of government agencies such as the U.S. Department of Education Office of Vocational and Adult Education (OVAE), the U.S. Department of Education Employment and Training Administration (ETA), and research institutions such as the Aspen Institute. The *Carreras en Salud* model has received several national awards in workforce development, including awards from the National Council for Education and Training, the National Council of La Raza, and the Bellwether National Award of the Community College National Assembly from the University of Florida.

The manual serves as reference to those organizations that want to implement career pathways programs, involving whichever industry, ethnic group, and region is relevant to that organization.

Appendix A: Sample Memorandum of Understanding

Carreras en Salud Master Partnership Agreement Between Instituto del Progreso Latino, Association House of Chicago, and Humboldt Park Vocational Education Center/Wilbur Wright College

Purpose of the Partnership

The purpose of this partnership is to pool resources and implement a cutting edge workforce development project, "Carreras en Salud," which aims to promote low-income Latinos into career-oriented, decent-salaried health occupations. Primarily, these occupations are Licensed Practical Nurse (LPN) and Certified Nursing Assistant (CNA).

General Partner Commitments

All three partners in this project have equal responsibility for ensuring that the project is implemented in the best way possible and is highly successful. Each partner commits to:

1. Keep the mission of the project intact.
2. Actively participate in all tasks, big and small, as needed to secure adequate support for the project.
3. Participate in all aspects of the project, from program design and negotiation of articulation agreements to fundraising, implementation, management, evaluation, dissemination, and any other responsibility emanating from the project.
4. Participating in the management team, and as such, being responsible for the overall supervision of project staff who report to the management team and receive general direction from it.
5. Implement its project responsibilities as promptly and thoroughly as possible.
6. Thoroughly ensure that project personnel recognize and acknowledge lines of supervision and required cooperation, resources, and information sharing across partners.
7. Work with existing and prospective partners to successfully disseminate project information, recruit participants, and perform other needed functions.
8. Attend all project management meetings, and support and uphold decisions made.
9. Share all relevant information with partners as much and as often as possible.
10. Share equally and generously in the credits and accolades as well as the bumps in the road.

Specific Responsibilities

Instituto del Progreso Latino (Instituto):

1. Instituto will secure initial funding for the project from the Department of Commerce and Economic Opportunity via the Chicago Workforce Board. It also agrees to serve as the fiscal agent and liaison for this part of the funding.
2. Instituto will supervise on a day-to-day basis personnel funded through it, as well as other line items included in its budgets. Positions supervised are instructors, program coordinator, and employer relations and resource development coordinator.

3. Instituto will provide curriculum leadership in the design and implementation of the Pre-LPN components of the project.
4. Instituto will serve as the lead agency in the set up of a science lab at the Pre-LPN instruction site.
5. Instituto will lead in the recruitment function of the Pre-LPN elements of the project, and will actively assist other partners in the implementation of theirs.
6. Instituto will be the lead partner in securing job placement for program participants and graduates.

Association House of Chicago (AHC):

1. AHC will secure resources to provide case management services to program participants.
2. AHC will serve as the lead agency in providing support services to all project participants, namely, case management services.
3. AHC will serve as the site for Pre-LPN instruction.
4. AHC will play a leadership role in recruitment targeted to West Town and Humboldt Park residents, for all parts of the program.

Humboldt Park Vocational Education Center/Wilbur Wright College (HPVEC):

1. HPVEC will serve as the lead partner in negotiating funding agreements with the Local Initiatives Support Corporation (LISC) and its neighborhood partner, Bickerdike Development Corporation.
2. HPVEC will serve as the lead contact in working with funding partner Health Resources and Services Administration (HRSA) and reporting project outcomes.
3. HPVEC will fund a management consultant, LPN tutor, and other instructional positions through HRSA.
4. HPVEC will spearhead recruitment of bilingual, bicultural participants eligible to enter the LPN program.
5. The HPVEC LPN instructional program will deliver all LPN instruction and professional practice to eligible participants enrolled through the efforts of all partners.
6. The HPVEC LPN instructional program will also play a leadership role in shaping the Pre-LPN curriculum in all its components.
7. The HPVEC LPN instructional program staff will lead decision-making and implementation on supplementary coursework, i.e., Phlebotomy to be offered to participants.
8. The HPVEC LPN instructional program staff will spearhead negotiations with Truman College and other centers offering CNA instruction for participant transition after completion of LPN.
9. The HPVEC LPN instructional program will play a major role in identifying employment opportunities for program participants.

[signed by all three partners]

Appendix B: Health Science Careers

Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development

Pathways	Therapeutic Services	Diagnostic Services	Health Informatics	Support Services	Biotechnology Research and Development
Sample Career Specialties/ Occupations	Acupuncturist Anesthesiologist Assistant Art/Music/Dance Therapist(s) Athletic Trainer Audiologist Certified Nursing Assistant Chiropractor Dental Assistant/Hygienist Dental Lab Technician Dentist Dietician Dosimetrist EMT Exercise Physiologist Home Health Aide Kinesiotherapist Licensed Practical Nurse Massage Therapist Medical Assistant Mortician Occupational Therapist/Asst Ophthalmic Medical Personnel Optometrist Orthotist/Prosthetist Paramedic Pharmacist/Pharmacy Tech Physical Therapist/Assistant Physician (MD/DO) Physician's Assistant Psychologist Recreation Therapist Registered Nurse Respiratory Therapist Social Worker Speech Language Pathologist Surgical Technician Veterinarian/Vet Tech	Cardiovascular Technologist Clinical Lab Technician Computer Tomography (CT) Technologist Cytogenetic Technologist Cytotechnologist Diagnostic Medical Sonographers Electrocardiographic (ECG) Technician Electronic Diagnostic (EEG) Technologist Exercise Physiologist Geneticist Histotechnician Histotechnologist Magnetic Resonance (MR) Technologist Mammographer Medical Technologist/Clinical Laboratory Scientist Nuclear Medicine Technologist Nutritionist Pathologist Pathology Assistant Phlebotomist Positron Emission Tomography (PET) Technologist Radiologic Technologist/ Radiographer Radiologist	Admitting Clerk Applied Researcher Community Services Specialists Data Analyst Epidemiologist Ethicist Health Educator Health Information Coder Health Information Services Healthcare Administrator Medical Assistant Medical Biller/Patient Financial Services Medical Information Technologist Medical Librarian/Cybrarian Patient Advocates Public Health Educator Reimbursement Specialist (HFMA) Risk Management Social Worker Transcriptionist Unit Coordinator Utilization Manager	Biomedical/Clinical Engineer Biomedical/Clinical Technician Central Services Environmental Health and Safety Environmental Services Facilities Manager Food Service Hospital Maintenance Engineer Industrial Hygienist Materials Management Transport Technician	Biochemist Bioinformatics Associate Bioinformatics Scientist Bioinformatics Specialist Biomedical Chemist Biostatistician Cell Biologist Clinical Trials Research Associate Clinical Trials Research Coordinator Geneticist Lab Assistant-Genetics Lab Technician Microbiologist Molecular Biologist Pharmaceutical Scientist Quality Assurance Technician Quality Control Technician Regulatory Affairs Specialist Research Assistant Research Associate Research Scientist Toxicologist
Cluster K&S	**Cluster Knowledge and Skills** Academic Foundation • Communications • Systems • Employability Skills • Legal Responsibilities • Ethics • Safety Practices • Teamwork • Health Maintenance Practices • Technical Skills • Information Technology Applications				

Source: http://careerclusters.org/resources/ClusterDocuments/hsdocuments/1HSModel.pdf

Appendix C: ESL Skill Levels and Competencies[20]

Literacy Level

Listening: Identify English alphabet letter names; identify cardinal numbers 0-100; demonstrate understanding of basic greetings and polite expressions (good morning, how are you, thank you); demonstrate understanding of request for basic personal information (what's your name); follow simple oral classroom instructions (repeat, copy, listen); and demonstrate understanding of basic life skills vocabulary (family, days, months, time, currency).

Speaking: Name the letters of the English alphabet; use cardinal numbers 0-100; use basic greetings and polite expressions; say money amounts or ask for and give the time; and ask and respond to simple questions.

Reading: Identify the letters of the English alphabet; identify cardinal numbers in a variety of contexts (prices, dates, and personal information); read simple classroom instructions; read short sentences of previously learned vocabulary; and read analog and digital clock times.

Writing: Print upper and lower case letters; write cardinal numbers 0-100; write simple personal information (name, address, birthday); and copy simple familiar words, phrases, and sentences.

Computers: Does not own a computer; does not know the components of a computer.

Beginning Level

Listening: Identify cardinal numbers 100 and above; identify ordinal numbers 1st through 31st (use of the calendar); demonstrate understanding of simple commands and warnings (stop, be careful); follow simple oral instructions (open the book, close the door); and respond to simple requests for repetition and clarification.

Speaking: Spell personal information orally; use cardinal and ordinal numbers in appropriate context; participate in familiar social interactions (greetings, introductions, goodbyes); ask for repetition and clarifications; and describe routine activities.

Reading: Read a variety of personal information in words and phrases; read a variety of signs; read simple written instructions with familiar vocabulary; read simple sentences on familiar topics; and read a short, simplified paragraph on a single topic with familiar vocabulary.

Writing: Complete short forms; write simple familiar words, phrases, and sentences; use basic capitalization and simple punctuation (question marks, periods); and complete simple writing tasks related to everyday needs (address an envelope, write a check, make a grocery list).

Computers: May own a computer; able to type short sentences with simple words.

Intermediate Low Level

Listening: Respond to statements, questions, and commands in routine face-to-face conversations related to immediate needs; respond to short phone conversations related to immediate needs; follow simple oral directions and instructions; identify main idea and some details in a short conversation or listening activity; and distinguish between formal and informal language in everyday conversations.

Speaking: Participate in routine face-to-face conversations related to immediate needs; participate in routine social conversations; participate in short phone conversations; give simple directions to a location; describe personal events; and ask for repetition or clarification.

Reading: Read short passages on familiar topics; identify the main idea in short passages on familiar topics; read authentic materials related to immediate needs; use alphabetical or numerical order to locate information; and read common abbreviations.

Writing: Write short paragraphs on familiar topics; apply capitalization and punctuation rules; complete authentic forms; write simple directions to a familiar location; and write short notes.

Computers: Familiar with Microsoft Word, able to use some functions of Microsoft Excel; and read and respond to e-mails.

Intermediate High Level

Listening: Follow multi-step oral directions and instructions; respond to requests for elaboration; and respond appropriately to small talks in everyday situations.

Speaking: Participate in face-to-face and phone conversations in familiar contexts; participate in social conversations; give directions to a location with details; describe a process; use examples and details to clarify meaning; and express opinions, giving reasons and examples.

Reading: Read passages or articles on familiar and new topics; predict meaning of unfamiliar vocabulary by using contextual clues in reading materials on familiar and new topics; identify main idea and supporting details in passages or articles on familiar and new topics; identify chronological order and sequence markers; and read work-related memos and e-mails.

Writing: Combine sentences using connectors and conjunctions; write paragraphs with a main idea and supporting details and conclusion; write simple step-by-step instructions; write a simple letter; and prepare simple resume using a model.

Computers: Able to conduct online job searches; prepare a resume; communicate via e-mail; and navigate the Internet for simple research.

Advanced Level

Listening: Follow complex multi-step oral instructions (doctor's directions, supervisor's instructions); identify the main idea and key details in a variety of sources (conversations, radio, TV broadcast, presentation); demonstrate understanding of high-frequency idioms; and demonstrate understanding of high frequency reductions ("gonna," "gotta").

Speaking: Use paraphrasing and elaboration to clarify meaning; participate in a wide range of social interaction using formal and informal language as appropriate; use collaborative skills in a group (agree, disagree, compromise); and present short speeches or oral reports.

Reading: Read a variety of materials; interpret charts, tables, graphs, and other non-prose information; identify a writer's purpose; summarize the main ideas and supporting details in reading materials; make inferences; draw conclusions and predict outcomes in reading materials; and use reference materials.

Writing: Add details to simple sentences; use transitions; write multi-paragraph essays demonstrating clear use of paragraphs to introduce, support, and conclude; write multi-paragraph comparison/contrast, cause/effect, description, and narration essays; prepare resume; write work-related memos and e-mails; write formal letters; and organize key details in a variety of contexts.

Computers: Familiar with Microsoft Office components; functional use of Internet.

Endnotes

[1] Unemployment data from Bureau of Labor Statistics. Poverty data from U.S. Census 2008 American Community Survey.

[2] U.S. Census 2008.

[3] Almost one-half of all job openings require more than a high school education. Harry Holzer and Robert Lerman, "America's Forgotten Middle-Skill Jobs: Education and Training Requirements in the Next Decade and Beyond," The Workforce Alliance, Washington, D.C. 2007.

[4] The Working Poor Families Project, "Still Working Hard, Still Falling Short: New Findings on the Challenges Confronting America's Working Families," 2008. www.workingpoorfamilies.org/pdfs/NatReport08.pdf (accessed March 2010).

[5] National Assessment of Adult Literacy, 2003. http://nces.ed.gov/naal/kf_demographics.asp#3 (accessed February 2010).

[6] Instituto del Progreso Latino uses this definition, from Women Employed, Chicago Jobs Council, and UIC Great Cities Institute, "Bridges to Careers for Low Skilled Adults," 2005. p. 2. The Illinois Community College Board has its own definition described later in this manual.

[7] www.aspenwsi.org/WSIwork-HigherEd.asp (accessed February 2010).

[8] The Critical Skill Shortages Initiative is part of a plan launched by the Illinois Department of Commerce and Economic Opportunity and the Illinois Governor's Office to distribute training funds throughout the state to create jobs and spur economic growth in Illinois. The goals of the initiative are to identify the key sectors and industries that drive the regional economy, determine occupational shortages within those sectors, and develop solutions.

[9] Dan Hull of The Center for Occupational Research and Development (CORD) has written extensively on tech prep and career pathways (www.cord.org).

[10] Maureen G. Conway and Ida S. Rademacher, "Measure for Measure: Assessing traditional and sectoral strategies for workforce development," The Aspen Institute, Washington, D.C., October 2000.

[11] The Human Relations Foundation/Jane Addams Policy Initiative and The Center for Urban Research and Learning, Loyola University Chicago, "Minding the Gap: An Assessment of Racial Disparity in Chicago," 2003.

[12] http://www.nd.edu/~chifacts/sixmetro.html (accessed February 2010).

[13] This manual is available on Instituto's Web site at www.idpl.org.

[14] PowerPoint presentation is available at www.idpl.org.

[15] Women Employed, Chicago Jobs Council, and UIC Great Cities Institute, "Bridges to Careers for Low Skilled Adults," 2005. p. 11.

[16] Based on the experience of Instituto in implementing both the tech prep and *Carreras* bridge programs. The social ladder needs to be taken into consideration in developing these programs, because as a person's social position changes he or she will face new and different challenges that may require support services. For example, Instituto staff have observed that some women who participate in its programs face resistance from their husbands as they progress in their careers and begin to earn more money and greater social standing than their husbands.

[17] Women Employed, Chicago Jobs Council, and UIC Great Cities Institute, "Bridges to Careers for Low Skilled Adults," 2005. p. 2.

[18] This definition can be found on the Shifting Gears Web site at www.shifting-gears.org (accessed March 2010).

[19] SEARK offers a good example of a contextualized curriculum for ABE students, in contrast to *Carreras*, which is primarily designed for ESL students. For more information: www.seark.edu/academics/nurs.php.

[20] According to Illinois ESL Content Standards, 2007.

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