ABE Career Connections:

A Manual for Integrating Adult Basic Education into Career Pathways

Prepared under contract to
Office of Vocational and Adult Education,
U.S. Department of Education

MPR Associates, Inc.
2401 Pennsylvania Avenue, NW
Suite 410
Washington, DC 20037

Contact
Laura Rasmussen
lrasmussen@mprinc.com
202-478-1027

February 2010

Contents

Introduction

As the U.S. labor market continues to shift to jobs requiring at least some postsecondary education, poli-cymakers, researchers, and practitioners are exploring ways to prepare adults to obtain and succeed in such jobs. Although more research is needed, initial results suggest that career pathways—a series of linked educational courses and training programs that lead to advancement within an industry—are a promising approach. Adult basic education (ABE) career pathways, in particular, focus on strengthening connections between ABE and postsecondary education to help more adult learners acquire a postsecon-dary credential or degree and well-paid employment.

Recent research projects that about half of the jobs in 2014 will require workers to have at least some postsecondary education (Holzer & Lerman, 2007). Researchers also have documented the labor market value of postsecondary credentials, suggesting that adults who complete at least some postsecondary edu-cation will earn more than those with only a high school diploma (Bailey, Kienzl, & Marcotte, 2004). These statistics underscore the need to increase postsecondary attainment and improve workforce skills not just among high school students, but also among adults enrolled in ABE programs.[1]

Researchers and practitioners are paying increasing attention to transitions within the education pipeline, which are often problematic for students, especially ABE students. To help adult learners overcome bar-riers to successful participation in postsecondary education[2], efforts are underway at the national level to identify effective models of transition.[3] This includes career pathways, which combine contextualized skills instruction, workforce training, and other support services to help adults improve their basic skills for enrollment in postsecondary education programs. Although no large-scale evaluation of career path-ways has yet been completed, case study reports of states and community colleges that have implemented career pathways show some initial positive results (Bragg et al., 2007; Grossman, 2009). For example, Washington State's Integrated Basic Education and Skills Training (I-BEST) program pairs basic skills instruction and workforce training within specific industries; research indicates that adults enrolled in I-BEST perform better on basic skills tests than adults enrolled in non-contextualized basic skills instruc-tion. I-BEST participants also are more likely to obtain postsecondary credentials than non-participants

---

[1] As defined by the *Adult Education and Family Literacy Act (AEFLA)* of the <u>Workforce Investment Act</u> (WIA) of 1998, the term "adult basic education" refers to services provided to adults who are age 16 and older, not currently enrolled in school, and in need of improved basic reading, writing, and math skills.

[2] In *Helping Adults with Low Literacy Skills Transition to and Succeed in Postsecondary Education*, the U.S. Department of Edu-cation categorizes adults' barriers to postsecondary education participation and completion as individual, institutional, and policy barriers. Individual barriers include lack of transportation and child care, employment schedules, previous educational expe-riences, tuitions fees, and more.

[3] Recent efforts led by the U.S. Department of Education to study adult learners' transitions to postsecondary education include the <u>College and Career Transitions Initiative (CCTI)</u>, the <u>Beyond the GED: Community College Career Pathways study</u>, <u>Transi-tioning English Language Learners Project</u>, and the <u>Supporting States' Development of Policies for Adult Basic Education (ABE) to Postsecondary Education (PSE) Transitions</u>, among others. Foundations, including the Bill and Melinda Gates Founda-tion, the Joyce Foundation, Lumina Foundation, and more, are also funding initiatives related to postsecondary transitions.

(Jenkins, Zeidenberg, & Kienzl, 2009). Though limited, these initial results suggest that career pathways can be considered a promising approach to improving the education and employment outcomes of low-skill adults.

Purpose of This Manual

States and local ABE programs are just beginning to explore strategies for connecting ABE with postsecondary career pathways. To further these efforts, the U.S. Department of Education, Office of Vocational and Adult Education, funded the Adult Basic Education Career Connections (ABECC) project in 2006-2010, a demonstration project involving five sites across the country. The sites were selected to participate in the project with the goal of connecting their ABE programs with existing career pathways in industries of importance to their local economies. To be eligible for participation, applicants had to receive federal Adult Education and Family Literacy Act (AEFLA) funds, obtain support for the project by their state directors of adult education, and already be involved in existing career pathways initiatives. The ABECC sites were:

- Bluegrass Community and Technical College in Lexington, Kentucky;

- Instituto del Progreso Latino in Chicago, Illinois;

- Jewish Vocational Service (JVS) in San Francisco, California;

- Madison Area Technical College in Madison, Wisconsin; and

- Montgomery College in Wheaton, Maryland.

Between 2008-2009, the sites developed and implemented work plans focused on improving adults' basic skills to prepare them to enter career pathways. To help other ABE programs undertake similar work, this manual provides an overview of career pathways and describes approaches used by the ABECC sites to align basic skills training and partnership efforts with local career pathways.

Manual Contents

Developing connections to career pathways can be challenging, as evident in the experiences of the ABECC sites. A significant investment of time and effort is necessary to design and implement key ABE pathway components for the recruitment of participants, development of basic skills courses, establishment of partnerships, and collection and analysis of data. This manual is organized into sections describing approaches to implementing pathways components, examples from the ABECC sites and the challenges they encountered, and resources that were provided to ABECC sites.

The sections include:

Overview of ABE Career Pathways. Defines ABE career pathways and discusses steps involved in designing them.

Descriptions of Pathway Components and Site Examples. Summarizes information on the pathway components listed below, based on resources used by project staff and participants. Each section also discusses challenges related to the pathway component and offers implementation examples from the ABECC sites.

Student Recruitment, Orientation, and Placement. Discusses approaches to identifying participants, introducing them to the educational and employment steps along the pathway, and confirming a match between their skills and interests and the pathway goals.

Course Development. Discusses approaches to designing and delivering contextualized basic skills courses, including the roles that postsecondary and employer partners can play in course development, support services for participants, and strategies for helping participants transition to postsecondary education.

Partnerships. Discusses approaches to establishing and sustaining partnerships in support of ABE pathways and provides information on the types of partners that may be involved and possible roles they may play.

Data Collection and Analysis. Discusses approaches to collecting and analyzing program and participant data on an ongoing basis to measure participants' basic skills gains and assess the effectiveness of the basic skills training. Also discusses the selection and use of appropriate assessment tools.

Conclusion. Summarizes lessons learned from the sites about ABE pathways design and implementation and discusses implications for policy and practice.

Resources. Lists resources made available to project staff and ABECC participants and consulted in the development of this manual. Includes brief descriptions of each resource and links to resources available online.

Glossary. Defines key terms related to adult basic education and career pathways.

The manual also contains the following appendices:

- Appendix A—Project Overview

- Appendix B—Site Profiles

- Appendix C—Pathways Maps

Overview of ABE Career Pathways

Career pathways are still a relatively new concept. This section provides:

- Brief definitions of <u>career and ABE pathways</u>;

- A description of <u>career pathway maps</u>; and

- General guidelines for <u>designing ABE pathways</u>.

Career Pathways and ABE Pathways

Traditional career pathways programs connect secondary and postsecondary education by preparing high school students for further education and work in a specific industry. As defined by the Institute for a Competitive Workforce and the National Career Pathways Network (2009), a "career pathway is a coherent sequence of rigorous academic and career courses that begins in high school and leads to an associate degree, a bachelor's degree and beyond, and/or an industry-recognized certificate or license" (p.6). The Adult Basic Education Career Connections (ABECC) project expands this concept, connecting ABE to postsecondary education, with the goal of improving adults' basic skills so they can advance in their education, careers, and employment.

ABE pathways focus on the educational and employment needs of adults by offering:

> *... a series of connected education and training programs and support services that enable individuals to secure employment within a specific industry or occupational sector, and to advance over time to successively higher levels of education and employment in that sector. (Jenkins 2006, p.6)*

ABE pathways programs also aim to prepare participants for the next steps along the pathway in employment and education (Jenkins, 2006), emphasizing a "seamless transition" among the pathway steps (Agrawal et al., 2007, p.2). The chart below summarizes pathways at the ABECC sites.

Pathways at the ABECC Sites

ABECC Sites	Pathway Industry	Basic Skills Component	Next Steps: Education	Next Steps: Employment
Bluegrass Community and Technical College	Healthcare	English as a Second Language (ESL) and pre-CNA training	Certified Nursing Assistant (C.N.A.) course at college	C.N.A.
Instituto del Progreso Latino	Healthcare	Pre-CMA course	Certified Medical Assistant (C.M.A.) course or relevant combination of other courses at community college	C.M.A.
Jewish Vocational Service	Healthcare	Professional Communication for Healthcare Workers course	Prerequisite courses for postsecondary certification programs	Various
Madison Area Technical College	Animal sciences	Prep for Success course	Lab Animal Caretaker Training (LACT)	Lab animal caretaker
Montgomery College	Building trades and healthcare	English for Speakers of Other Languages (ESOL) for Building Trades and Healthcare Careers	Noncredit postsecondary courses in building trades and healthcare	Various

Career Pathways Maps

Career pathways maps illustrate the steps leading to further education and employment for a specific career. These maps are visual representations of a pathway that highlight key steps and display skills requirements for each step. The key components of pathway maps commonly include:

- Potential jobs in the pathway industry;
- Progression of education and training;
- Salary information;
- Service providers;
- Partnerships;
- Support services; and

- Arrows denoting links between pathway components (Hinckley & Cotner, 2008).

Pathway maps are developed as information is collected on the pathway, such as labor market data and related postsecondary courses. The maps should be seen as "living" documents, updated regularly to reflect any necessary changes, such as changes in partners or course requirements. The ABECC sites' maps are included in Appendix C.

> In 2003, Oregon launched a statewide career pathways initiative that included all 17 community colleges in the state. Pathway maps developed by the colleges provide good illustrations of how maps can be used to communicate information about career pathways. See the following maps for examples: Portland Community College – Certified Nursing Assistant, Portland Community College/Mt. Hood Community College – Direct Care Worker, Portland Community College/Mt. Hood Community College – Food Service Worker, and Mt. Hood Community College – Certified Nursing Assistant.

Steps in Designing ABE Pathways

To develop ABE pathways, significant up-front planning and development time must be allocated to ensure that the pathway meets local employer needs and enables participants to meet their education and career goals in the allotted time. During the planning stage, ABE programs should allow considerable time to work with their partners, including employers and postsecondary institutions, to:

- Define the pathway's target population;

- Review labor market data to select an industry focus;

- Benchmark the academic and technical skills needed for each pathway step;

- Establish the key education and employment steps along the pathway;

- Identify existing education and training opportunities; and

- Leverage funding opportunities and build on existing pathways efforts to make the pathway sustainable (Alamprese, 2008; Henle, Jenkins & Smith, 2005; Jenkins, 2006).

ABE pathways programs should consider a variety of information in defining their target population, including participants' basic skills levels upon entry to the program, their previous educational experiences, employment status, and possible barriers to participation (Alamprese, 2008). This information can be collected through pre-course assessments, intake forms, focus groups, and one-on-one conversations with participants and should be used to align the target population with pathways goals and entrance requirements. During the intake process, it is especially important, as participants are enrolled, to ensure that

their skills match those of the target population identified during the pathway design process. Site profiles in Appendix B describe the target population served by each ABECC site.

Local labor market data and business reports, available from city, state, and federal agencies, employers, and other sources, provide useful information on a community's high-growth industries and should be used to determine the relevance of a pathway's industry focus to the local economy (Alamprese, 2008). The ABECC sites referred to the following sources, for example, to obtain data on the need for skilled workers in their local labor markets:

- National

  - O*NET (The Occupational Information Network): Provides access to a database of occupations and includes workforce statistics and data on specific occupations.

  - U.S. Census Bureau: Contains demographic data on national, state, and regional populations, including data on employment status, educational attainment, and English language proficiency.

  - U.S. Department of Labor: Compiles resources on general career and workforce issues and profiles 13 targeted industries.

- State

  - Kentucky Hospital Association: Summarizes data on Kentucky's healthcare workforce and includes information on supply-and-demand for employees in the state's hospitals.

  - Maryland Department of Labor, Licensing and Regulation: Presents statistics on Maryland's labor market and includes descriptions of industry sectors, state occupational projections, wage data, and unemployment rates.

- Local

  - Metropolitan Chicago Healthcare Council: Compiles resources describing workforce shortages in the healthcare field in Chicago, IL.

  - Montgomery Works (One-Stop Center): Presents occupational data for Montgomery County, MD, including profiles of and salary information for the top 50 occupations in the county.

  - San Francisco Mayor's Office of Economic and Workforce Development: Provides information on employment and training opportunities for residents of San Francisco, including data on local industries and projections of employment needs.

Since considerable time and effort are required to develop a career pathway, some ABECC sites built upon existing models and leveraged other funding streams to integrate their basic skills component into local pathways efforts. For example, Instituto del Progreso Latino added a horizontal expansion to the Carreras en Salud healthcare pathway by developing a Pre-Certified Medical Assistant (pre-CMA) bridge

program to prepare participants for CMA certification. Likewise, Madison Area Technical College de-veloped a basic skills training course, called *Prep for Success*, to strengthen participants' basic writing and math skills for entry into lab animal caretaker training, an existing career pathway program supported by a U.S. Department of Labor grant. By focusing on expanding existing activities, these sites gained immediate access to information on the target population and skills requirements for the next educational steps and made plans for sustaining the pathway beyond the current project.

Descriptions of Pathway Components and Site Examples

The following sections describe significant ABE pathway components, including recruitment, orientation, and placement; course development; partnerships; and data collection and analysis. They also highlight site implementation examples.

Student Recruitment, Orientation, and Placement

Considerable time and effort should be devoted to recruiting and orienting participants, a crucial component of developing and implementing ABE career pathways. Programs should adopt active recruitment strategies (Hinckley & Hull, 2007) and advertise broadly to attract a large number of applicants and ensure sufficient enrollment. Recruitment strategies range from disseminating promotional materials about the pathway to conducting informational sessions and presentations and reaching out to partners for referrals (Henle, Jenkins & Smith, 2005). For examples of recruitment flyers, see Madison Area Technical College's *Prep for Success* and JVS's *Professional Communication for Healthcare Workers* flyers in Appendix D.

Potential participants may be recruited from a variety of sources (Alamprese, 2008). Partnerships with employers, community-based organizations, unions, postsecondary institutions, and other local ABE programs and organizations can facilitate student recruitment (Hinckley & Hull, 2007). Partners can share information about the program with their various networks and refer potential participants. Involving partners in recruitment also benefits pathways participants, enabling them to become familiar with representatives from various pathways components at the start, so that they can begin to consider future employment and training options. The ABE program's own networks are another recruitment source, potentially reaching learners enrolled in other ABE or ESL classes or those in related departments and programs likely to be interested in the pathway's targeted industry. Other learners already may be employed in the pathway industry, but still interested in basic skills training to advance in their careers.

A primary consideration during recruitment, orientation, and placement is ensuring that participants' career and academic goals align with the pathway's focus, with respect to meeting skill requirements for the next education steps of the pathway and planning for future employment in the targeted industry. To be successful, pathways participants should want to work in the chosen field, possess a minimum level of basic skills (to be determined during pathway design), and have time to participate in the program (Alamprese, 2008).

Many ABECC demonstration sites faced the challenge of serving participants who did not meet these criteria. Some sites, for example, were limited to serving participants who were not recruited for the pathway, such as incumbent employees at one workplace or participants already connected with the program, often due to time constraints. Still other sites found that some participants were interested mostly in improving their basic skills, but did not intend to pursue employment in the pathway industry. These challenges led sites to revise their basic skills instruction to address the training needs and interests of enrolled participants, or to proceed as planned despite a mismatch between entering participants' basic skills and the requirements for the next steps. ABE programs can ensure better alignment between participants' career goals and program services by offering information sessions, career exploration activities, one-on-one interviews with potential participants, placement exams, formal orientation, and other activities designed to create a good match between participants and services.

Moreover, the recruitment, orientation, and placement processes offer opportunities for ABE programs to set expectations for pathways participation by collecting information about participants' entering skill levels, establishing attendance requirements, and informing participants about the steps along the career pathway. Programs can help ensure that potential participants understand these expectations by conducting an initial orientation to familiarize them with course content and assessments and introduce them to the major career and postsecondary steps crucial to progressing in the pathway. Likewise, ABE programs also can model good workplace behavior by establishing attendance policies and developing student contracts and discussing these during orientation. These efforts can address some of the challenges faced by the ABECC sites, including diminishing attendance as the courses progressed and unexpected barriers to entry into other pathway steps, such as documentation needs for placement tests and wait-lists for popular certification programs. Successful recruitment, orientation, and placement strategies allow programs to provide career-awareness information early on, set clear expectations for participation and goals, and ensure that participants understand pathway requirements. See Appendix D for sample intake forms from Instituto del Progreso Latino and Madison Area Technical College.

Career pathway maps are a useful tool for communicating this information to participants. For example, the pathway maps developed by the ABECC site at Montgomery College presents possible paths for participants in the English for Speakers of Other Languages (ESOL) course in building trades to pursue additional training in the field, including noncredit courses and other courses leading to a certificate and/or associate degree. The maps describe the time requirements for each path and list additional considerations for participants. Pathway maps developed by all of the ABECC sites are included in Appendix C.

Implementation Examples

The following examples highlight the approaches used by the ABECC sites to recruit and orient students about pathways:

External Recruitment
- Ask partners to use their networks for recruitment.
- Enlist local media in recruiting participants.

Internal Participant Recruitment
- Recruit through internal organizational networks.
- Recruit from adults interested in the pathway industry.

Orientation Activities
- Prepare adults for the reality of work in the pathway industry.
- Prepare adults for postsecondary education.
- Familiarize participants with the next steps in the pathway.

External Recruitment

Ask partners to use their networks for recruitment: Jewish Vocational Service (CA)

All partnership members, including employers, community-based organizations, postsecondary institutions, and others, can provide vital assistance in recruiting participants for ABE pathways. Jewish Vocational Service (JVS) in San Francisco worked with its partners at the SEIU-UHW West & Joint Employer Education Fund (the Education Fund), the education and training arm of the local healthcare union, to recruit union members. The partners agreed that the Education Fund would recruit its members to participate in the JVS basic skills course, which would help prepare union members for enrollment in other Education Fund courses. The partnership thus gave JVS access to a ready pool of potential participants from multiple employers.

This recruitment strategy enabled program staff to spend more time educating union members about the course and tailoring the basic skills curriculum to participants' needs and less time identifying participants through other channels. The Education Fund benefitted by encouraging its members to improve their basic skills, thus preparing them for other courses, many of which were prerequisites for healthcare certification programs at the City College of San Francisco. To recruit participants, Education Fund staff developed and posted recruitment flyers at various area hospitals and spoke informally with its members about the course and other training offered by the union. The Education Fund and JVS also conducted joint information sessions and presentations to inform prospective participants of course goals and requirements.

Enlist local media in recruiting participants: Instituto del Progreso Latino (IL)

ABE programs need to pursue active recruitment strategies that can engage potential program participants effectively. For example, the local Spanish language media played a major role in spreading the word about the various Carreras en Salud programs offered by Instituto del Progreso Latino in Chicago. Radio stations and newspapers donated air time and advertising space, allowing Instituto to reach a broad audience of bilingual adults interested in healthcare careers. After announcements appeared, the site's phone lines were flooded with calls from potential participants, requiring additional staff and a separate phone line to respond to these inquiries.

Internal Participant Recruitment

Recruit through internal organizational networks: Jewish Vocational Service (CA)

Identifying participants and promoting their success may require multiple strategies. Besides relying on its partnership with the Education Fund, JVS turned to internal partners to recruit participants for the second and third sessions of the *Professional Communications for Healthcare Workers* course. By recruiting from within the organization, site administrators hoped to ensure sufficient course enrollment and offer contextualized basic skills training to a wider audience. For example, staff in the JVS Employment Services division reached out to colleagues in the JVS nursing department to identify job-seeking clients who might want to improve their basic skills and increase their employment prospects. The course instructor developed guidelines for recruitment to summarize information about course goals and requirements for case managers to use in conversation with potential participants. As a result of these efforts, the third session of the JVS basic skills course enrolled participants recruited from both the Education Fund and current JVS clients, who all shared the common goal of advancing along a healthcare pathway and needed basic skills training to do so. Through this recruitment strategy, JVS could meet basic skills training needs of both internal and external partners.

Recruit from adults interested in the pathway industry: Madison Area Technical College (WI)

To ensure that prospective participants are the right fit for the pathway, many ABE programs target adults who have already chosen to pursue education and training opportunities in the pathway industry. The ABECC site in Madison initially expected to enroll primarily English-language learners in its *Prep for Success* course to improve their basic skills in preparation for the Laboratory Animal Caretaker Training (LACT) at Madison Area Technical College. To recruit students, the site (based in the college Business, Industry & Community Services department) reached out to several departments on campus, including the adult education department, and used existing recruitment outlets for the LACT, including local community-based organizations and job centers, for student referrals. While this approach resulted in the enrollment of some participants in *Prep for Success*, site staff soon discovered another set of prospective participants—applicants to the college's veterinary technician program, some of whom lacked the basic skills to enroll in the technician program. Targeting vet tech applicants for *Prep for Success* worked well because these adults had already demonstrated interest in the field. These applicants proved to be an ideal match for *Prep for Success*, since they were motivated to improve their skills to pursue training for their chosen careers.

Orientation Activities

Prepare adults for the reality of work in the pathway industry: Madison Area Technical College (WI)

The recruitment and orientation phase is an excellent time to introduce participants to the realities of day-to-day work in the targeted industry. Because of the unique tasks required of lab animal caretakers, the ABECC site in Madison incorporated significant career exploration opportunities into the initial six-hour orientation to the *Prep for Success* course and Lab Animal Caretaker Training (LACT). This <u>orientation</u> gave participants the chance to learn about lab animal caretaker work. Participants were able to use actual protective equipment and clothing required for daily tasks; watch a video about the job; review course requirements and content; and practice test-taking skills. For example, participants completed worksheets to analyze what they liked and disliked about previous jobs and then assessed their employability skills and behaviors, such as timeliness, attention to detail, and ability to work with others. These activities helped participants understand hiring requirements for the lab animal caretaker job and decide whether the career was right for them before progressing further along the pathway.

Prepare adults for postsecondary education: Bluegrass Community and Technical College (KY)

Besides preparing participants for careers in the targeted industry, ABE programs can use recruitment and orientation activities to help adults consider the steps required for transitioning to postsecondary education. During its initial orientation to the English as a Second Language (ESL) and pre-certified nursing assistant (pre-CNA) classes at Pine Meadows Health Center and midway through the pre-CNA class, the ABECC site brought in representatives from Bluegrass Community and Technical College to familiarize participants with the educational requirements for the nursing pathway. During orientation, the dean of the nursing department spoke with participants, most of whom were employed in housekeeping and other non-patient-care positions, about nursing careers and the nursing career pathway. A translator made sure that this information was accessible to English-language learners. Later in the pre-CNA course, the college's Hispanic Outreach Coordinator followed up with participants to prepare them to apply for college admissions and financial aid. By meeting with these college partners at the start, Pine Meadows employees gained a thorough understanding of pathway requirements and processes related to moving on to the next educational step of the pathway.

Familiarize participants with the next steps in the pathway: Montgomery College (MD)

During orientation, ABE programs can establish expectations for participation in the current and future steps of the pathway. For example, the ABECC site at Montgomery College devoted some time during its initial orientation and later during the ESOL courses to prepare participants for enrolling in other courses at the college. In addition, to help students navigate potential paths through credit, non-credit, and vocational courses at Montgomery College, the Adult-ESOL and Literacy GED (AELG) program at the college developed <u>worksheets</u> that outlined the necessary steps for participants to enroll in college courses—and then quizzed them on the process. This encouraged participants to begin thinking about their progress along the pathway from the start.

Course Development

The quality of basic skills instruction in a pathways program plays an important role in successfully con-necting ABE programs with career pathways. Ideally, if learners master the skills and content taught in an ABE pathways course, they will be prepared for the next steps in their education and careers. Thus the basic skills course must be carefully designed to align with other courses in the pathway and teach the necessary basic skills within the course timeframe. The course curriculum also must address general workplace and specific industry skills to prepare participants for progress along the pathway (Agrawal et al., 2007; Henle, Jenkins & Smith, 2005; Hinckley & Hull, 2007; ICW & NCPN, 2009). One approach to developing high-quality curriculum that integrates basic skills with technical content is beginning with a foundation of well-defined educational objectives, such as adult education content standards, industry-skill standards, and workforce-readiness standards (Grossman, 2009; Hinckley & Hull, 2007).

Before developing a course, ABE programs must determine the appropriate course design. They must take into account participants' basic reading, writing, and math skills needs, incorporate occupational in-formation, and recognize the other demands on participants, such as work and family obligations. Pro-grams must also decide the length of the classes and duration of the course and then identify the basic and occupational skills that can be taught effectively in that timeframe (Alamprese, 2008). Whenever possi-ble, ABE programs should consider aligning the course schedule with other steps in the pathway, such as modeling the timing and length of postsecondary courses and avoiding conflicts with employees' shifts (Henle, Jenkins & Smith, 2005; ICW & NCPN, 2009). Some ABECC sites found that course schedules were particularly difficult for incumbent workers, whose work shifts may change during the course and interfere with their attendance. For courses with a small number of students, some sites were able to change class times to accommodate these unexpected shift changes. Others established agreements with employers to avoid changing shift schedules during the course.

The key components of course design for ABE pathways include benchmarking the basic and technical skills needed for an effective transition to postsecondary education and employment. Benchmarking ac-tivities include analyzing the skill requirements of postsecondary texts and course assignments and may involve a literacy task analysis of materials used in the jobs in the pathway. This information about basic skills, occupational applications of basic skills, and academic knowledge can be used to design an ABE pathways course that enables participants to gain the essential skills needed to advance along the pathway (Alamprese, 2008). Course development in this context requires significant up-front planning and the involvement of postsecondary and employer partners to ensure that the basic skills taught will meet labor market demands and enable participants to transition to college-level classes (Hinckley & Hull, 2007; ICW & NCPN, 2009).

For some pathways, ABE program staff may need to design new course outlines and lessons, while, for other pathways, staff may be able to build on existing models and adjust existing courses. Regardless of the approach, course development, especially when it involves integrating basic skills and technical con-

tent, requires significant investments of staff time and effort (Grossman, 2009). Common activities for course development at the ABECC sites included:

- Reviewing relevant texts and materials from other pathway courses;

- Identifying content and industry skill standards addressed in the other courses;

- Benchmarking the basic skills needed for postsecondary education and the occupational content and skills needed for employment;

- Developing course objectives and lessons; and

- Locating appropriate materials.

Moreover, course development does not end when instruction begins, as program staff must constantly review how well the curriculum meets participants' needs and course objectives and make adjustments as necessary (Hinckley & Hull, 2007). In some cases, the curriculum must be approved by college or state regulatory bodies, which can affect when the course is launched. The ABECC sites learned that these approvals may take a year or longer to obtain.

As course information is developed, details about the course skills requirements, articulation with postsecondary courses, and links to jobs within an industry should be added to the career pathway maps. While multiple maps may be needed for different audiences, the maps can be an effective tool for communicating information about the course to participants, partners, and employers. For example, the pathway map developed by the site at Bluegrass Community and Technical College shows the pathway for incumbent employees at the Pine Meadows Health Center who want to move from housekeeping jobs to certified nursing assistant positions. The map describes the target population, lists entrance skills requirements, and shows the number of instructional hours for each educational component.

An integrated basic skills curriculum requires an instructor with the content and pedagogical expertise to teach integrated basic and technical skills (Grossman, 2009). Some ABE programs use a team-teaching model, in which basic skills and technical skills instructors are paired in the classroom to teach their respective components (Henle, Jenkins & Smith, 2005). Whether the course is taught by one or several instructors, most instructors will benefit from additional training and/or support, such as sustained professional development; time to collaborate with other teachers; additional planning time; access to employer and postsecondary partners for lesson planning; and financial compensation for extra time, if possible. I n addition to the challenges encountered in finding qualified instructors, the ABECC sites had difficulty retaining instructors, especially given the additional time and effort required to develop and implement integrated basic skills courses. Some sites found that additional training and support were incentives that aided instructor retention.

Finally, besides providing integrated basic skills instruction, programs should consider other kinds of support that adults may need to learn the required content and prepare for employment in the pathway industry (Henle, Jenkins & Smith, 2005; ICW & NCPN, 2009). This support may include career aware-

ness activities, advising, instructional support (i.e. tutoring), opportunities for job shadowing, internships, and mentoring.

Implementation Examples

The following examples highlight the approaches used by the ABECC sites to recruit and orient students about pathways:

Course Development and Delivery
- Schedule courses at times convenient for employees and employers.
- Conduct a benchmarking process to determine skills required for pathway progress.
- Contextualize basic skills with workplace skills.
- Build on existing courses.
- Involve postsecondary partners in curriculum development.
- Involve employers in curriculum development.
- Build staff capacity to develop integrated basic skills curriculum.
- Revise the course design to address instructional needs.
- Provide additional support to instructors.

Supplemental Student Support
- Offer academic support to participants outside the classroom.
- Provide opportunities for career exploration.

Transition to Next Steps
- Align ABE program and college schedules to ensure a seamless transition.
- Provide extra support to help students transition.

Course Development and Delivery

Schedule courses at times convenient for employees and employers: Bluegrass Community and Technical College (KY)

Courses should be designed, to the extent possible, to accommodate the schedules of working participants. For example, the ABECC site in Lexington, KY tried to schedule its English-language and pre-certified nursing assistant (pre-CNA) courses at Pine Meadows Health Center during times that would be least disruptive to both employees and their supervisors. Because Pine Meadows administrators granted employees paid release time to attend classes, this meant that classes could be scheduled during work hours to allow employees to attend. To avoid disrupting normal business operations, however, site staff agreed to offer multiple class sessions so that no more than five employees would be "off the job" at one time.

Conduct a benchmarking process to determine skills required for pathway progress: Montgomery College (MD)

Before designing a course, ABE programs should devote considerable time to understanding the basic and technical skills participants will need for success in the pathway. Programs need to compare the end-of-course goals with participants' starting skills to develop detailed instructional plans to address participant needs. The ABECC site at Montgomery College undertook a comprehensive course design process, represented in its project model, to ensure alignment between the goals of its *English for Speakers of Other Languages for Building Trades* (ESOL-BT) courses with entrance requirements for the college's other non-credit building trades classes. Site staff began by meeting with the non-credit course instructors and staff to discuss syllabi, texts, and assignments from their courses. This analysis helped site staff identify the language and content skills students would need to acquire by the end of the course and to establish these skills as the "benchmarks" for participant attainment by the end of the third class in the series (advanced ESOL-BT).

The benchmarking process led to the development of a program framework that included course objectives, course content, and an outline of the skills and topics to be taught at the beginning, intermediate, and advanced ESOL course levels. Site staff then compared the program frameworks to Maryland's content standards for adult English language instruction to ensure the courses covered the necessary skills. Once the overall structure of the courses was laid out, site staff focused on the content of the advanced course, which they planned to implement as a pilot class before developing the intermediate and beginning levels. Next they developed a matrix outlining topics and skills to be covered by each proposed unit. These tools helped instructors create lessons to teach the skills and topics. Although time consuming, this process ensured that the basic skills component properly linked to the other educational steps in the building trades pathway.

Contextualize basic skills with workplace skills: Jewish Vocational Service (CA)

Integrating basic skills instruction with occupational knowledge and technical skills is one approach to preparing adults for both education and careers. The ABECC site at Jewish Vocational Service (JVS) worked closely with its partners at the City College of San Francisco to develop a curriculum module that contextualized supervisory and management skills with basic reading, writing, and math skills for incumbent food service workers. Upon completing the module, participants would be prepared to enter a supervisory course in the college's Healthcare Technology department.

To develop the module, JVS staff reviewed the syllabus and texts from the college's supervisory course to understand the reading levels and basic skills participants would need. When the focus of the site's basic skills course changed and the supervisory module was no longer relevant to the new target population, site staff were able to adapt the initial curriculum to address more general workplace skills. The supervisory content was incorporated into a separate unit for future use. In the meantime, JVS implemented the *Professional Communication for Healthcare Workers* course, which emphasized the original curriculum units on active listening and reading strategies for the workplace and reading and writing assignments addressing on-the-job duties, such as reading charts, communicating with supervisors, and writing busi-

ness memos. This more general focus meant that the course would be widely applicable to participants' personal and professional goals and prepare them for further education, training, and career advancement opportunities within the healthcare pathway.

Build on existing courses: Instituto del Progreso Latino (IL) and Madison Area Technical College (WI)

Given the relatively large amount of time and effort necessary to develop contextualized curriculum, ABE programs can benefit by locating and adapting existing curricula for basic skills courses. Staff at the ABECC site at Instituto del Progreso Latino in Chicago created its pre-Certified Medical Assistant (pre-CMA) curriculum by building on and adapting curricula used in its other courses, including the pre-certified nursing assistant (pre-CNA) and pre-licensed practical nurse (pre-LPN) bridge programs. These curricula had been developed with industry partners and piloted in other courses, which helped simplify implementation of the new course. Time-intensive steps, such as conducting an assessment of postsecondary skills requirements and a literacy task analysis of workplace materials, had already been completed and could be adapted for the pre-CMA level.

The ABECC site in Madison also developed its basic skills curriculum by reviewing other courses. Site staff conducted extensive research on the course and curriculum design of other technical training programs for English language learners so they could better understand existing integrated curriculum models for possible adaptation for *Prep for Success*.

Involve postsecondary partners in curriculum development: Jewish Vocational Service (CA)

Community college instructors and deans can provide valuable advice about the development of basic skills courses to prepare participants for postsecondary courses. To develop the supervisory course module, staff from the ABECC site at JVS met with the chair of the Healthcare Technology Program at City College of San Francisco and the instructor for the department's Organization and Supervision course to ensure that the goals of the module would align with and effectively prepare students for the college course. To develop the basic skills module, JVS consulted the college course syllabus and assignments to understand the reading and math requirements and supervisory content. Site staff also spoke with an academic counselor about the college's placement exam to ensure participants would acquire skills needed to pass it. By involving college partners in course development, site staff sought to create a course that would help students transition successfully to the next level.

Involve employers in curriculum development: Instituto del Progreso Latino (IL)

Employers can play a major role in course development by providing information about skills requirements for jobs in the industry and ensuring that the occupational knowledge taught is relevant to their workplace. Instituto del Progreso Latino in Chicago involved employers in these ways to create a curricular model for the Carreras en Salud pathway, which was ultimately adapted for the pre-Certified Medical Assistant (pre-CMA) bridge program for the ABECC project. The site worked with a local hospital association to reach multiple employers. Instituto sought ongoing employer input, including at the beginning of the curriculum development process, by gathering information about technical skills requirements

at two employer breakfasts, and after the curriculum was developed, by requesting employer feedback. For the ABECC project, the site included employers in the development of the <u>pre-CMA curriculum</u> by surveying community clinics about their need for medical assistants and making adjustments to the Carreras curriculum model to address these needs and include content relevant to the CMA position.

Build staff capacity to develop integrated basic skills curriculum: Montgomery College (MD)
Course development can also provide useful professional development for staff and instructors, allowing them to learn the industry content and basic skills requirements for career pathways. Staff at the ABECC site at Montgomery College saw an opportunity to build internal staff capacity in course development by involving its entire adult education team in developing the curriculum for the *ESOL for Healthcare Careers* courses. As a team, the adult education staff went through the same course development process used for the *ESOL for Building Trades* course and learned how to conduct an assessment of postsecondary and technical skills requirements for a new industry. They benchmarked the skills needed for transition to other non-credit healthcare courses, established course goals and objectives, reviewed existing healthcare texts and materials, and developed the program framework outlining course topics and content standards to be incorporated at the beginning, intermediate, and advanced ESOL levels. To support instruction, the adult education staff also created a <u>resource binder</u> with relevant texts, materials, and sample lesson plans. Developing the course in this way helped the site ensure that staff can undertake this process again for other industries and continue to adapt or build new integrated basic skills curricula in-house.

Revise the course design to address instructional needs: Madison Area Technical College (WI)
If course goals and objectives cannot be met in the time initially allotted, program and instructional staff may increase the instructional hours offered to help participants attain the necessary basic skills gains to advance in the pathway. For example, after the first *Prep for Success* session, staff at the ABECC site in Madison realized that the course schedule needed to be adjusted because both participants and the instructor wanted to spend more time on math and writing practice. Many *Prep for Success* participants had little or no previous knowledge of the <u>metric system</u>, so the instructor devoted more time than originally planned to teaching this information, which is essential to employment in the lab animal caretaker industry. Site staff also added time to the actual *Lab Animal Caretaker Training* (LACT) course—the next step for most *Prep for Success* participants—to allow a greater focus on writing. By adding four hours to *Prep for Success* and four hours to LACT, site staff sought to meet participants' basic skills needs more effectively.

Provide additional support to instructors: Montgomery College (MD)
Not only is course development time consuming for ABE programs, but instruction also requires a significant investment of planning time and effort to ensure that participants can master both basic skills and technical content. Staff at the ABECC site at Montgomery College recognized the need for additional support for its *ESOL for Building Trades* and *ESOL for Healthcare Careers* instructors so that the instructors could fulfill course objectives, especially since they were employed only part time. The site's adult education staff made themselves available on a regular basis to help the instructor plan course activities,

offer examples of supplemental resources, and adjust the curriculum framework as needed. Instructors also were compensated for the time they devoted to lesson planning and meeting with staff about the curriculum.

Supplemental Student Support

Offer academic support to participants outside the classroom: Instituto del Progreso Latino (IL) and Bluegrass Community and Technical College (KY)

Many pathway participants need academic support outside the classroom to ensure their mastery of basic skills. To help participants succeed in their coursework, staff at the ABECC site at Instituto del Progreso Latino encouraged them to work with a tutor. Site staff suggested that finding the right tutor, especially someone with teaching and industry experience, can make a big difference in participants' commitment to the pathway. Instituto's tutor, a clinical nurse with an understanding of the job requirements, helps with academic work and serves as a mentor to Carreras en Salud participants. Tutoring is available at all times to participants, including weekends, late nights, and via the Internet, to accommodate their busy schedules.

The ABECC Site in Lexington, KY encouraged participants to practice their English language skills by inviting them to spend their daily lunch hour eating together and speaking English informally with the English as a Second Language (ESL) instructor. "Lunch with Randy" provided an informal and safe environment for practicing language skills at the workplace. Site staff also made instructional software available for participants to practice their English at home or to use during their breaks on computers in the classroom.

Provide opportunities for career exploration: Jewish Vocational Service (CA)

Career awareness is an important part of ABE pathways and can be incorporated into basic skills instruction. For example, JVS developed a <u>career advising manual</u> for staff and instructors dealing with working adults, to supplement its basic skills curriculum and build on its experience working with job-seekers. The manual has resources, information, and worksheets for career advisors to promote better understanding of their roles in working with clients seeking career advancement. It also provides information about the career development process and effective communication strategies, such as how to structure conversations with clients, and offers suggestions for helping clients conduct a self-assessment, set goals, and develop an action plan using career pathway maps. In addition to the manual, JVS staff incorporated career information into the *Professional Communication for Healthcare Workers* course in several ways. General workplace skills, such as team building and active listening, are included in the course to provide context for the basic skills instruction. The SEIU-UHW West & Joint Employer Education (the Education Fund) career counselor met regularly with union participants to tell them about options for further education and training and help them explore career advancement opportunities. For non-Education-Fund participants, JVS made its internal career advisors available to talk with them about healthcare careers and job search strategies. This allowed the site to offer supplemental support to participants to help them succeed both academically and professionally.

Transition to Next Steps

Align ABE program and college schedules to ensure a seamless transition: Montgomery College (MD)

As many ABECC sites learned, aligning the schedules of various pathway components is essential to student progress. From the beginning, participants must think about transition, know when they must fulfill requirements, and undertake procedures for moving to the next academic step on the pathway. To help participants in the *ESOL for Building Trades* and *ESOL for Healthcare Careers* courses prepare for transition to other non-credit classes at Montgomery College, the ABECC site staff changed the ESOL course schedules to align with the college schedule. The site also hired a Transition Coordinator and adjusted course length and activities to be consistent with college deadlines for registration, enrollment, and financial aid. This allowed participants additional time to consider their transition options and prepare to meet college deadlines.

Provide extra support to help students transition: Montgomery College (MD)

Financial limitations often prevent adult learners from completing pathway components. Through a grant from the John Edward Fowler Memorial Foundation, the ABECC site at Montgomery College was able to offer adults in its ESOL building trades and healthcare courses scholarships for enrolling in the college's non-credit building trades or healthcare classes—the next steps after *ESOL for Building Trades* or *ESOL for Healthcare Careers*. To receive a scholarship, participants had to complete an application successfully describing their career and educational goals. Site staff designed the application process to prepare participants for the other applications they might encounter at Montgomery College, such as the financial aid application, for example, and offered support in developing and presenting their applications. Those receiving scholarships could continue their education at no extra cost.

Partnerships

Partners play a significant role in all components of ABE pathways, including recruitment, orientation, and placement, course development and delivery, and data collection and analysis (Jenkins & Spence, 2006). Through these partnerships, individual organizations combine their efforts to achieve the common goal of preparing adults for educational and career advancement (Hinckley & Hull, 2007).

Different types of partners contribute to the pathway in different ways. For example, employer partners may supply information about their workforce needs and technical skills and standards to aid curriculum development (Hinckley & Hull, 2007; ICW & NCPN, 2009; Jenkins & Spence, 2006). Employers also might partner with ABE programs to develop basic skills training for their current employees or serve as mentors to pathway participants. Postsecondary partners may share information about entrance requirements for college certification programs and develop articulation agreements to facilitate adults' transition to college courses. These partners might also join forces with ABE programs to provide basic skills instruction or share college facilities and classrooms. Other important partners include community-based

organizations, unions, school districts, other ABE programs, one-stop centers, and other workforce agencies (Agrawal et al, 2007; ICW & NCPN, 2009).

When seeking partners for ABE pathways, ABE programs should consider building on existing partnerships along with establishing new ones. With existing partnerships, partners can establish new terms and specific agreements for the pathways project work. ABE programs also may benefit from strengthening intra-organizational partnerships, such as those with other departments on campus or within an organization, to facilitate close ties with important stakeholders and build on internal expertise (Alamprese, 2008). Finally, outreach and networking are important in promoting ABE pathways and partnership opportunities, for example, through meetings with employer associations, local Chambers of Commerce, and advisory groups that convene educational stakeholders.

Alamprese (in press) identified the following factors as essential to the success of partnerships:

- Supportive environmental conditions, such as previous successful collaborations and compatible political and organizational climates;

- Interpersonal relationships built on trust, respect, and a willingness to be flexible to achieve partnership goals;

- An approach to partnership formation that includes a clear vision and well-defined goals and objectives;

- An established infrastructure to support partnership activities, including multiple levels of staff involvement and defined roles for each partner; and

- Regular communication that involves an articulated process for addressing partnership challenges and sharing accomplishments.

Other elements contributing to success focus on establishing clear roles for partners and identifying strategies for collaboration. Sometimes this means determining what each partner may need to give up in order for the partnership to be successful (Hinckley & Hull, 2007). For example, employers who compete with each other for business will need to develop ways to work together in support of pathways. Likewise, postsecondary partners may need to overcome any unsuccessful attempts to work with employers in the past to embrace the pathways concept.

To strengthen partnership efforts, one partner should assume responsibility for coordinating the various partners' involvement and formalizing the partnership activities (Alamprese, 2008; Henle, Jenkins & Smith, 2005; Jenkins & Spence, 2006). Taking the approach that works best for partners, some programs have established steering committees or advisory groups to formalize the participation of employers, postsecondary representatives, and other key stakeholders. Regardless of the approach, it's important to formalize partnership roles and expectations in writing, such as a memorandum of understanding, to ensure that all partners understand the goals of collaboration and can participate fully (Jenkins & Spence, 2006). A sample partnership agreement from Instituto del Progreso Latino is included in Appendix D.

While many partnerships are formed by the leaders of partner organizations (Hinckley & Hull, 2007; Jenkins & Spence, 2006), the ABECC sites found it essential to shift partnership responsibilities from a high-level administrator to someone who can oversee the day-to-day work of the partnership. Additionally, effective partnerships involve multiple levels of staff, ranging from top-level leaders to managers and instructors, to provide diverse input and expertise.

The ABECC sites faced some challenges in establishing and sustaining partnerships. For example, unforeseen factors, such as economic and institutional changes, can affect a partner's ability to participate in ABE pathways work. Some changes, such as staff turnover, can be addressed in written agreements that clearly delineate each partner's roles. Other changes, such as budget cuts and administrative reorganization, require partners to be flexible and develop contingency plans as needed.

Likewise, for a variety of reasons, not every partnership will be successful. Personality issues, economic factors, and changes in organizational priorities can affect partnerships adversely. Partnerships should establish mechanisms for regularly evaluating whether the partnership is still achieving its objectives and, if not, establish plans for improving or changing it. Scheduling a debriefing session after the completion of a basic skills course or other pathway activity is one way to assess the effectiveness of the partnership.

Implementation Examples

The following examples highlight the approaches used by the ABECC sites to recruit and orient students about pathways:

Employer Partnerships
- Design partnerships to address employer needs.
- Build new partnerships with existing partners.
- Find employers through networking.
- Convene multiple employers within an industry to serve as advisors.

Postsecondary Partnerships
- Design partnerships to facilitate participants' transitions to postsecondary education.
- Involve postsecondary partners in curriculum development.

Intra-Organizational Partnerships
- Expand intra-organizational connections.
- Reach out to internal partners for programmatic support.

Partnership Activities
- Work with partners to expand program efforts.
- Leverage other funding and partnerships to support pathways work.

Employer Partnerships

Design partnerships to address employer needs: Bluegrass Community and Technical College (KY)
Supporting ABE pathways can help employers meet a crucial workforce need: improving adults' basic skills for participation and advancement in the labor market. By partnering with ABE programs, businesses can provide input into the development of basic skills training programs and support specific classes for incumbent employees. The adult education program at Bluegrass Community and Technical College (BCTC) has been providing English language training to employees at the Louden Company nursing home facilities for three years as part of another nursing career pathways initiative. Because of this existing relationship, the employer asked for help from BCTC in addressing challenges associated with the high turnover of nursing assistants.

With support from the ABECC project, BCTC designed pre-certified nursing assistant (pre-CNA) training for current housekeeping employees at Louden who had expressed interest in transferring to patient-care jobs. As part of the partnership, Louden agreed to offer incentives to its incumbent workers who enrolled in both the English language and pre-CNA courses, including a $50 bonus for completing the English classes and a $1 hourly raise for becoming certified as a nurse aide. As its contribution to the partnership, the ABECC site expanded English as a Second Language (ESL) courses to introduce medical terminology and nursing equipment and developed the pre-CNA course to prepare participants for the certification program at BCTC. This partnership benefits both the employer and the college: Louden Company retained current employees and helped them advance to patient-care careers, while the college had a pool of qualified candidates for its nursing assistant certification program. Further, employees benefitted from the opportunity to improve their language skills, become nurse aides, and increase their salaries.

Build new partnerships with existing partners: Jewish Vocational Service (CA)
Successful partnerships often lead to new opportunities for collaboration. The ABECC site at Jewish Vocational Service (JVS) in San Francisco built upon its history of collaboration with several employers to implement basic skills training. For example, for many years JVS has partnered with the Joint Employer Education Fund (Education Fund), the training arm of the local healthcare union, to provide workforce development for union members, including retraining healthcare administrative staff to work with patients and in other customer-focused positions. Because of this shared history, when other employer partners could no longer participate, JVS approached the Education Fund to help design a contextualized basic skills course for the healthcare career pathway. The Education Fund provided JVS with access to incumbent workers at multiple employment sites and served as an intermediary between potential union participants and JVS (the basic skills provider). The Education Fund agreed to this new partnership because many union members were interested in furthering their education and careers, but they needed to improve their basic skills to enroll in the postsecondary courses offered by the union. To re-establish the terms of the partnership, the two organizations met to discuss the goals and objectives of the basic skills course, delineate partners' roles in recruitment and outreach, career advising, and service provision, and determine the appropriate course schedule and design. Together, the partners contributed infrastructure and expertise to their common goal of improving participants' basic skills and increasing their success in the workforce.

Find employers through networking: Montgomery College (MD)

Informal and formal networking opportunities can provide access to local employers and offer ABE programs the chance to connect their services to business needs. To understand the needs of employers in the community, the ABECC site director and dean of the Adult ESOL and Literacy-GED (AELG) program at Montgomery College reached out to potential partners by serving on several advisory committees composed of local education and business representatives. For example, the site director represented the college on the Montgomery County Chamber of Commerce Education and Workforce Committee and participated in meetings of the Montgomery County Career Cluster Advisory Board in Health Sciences and Biotechnology. Through these networks, site staff met with representatives from other career-focused programs in the county's K-12, college, and university systems and with employers in industries of importance to the local economy. As a result, the site learned more about employers' needs and other educational programs' attempts to meet these needs. Site staff became more proactive about developing opportunities to work with employers and sharing information about the site's ABE pathways work.

Convene multiple employers within an industry to serve as advisors: Instituto del Progreso Latino (IL)

Offering concrete opportunities for partnering, such as participation on an advisory committee or attendance at a program event, is one way to expand employer participation in ABE pathways. Employers have been involved in many aspects of the Carreras en Salud program at Instituto del Progreso Latino, from contributing to initial project conception to offering input on curriculum development and providing career exploration opportunities for Carreras participants. To recognize its longstanding employer partnerships and to attract new employers, the ABECC site at Instituto hosted an <u>employer breakfast</u> for more than 70 representatives of hospitals and long-term care facilities in Chicago.

Following a welcome from the president of Wilbur Wright College and the dean of the Humboldt Park Vocational Education Center, Instituto staff shared data on the progress of Carreras participants and updated employers on the program. Two employers also described how their workforce has benefited from the Carreras program. After the presentations, employers were invited to join the partnership by identifying three possible roles to play, including providing clinical space, reviewing industry-based basic skills curriculum, and identifying potential instructors with the necessary technical skills. As a result of this breakfast, 10 employers immediately volunteered to be part of a new advisory council to support and expand Instituto's career pathway efforts. By recognizing past partnership efforts and clearly delineating future partnership needs, Instituto engaged new employer partners in its current work.

Postsecondary Partnerships

Design partnerships to facilitate participants' transitions to postsecondary education: Bluegrass Community and Technical College (KY)

By working with postsecondary institutions from the start, ABE programs can ensure that the basic skills component of career pathways will prepare adults effectively for future enrollment in college certification and degree programs. To prepare participants for the certified nurse assistant (CNA) program at BCTC, the ABECC site offered on-site contextualized English language and pre-CNA instruction to incumbent

housekeeping workers at Pine Meadows Health Care. To facilitate participants' transition to college courses, the ABECC site established agreements with BCTC's nursing department to give participants college credit for the nurse aide training and to waive their tuition costs. The college partners also contributed to the basic skills program in other ways, such as sending representatives from the nursing department to speak with participants at Pine Meadows about the nursing profession and related certification programs at BCTC. As a result of this partnership, the ABECC site was able to offer incentives to participants to enroll at the college and BCTC expected to benefit from the pool of potential nurse aid candidates with the appropriate basic skills to enter and succeed in the program.

Involve postsecondary partners in curriculum development: Jewish Vocational Service (CA)
Postsecondary partners can provide advice and establish articulation guidelines for transitioning adults from ABE to college certification programs within a career pathway. As they developed the supervisory module for the original basic skills course, staff from the ABECC site at JVS met with the chair of the Healthcare Technology Program at City College of San Francisco and the instructor for the department's Organization and Supervision course, to ensure that the goals of the module would align with and effectively prepare students for the college course. J VS consulted the college course syllabus and assignments to understand its reading and math requirements and supervisory content to develop the basic skills module. Site staff also spoke with an academic counselor about the college's placement exam to ensure participants would acquire the skills necessary to pass it. By involving college partners in curriculum development, the site sought to create a course that would transition students effectively to the next level.

Intra-Organizational Partnerships

Expand intra-organizational connections: Montgomery College (MD)
Intra-organizational partnerships can be important in supporting and promoting ABE pathways. Because adult education services in Montgomery County recently transferred from the K-12 school system to the community college, the dean of the Adult ESOL and Literacy-GED (AELG) program at Montgomery College worked hard to establish internal partnerships to support the ABECC project and its other adult education services. This <u>outreach</u> involved educating other college departments on the characteristics and needs of adult learners and on the services offered by AELG to encourage referrals to the adult education program from other departments and help transition adults to other college programs. The site has benefitted from these partnerships by gaining access to the college's employer partners and promoting its programs on campus. Further, through a similar intra-organizational partnership within the Workforce Development and Continuing Education Unit, the ABECC site learned about and received a grant from the Fowler Foundation to provide scholarships to participants in the *English for Speakers of Other Languages for Building Trades and Healthcare Careers* classes. The site then worked with the college financial aid department and the college foundation to support participants' applications for scholarships. By strengthening ties within the college, the ABECC site was able to offer a unique scholarship opportunity to its participants.

Reach out to internal partners for programmatic support: Jewish Vocational Service (CA)

ABE pathways can take advantage of the internal expertise of many adult education programs. As previously noted, the ABECC site at JVS in San Francisco successfully recruited for its basic skills course by reaching out to other departments for referrals of current JVS clients to the course. In addition, the site shared information about the *Professional Communication for Healthcare Workers* course with its colleagues in the Client Services, Nursing, and Allied Health departments and asked for their support in fine-tuning the curriculum for the healthcare industry and identifying potential course participants. According to the site director, this internal outreach helped strengthen communication among the various departments and identified ways in which they could partner in the future on other career pathway projects.

Partnership Activities

Work with partners to expand program efforts: Madison Area Technical College (WI)

Partnerships can contribute to the expansion of ABE pathways, especially by considering ways to sustain pathway activities through securing additional funds or identifying other adult populations to participate in basic skills training. After implementing six sessions of the *Prep for Success* course, the ABECC site in Madison realized that more adults could benefit from a similar bridge program if they broadened the curriculum focus from preparation for lab animal caretaker careers to careers in health sciences. To oversee the expansion of *Prep for Success*, the site reached out to the Madison Area Technical College's College Preparedness and Academic Advancement Center (CPAAC), which coordinates adult education services on campus, and the Health and Safety Education Department, forming an intra-organizational partnership to assess how to replicate *Prep for Success* to prepare adults for other career pathways. Representatives from the three departments, including the Business, Industry, and Community Services division that currently oversees the ABECC project, met to secure support from college deans and expand the *Prep for Success* curriculum for adults seeking more general health sciences careers. As agreed upon by the new partners, the new course will provide basic skills training for adults interested in entering the health sciences career pathway, along with a focus on study and test-taking skills, to prepare them for enrollment in the health sciences' prerequisite course, *Medical Terminology*. As a result of these internal partnerships, the ABECC site is able to expand the *Prep for Success* model to serve more participants and has strengthened its connections with the adult education program and other departments on campus, with the goal of better meeting adults' needs for workforce and basic skills training.

Leverage other funding and partnerships to support pathways work: Instituto del Progreso Latino (IL)

Effective partnerships with employers and others can serve as a model for future ABE pathways programs and funding. Because of its partnerships, Instituto del Progreso Latino has received additional funding and support to document its work and expand the Carreras model. For example, the site received funding from the Illinois Department of Commerce and Economic Opportunity to develop a guide (available in mid-March 2010) on how community colleges can partner effectively with community-based organizations and employers to develop bridge and career pathway programs based on Instituto's partnership with Wilbur Wright College to support the Carreras model. In addition, the site has received funding from the

Illinois Community College Board to develop other career bridge programs in healthcare to prepare ABE students for certified nursing assistant programs. Finally, Instituto has reached out to other colleges in the Chicago Community Colleges system to establish partnerships for replicating the Carreras model on a larger scale and to help other colleges develop career pathways to train bilingual nurses. In these ways, the Carreras model will expand to benefit more adults.

Data Collection and Analysis

Ongoing data collection and analysis are essential in supporting the design, implementation, and evaluation of ABE pathways (Jenkins, 2006). In the planning stages, an analysis of labor market data can help ABE programs identify local workforce needs and select an occupational focus for the pathway (Alamprese, 2008). During the course, program-level and participant data can provide immediate feedback on how well course objectives are being met and suggest areas for improvement, if necessary. Finally, data are needed at the conclusion of instruction to evaluate the effectiveness of the basic skills training and assess participant skills gains (Henle, Jenkins & Smith, 2005).

ABE programs can benefit by collecting and analyzing a variety of data throughout their pathway endeavors (ICW & NCPN, 2009). Using a pathway map, programs can identify expected participant outcomes at all stages of the pathway and the appropriate assessment tool for measuring each outcome. For example, Alamprese (2009) compiled the following list of possible outcomes and related assessment tools for the five ABECC sites:

Expected Outcomes	Instruments/Measures
Basic skills gains	CASAS, TABE, and other standardized pre- and post- tests Writing assessments Oral assessments
Occupational knowledge/skills gain	Content exams Supervisor evaluations
Progress in pathway	Enrollment in and/or completion of next class level Attainment of certificate or degree Job promotion or advancement
Affective changes (e.g., self- confidence, learner satisfaction)	Course evaluations and participant feedback forms End-of-course interviews

While some of these outcomes are measured after completion of basic skills training, others might take longer to assess as participants progress through the pathway, such as attainment of certificate or degrees and job promotion or advancement. Programs should develop plans to measure participant outcomes at all future educational and employment steps along the pathway (Jenkins & Spence, 2006). The schedule

for this project allowed participants served by the ABECC sites to complete only the basic skills compo-nent; these sites thus have limited data on participants' transitions and performance in other pathway steps.

To collect participant data, ABE programs should select assessment tools that take into account institu-tional requirements (such as the <u>COMPASS</u> or other placement exams for community colleges), are ap-propriate for adult learners (such as the <u>Test for Adult Basic Education</u>, <u>Comprehensive Adult Student Assessment Systems</u>, or <u>Basic English Skills Test</u>), and are reliable and valid measures for the outcomes (Mellard & Anderson, 2007). Programs often can incorporate a combination of standardized and non-standardized assessments into instruction to collect a variety of information on participants' skills gains. Moreover, some adults may have learning objectives not easily measured on a written or standardized exam. The ABECC sites adapted and/or selected other assessment tools to track these objectives, such as oral or listening communication skills. Finally, to measure such skills as occupational knowledge and general workplace behavior, ABE programs can work with employers to determine appropriate ways to evaluate participants' workplace performance as related to the ABE pathway. Programs also will want to capture participants' understanding of industry-specific content, for example, through a content exam.

Besides selecting appropriate assessment tools, ABE programs should consider the number of instruction-al hours required between pre- and post-tests and schedule time for administering the assessments from the start. For example, many ABECC sites realized once instruction had started that they needed to in-crease the instructional hours allotted to their basic skills training to include time for pre- and post-testing. Building in time for assessment can help ensure that the course has sufficient instructional hours between the two test administrations.

Implementation Examples

The following examples highlight the approaches used by the ABECC sites to recruit and orient students about pathways:

Assessment Selection and Design
- <u>Measure participant skills gains with a variety of assessments.</u>
- <u>Design assessments to evaluate participants' mastery of basic skills and technical content.</u>

Assessment Administration
- <u>Incorporate informal assessment methods into classroom instruction.</u>
- <u>Collect participant feedback during and at the end of class sessions.</u>
- <u>Familiarize participants with assessment tools.</u>

Data Use
- <u>Track student progress along the pathway.</u>
- <u>Use participant data for program improvement.</u>

Assessment Selection and Design

Measure participant skills gains with a variety of assessments: Jewish Vocational Service (CA)

Different types of assessments, such as performance-based and standardized, can provide ABE programs with outcome data. The ABECC site at Jewish Vocational Service (JVS) in San Francisco, for example, used a combination of assessments, including the CASAS exam, to measure participants' reading abilities in English, an oral assessment to measure speaking skills, and multiple written assignments designed by the instructor. The site chose to supplement the CASAS exam with other non-standardized assessments to evaluate participants' attainment of their oral and written communication skills goals.

At the start of each class session, the instructor assessed participants' entering writing abilities by asking them to describe their goals for enrolling in the *Professional Communication for Healthcare Workers* course. Participants were asked to reflect on past positive educational and employment experiences. Their responses to these prompts were measured against a writing rubric designed by JVS and compared to other written exercises completed throughout the course. The instructor also developed an interview protocol for conducting pre- and post- course oral assessments to evaluate participants' English fluency skills at the beginning and end of class sessions. This information could then be used to supplement data attained from participants' performance on the CASAS exam to give site staff a good understanding of participants' skills gains and attainment of course goals.

Design assessments to evaluate participants' mastery of basic skills and technical content: Montgomery College (MD)

ABE programs should select assessments that measure both basic and technical skills imparted by the integrated basic skills curriculum. After searching for an assessment to measure participants' mastery of building trades content, staff at the ABECC site at Montgomery College decided to create their own. The *ESOL for Building Trades* final exam tests participants' vocabulary, general workplace communication skills, grammar, and math skills in the context of the building trades industry. For example, participants are asked to select the correct construction term to complete a sentence and to compute the perimeter of a room and the area of a patio. The site also developed a final content exam for the *ESOL for Healthcare Careers* course. The content exams, along with the results of the CASAS assessment, measure participants' basic and technical skills and demonstrate their preparedness for both further education and employment in the pathway industry.

Assessment Administration

Incorporate informal assessment methods into classroom instruction: Bluegrass Community and Technical College (KY)

Daily classroom activities offer an opportunity for informally assessing how well participants are learning course content and making basic skills gains. The English language and pre-CNA instructor at the ABECC site in Lexington, KY relied on a combination of informal methods to assess participants' English speaking abilities. To encourage participants to speak English outside of class, the instructor asked them to reflect daily on when and with whom they practiced English. The instructor also evaluated participants' speaking ability according to a rubric developed for the course. The site consulted informally

with participants' supervisors at the Pine Meadows Health Center to collect information about how often and how well they spoke in English. Supervisors indicated that participants appeared more comfortable informally speaking in English as a result of the classes and were more likely to respond to patient call signals. While participants' skills also were assessed on the pre- and post-CASAS exam, the informal evaluations of English usage provided the instructor with more immediate feedback.

Collect participant feedback during and at the end of class sessions: Jewish Vocational Service (CA) and Montgomery College (MD)

Participant surveys and feedback forms can provide important information about the effectiveness of the basic skills curriculum and instruction. Mid-course surveys can be especially helpful in adjusting the course to meet participants' instructional needs before the course ends. The ABECC sites at JVS and at Montgomery College, for example, designed end-of-course evaluation forms to obtain participants' input to improve future class sessions. The JVS evaluation asked participants to rate the course materials and instruction, comment on how they have applied what they learned at work, and describe their future education and training interests. Montgomery College's final evaluation form asked participants to indicate their interest in other classes at the college, provide recommendations for course improvements, and share what they most liked about the course. The site administered a similar survey midway through the class, which prompted participants to assess whether they were enrolled in the correct course level and to suggest ways to improve the course. These examples illustrate some standard approaches to collecting participant feedback, especially for the purpose of improving the curriculum and instruction, but other sites collected information more informally, such as through one-on-one or group conversations with participants.

Familiarize participants with assessment tools: Madison Area Technical College (WI)

Many adult learners have been out of school for some time and may experience test anxiety as a result of this lapse and/or previous negative experiences with testing. To help participants prepare for and feel more comfortable during exams, staff at the ABECC site in Madison developed a unit on test-taking skills to be used in conjunction with the Test of Adult Basic Education (TABE). During this unit, the site instructor provided tips to participants on preparing for exams and strategies for determining the correct multiple choice answers. Participants then applied these strategies to a practice exam, with the goal of diminishing their anxiety during formal test conditions in future postsecondary courses.

Data Use

Track student progress along the pathway: Instituto del Progreso Latino (IL)

Besides measuring participants' basic skills improvements, ABE programs also should determine how well the basic skills instruction has prepared them for progress along the pathway, including tracking their enrollment and completion of further postsecondary education and assessing their on-the-job performance and career advancement. To capture participants' postsecondary participation, Instituto del Progreso Latino developed a data-sharing agreement with Wilbur Wright College in Chicago.

Supported by a grant from the Aspen Institute, the data-sharing agreement allowed the site to incorporate college data into Instituto's database and get a better picture of the certifications and licenses obtained by Carreras del Salud participants and their employment status. For example, the agreement allowed the site to collect information on participants who completed the pre-certified medical assistant course and went on to enroll in other certification programs at Wilbur Wright College. The site also collects Carreras students' demographic data, such as information about participants' native and second languages, income data, and family size and dependents. While establishing the agreement took significant effort, especially to address privacy concerns, and managing the databases requires specific technical skills, the site can now access follow-up data on its participants and measure long-term academic and employment outcomes.

Use participant data for program improvement: Madison Area Technical College (WI)
Assessment data can identify skills in which participants need additional instruction and practice, especially to ensure mastery of these skills during the time allotted for the course. In some cases, participant data may suggest a need for changes to the course design to allow additional time to focus on specific skills. After the first *Prep for Success* class session, for example, staff at the ABECC site in Madison realized they needed to adjust the course schedule because both participants and the instructor wanted to spend more time on math and writing practice. Participants requested more focus on these skills during informal mid-course evaluations, and the instructor for the Lab Animal Caretaker Training (LACT), the next step after *Prep for Success*, alerted program staff of similar writing and math skills' needs after reviewing participants' classroom results. The ABECC site thus was able to respond to an obvious need identified in the data by expanding the instructional hours for both *Prep for Success* and the LACT to include a greater emphasis on the metric system and basic math skills as well as allow more time for writing practice, especially with cover letters.

Conclusion

The information in this manual and the examples from the Adult Basic Education Career Connections project summarize various approaches to implementing ABE career pathways. Regardless of how pathways are implemented, the five sites all worked towards a common goal: improving the educational and employment outcomes of ABE participants. Furthermore, the sites' experiences resulted in some common insights about ABE pathways:

- Pathway design and implementation requires significant investments of time and effort, especially during the initial planning stage.

- Considerable time should be devoted to ensuring that the skills and interests of potential participants match pathways' goals and requirements.

- Information from multiple sources must be consulted to ensure that:

  - The pathway focus is relevant to employers;

  - The curriculum aligns with postsecondary entry requirements; and

  - Participants can acquire the necessary knowledge and skills within the established timeframe to be successful in further education and at work.

  - Partnerships are essential to the success of ABE pathways.

  - Programs can expand pathway efforts by leveraging other funding sources and building on existing models.

  - Pathway programs should be evaluated continually to assess their effectiveness and to make any improvements needed to better serve pathway participants.

More research is needed to gain a better understanding of the effectiveness of career pathways, especially with regard to adults' transition from ABE to postsecondary education. There is also a need to evaluate whether lessons learned from local pathway efforts can be applied on a statewide level to develop a large-scale systematic approach. Despite the need for more information, the examples in this manual show how ABE programs can construct connections to career pathways to promote educational and career advancement for adults.

Resources

These resources were made available to ABECC project staff and participants and consulted for this manual. Resources in bold are cited in the text.

Adult Education Content Standards Warehouse. (n.d.). Retrieved on January 22, 2010, from http://www.adultedcontentstandards.ed.gov/.

> Funded by the U.S. Department of Education, compiles information related to standards-based education for adult education programs. Includes links to state content standards and professional development resources for program administrators on using standards in the classroom.

Agrawal, A., Alssid, J., Bird, K., Goldberg, M., Hess, S., Jacobs, J., Jenkins, D. et al. (2007). *Career Pathways as a Systemic Framework: Rethinking Education for Student Success in College and Careers***. Retrieved on January 15, 2010, from http://www.league.org/league/projects/ccti/files/Systemic_Framework.pdf.**

> Presents a framework for establishing career pathways at community colleges. Focuses on institutional and instructional transformation (i.e. articulation and mission integration), student support and tools, partnerships and employer involvement, planning and accountability, and sustainability.

Alamprese, J. (in press). *Shared Goals, Common Ground: State and Local Coordination and Planning to Strengthen Adult Basic Education Services***. Bethesda, MD: Abt Associates Inc.**

> Summarizes results from the Adult Education Coordination and Planning (AECAP) demonstration project, which aimed to develop and test state and local planning processes for improving adult education and workforce services in six demonstration states. Describes findings related to state-level collaboration.

Alamprese, J. (2009). ABE Career Connections Implementation Guidelines. Presentation at ABE Career Connections Second National Meeting, June 9-10, 2009, Washington, DC.

> Presentation slides from the ABECC national meeting in 2009, which brought together ABECC sites and coaches to discuss issues related to the implementation of sites' work plans. Slides are included with other project materials in Appendix E.

Alamprese, J. (2008). ABE Career Connections Implementation Guidelines. Presentation at ABE Career Connections First National Meeting, May 21-22, 2008, Washington, DC.

Presentation slides from the ABECC national meeting in 2008, which brought together ABECC sites and coaches to discuss issues related to the development of sites' work plans. Slides are included with other project materials in Appendix E.

Bailey, T., Kienzl, G., and Marcotte, D.(2004, August). *The Return of a Sub-Baccalaureate Education: The Effects of Schooling, Credentials, and Program of Study on Economic Outcomes.* **Paper prepared for the National Assessment of Vocational Education, U.S. Department of Education. Retrieved January 13, 2009, from http://www.ed.gov/rschstat/eval/sectech/nave/subbac-ed.pdf.**

Analyzes survey data from the National Center for Education Statistics to understand the economic returns of postsecondary education. Finds that students who earn a postsecondary certificate or associate's degree earn more than students with only a high school diploma.

Bragg, D., Bremer, C., Castellano, M., Kirby, C., Mavis, A., Schaad, D., and Sunderman, J. (2007). *A Cross-Case Analysis of Career Pathway Programs that Link Low-Skilled Adults to Family-Sustaining Wage Careers.* **Retrieved on January 20, 2010, from http://136.165.122.102/UserFiles/File/pubs/Career_Pathways.pdf**.

Presents case study reports of three career pathway programs at Instituto del Progreso Latino in Chicago, Shoreline Community College in Washington State, and Ouachita Technical College in Arkansas. Discusses the programs, policies, and practices associated with pathways that support adults' transitions to postsecondary education.

Career Voyages. (n.d.). Construction - Certifications. Retrieved on January 21, 2010, from http://www.careervoyages.gov/construction-certifications.cfm**.**

Website for students, career changers, parents, and career advisors that provides an overview of certification in the construction industry and links to certification information in other industries.

Career Voyages. (n.d.). Health Care - Certifications. Retrieved on January 21, 2010, from http://www.careervoyages.gov/healthcare-certifications.cfm.

Website for students, career changers, parents, and career advisors that provides an overview of certification in the healthcare industry and links to certification information in other industries.

Carman, P., Van Horn, B., Hamilton, K., and Williams, M.K. (2002). *Exploring Work-Based Foundation Skills in the ABLE Classroom. Instructional Activities and Resources for the Adult Learner [and] Supplemental Handouts for Modules*. University Park, PA: Institute for the Study of Adult Literacy, Pennsylvania State University. Retrieved on January 20, 2010, from http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/1a/af/3d.pdf.

Guide for instructors that features classroom activities and instructional resources to help adults develop work-based skills, including basic employability skills, workplace knowledge, and life-long learning skills.

CASAS Basic Skills Content Standards. (n.d.). Retrieved January 21, 2010, from https://www.casas.org/home/index.cfm?fuseaction=home.showContent&MapID=1720.

Presents tools for instructors to implement the CASAS basic skills standards. Outlines standards as they relate to specific CASAS test items, content areas, and student levels and provides worksheets to address standards in the classroom.

CASAS Frequently Asked Questions. (n.d.) Retrieved January 21, 2010, from https://www.casas.org/home/?fuseaction=home.faqs.

Answers frequently asked questions about the CASAS exam on topics such as test administration, interpretation and use of results, staff training, and general assessment information.

Chernus, K., and Fowler, D. (in press). Integrating Curriculum: Lessons for Adult Education From Career and Technical Education. Washington, D.C.: National Institute for Literacy.

Summarizes literature on integrated curriculum and discusses approaches used in secondary education that could be applied to adult education.

Georgetown University. (n.d.). *Nursing Career Pathway.* Retrieved on January 21, 2010, from http://careerweb.georgetown.edu/71654.html.

Outlines the training and skills necessary to become a registered nurse for nursing majors at Georgetown University. Includes links to relevant websites, publications, and professional associations.

Gershwin, M., Coxen, T., Kelley, B., and Yakimov, G. (2008). *Building Tomorrow's Workforce: Promoting the Education and Advancement of Hispanic Immigrant Workers in America.*   Retrieved on January 20, 2010, from http://www.nam.org/~/media/Files/s_nam/docs/240600/240524.pdf.ashx.

Highlights examples of partnerships between employers and community colleges to improve the educational and employment outcomes of Hispanic immigrants in the manufacturing industry. Focuses on promising features of the partnerships, including career pathways.

Grossman, L. (2009). New York City Career Pathways: Skill Strategies for Low-paid Immigrants. In F. Froy, S. Giguere, and A.R. Hofer (Eds.), *Designing Local Skills Strategies* (pp. 239-274). Paris: Organisation for Economic Co-operation and Development.

Part of a report that discusses promising features of models used across the world to improve adults' basic skills and prepare them for postsecondary education and employment. Presents a case study of career pathways in New York in healthcare, retail, and hospitality and tourism.

Henle, T., Jenkins, D., and Smith, W. (2005). *Bridges to Careers for Low-Skilled Adults: A Program Development Guide***. Retrieved on January 12, 2010, from http://www.womenemployed.org/docs/BridgeGuideFinal.pdf.**

Guide to developing and implementing bridge programs to prepare adults for career and educational advancement. Describes the steps to design a bridge program, establish partnerships, involve employers, develop curriculum, offer support services, and place participants in jobs and training programs. Also discusses funding and managing bridge programs.

Hernandez-Medina, E., Eaton, S., Hurd, D., and White, A. (2006). *Training Programs for Certified Nursing Assistants.* Retrieved on January 21, 2010, from http://assets.aarp.org/rgcenter/il/2006_08_cna.pdf

Discusses federal and state training requirements to become a certified nursing assistant (CNA) based on an examination of CNA training programs in 10 states. Describes the CNA profession, certification test, and recommendations for instructional hours and clinical training.

Higgs, A. (2007). *An Overview of the TABE test*. Retrieved on January 21, 2010, from http://www.associatedcontent.com/article/405888/an_overview_of_the_tabe_test_pg2.html?cat=4.

Provides an overview of the reading comprehension, math comprehension, math application, and language sections of the Test of Adult Basic Education (TABE), as well as three optional TABE tests: language mechanics, vocabulary, and spelling.

Hinckley, R., and Cotner, H. (2008). *Creating, Refining, and Using Career Pathways Maps*. Webinar Presentation for the Adult Basic Education Career Connections Project.

Presentation slides from the ABECC project webinar in 2008, facilitated by the Center for Occupational Research and Development (CORD), which convened ABECC sites, coaches, project staff, and consultants to discuss issues related to career pathways maps.

Hinckley, R., and Hull, D. (2007). *Providing a Second Chance in Public Education: Adult Career Pathways***. Waco, TX: CORD Communications.**

Describes the components of adult career pathways, including personal needs, academic skills, career focus, employability skills, career and technical skills, job entry skills, and advanced skills. Presents strategies for implementing adult career pathways, such as involving employers, recruiting participants, and developing curricula, and discusses related state and federal policies.

Holzer, H., and Lerman, R. (2007). *American's Forgotten Middle-Skill Jobs: Education and Training Requirements in the Next Decade and Beyond.* Retrieved January 12, 2010, from http://www.urban.org/UploadedPDF/411633_forgottenjobs.pdf.

> Presents data on supply-and-demand for middle-skill jobs (e.g., those requiring more than a high school diploma but less than a bachelor's degree) and suggests strategies for preparing the labor force to meet this demand, including implementing career pathways.

Institute for a Competitive Workforce (ICW) and the National Career Pathways Network (NCPN*).* (2009). *Thriving in Challenging Times: Connecting Education to Economic Development through Career Pathways.* Retrieved on January 15, 2010, from http://www.cordonline.net/atlanta2009/thriving_in_challenging_times.pdf.

> Provides a general overview of career pathways and adult career pathways and profiles 17 pathway programs. Two profiles focus on adult pathways, including a health sciences pathway in Wisconsin and a multi-sector program in Florida.

Jenkins, D. (2006). *Career Pathways: Aligning Public Resources to Support Individual and Regional Economic Development in the Knowledge Economy.* Retrieved on January 23, 2010, from http://www.workforcestrategy.org/publications/WSC_pathways8.17.06.pdf.

> Provides an introduction to career pathways, including their benefits and limitations and an overview of a process for designing pathways. Also describes a pathway in Elizabethtown, Kentucky.

Jenkins, D., and Spence, C. (2006). *The Career Pathways How-To Guide.* Retrieved on January 22, 2010, from http://www.workforcestrategy.org/publications/WSC_howto_10.16.06.pdf.

> Outlines a five-step process to develop career pathways for local programs and state agencies and offers implementation examples from local programs. Process involves conducting a gap analysis, forming partnerships, coordinating partner efforts around implementation, evaluating the pathway, and expanding the pathway.

Jenkins, D., Zeidenberg, M., and Kienzl, G. (2009). *Educational Outcomes of I-BEST, Washington State Community and Technical College System's Integrated Basic Education and Skills Training Program: Findings from a Multivariate Analysis.* Retrieved on January 20, 2010, from http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/44/45/04.pdf

> Summarizes outcomes from Washington State's Integrated Basic Education and Skills Training (I-BEST) program, which combines basic and technical skills instruction to increase the rate at which adult basic education students enroll and succeed in postsecondary occupational training

programs. Finds that adults enrolled in I-BEST perform better and complete more postsecondary education than comparable non-I-BEST adults.

Lippman, L., Atienza, A., Rivers, A., and Keith, J. (2008). *A Developmental Perspective on College and Workplace Readiness.* Washington, DC: Child Trends and the Bill and Melinda Gates Foundation. Retrieved on January 20, 2010, from http://www.childtrends.org/Files/Child_Trends-2008_09_15_FR_ReadinessReport.pdf.

Summarizes developmental literature on the skills young people need to be ready for college, the workplace, and the transition to adulthood, including physical, psychological, social, cognitive, and spiritual development needs.

Losh, C. (2003). *Career Cluster Resources for Hospitality and Tourism*. Retrieved on January 20, 2010, from http://www.careerclusters.org/resources/ClusterDocuments/htdocuments/HTFinal.pdf.

Provides an overview of the hospitality and tourism career cluster, which is part of the States' Career Cluster Initiative coordinated by the National Association of State Directors for Career and Technical Education Consortium. Includes a career pathway model, a summary of the pathway's skills and knowledge requirements, and a list of related industry credentials.

Mellard, D., and Anderson, G. (2007). *Challenges in Assessing for Postsecondary Readiness.* Retrieved on January 15, 2010, from http://www.nationalcommissiononadultliteracy.org/content/assessmentmellard.pdf.

Provides an overview of the most commonly used assessments in adult education, such as the CASAS, TABE, and COMPASS, and discusses the alignment between these tests and the requirements for entry into postsecondary education.

National Council for Workforce Education. (2007). *Envisioning the Future: Career Pathways as a Systemic Framework Fully Implemented in the Community College.* Compiled from the 2007 NCWE Conference. Retrieved on January 20, 2010, from http://www.ncwe.org/wp-content/uploads/2007/09/Envisioningthefuture.pdf.

Based on a framework presented by the League for Innovation in the Community College, describes the ideal conditions for implementing system-wide career pathways.

National Institute for Literacy. (n.d.). *Career Pathways Instructional Materials Library.* Retrieved on January 26, 2010, from http://www.nifl.gov/pd/careerpathways.

Compiles links to career pathway resources for program administrators and instructors submitted by adult education practitioners. Categorizes resources by industry sectors and provides links to more general "work readiness" resources.

O*Net Online. (2009). *Summary Report for Veterinary Technologists and Technicians.* Retrieved on January 21, 2010, from http://online.onetcenter.org/link/summary/29-2056.00.

> Summarizes the skills, abilities, and knowledge needed to become a veterinary technologist or technician. Includes information on job tasks, work styles, and tools used in the profession.

Oesch, M., and Bower, M. (2009). *Integrating Career Awareness into the ABE and ESOL Classroom.* Retrieved on January 20, 2010, from http://www.sabes.org/workforce/integrating-career-awareness.pdf.

> Curriculum for instructors and career counselors to help adult learners explore career options and understand the educational requirements to advance in their careers. Includes handouts and lesson summaries.

Park, R., Ernst, S., and Kim, E. (2007). *Moving Beyond the GED: Low-Skilled Adult Transition to Occupational Pathways at Community Colleges Leading to Family-Supporting Careers.* Retrieved on January 21, 2010, from http://136.165.122.102/UserFiles/File/pubs/Moving_beyond_the_GED.pdf.

> Summarizes literature on effective models of transition from ABE to postsecondary education and includes case study reports of various transition models, including career pathways.

Prince, D., and Jenkins, D. (2005). *Building Pathways to Success for Low-Skill Adult Students: Lessons for Community College Policy and Practice from a Statewide Longitudinal Tracking Study.* Retrieved on January 20, 2010, from http://ccrc.tc.columbia.edu/Publication.asp?UID=204 .

> Presents findings from a study of the experiences and outcomes of low-skill adults in community colleges in Washington State. Found that adults who attend college for at least a year and attain a credential do better in the labor market than adults who do not reach this "tipping point."

Richburg-Hayes, L., Brock, T., LeBlanc, A., Paxson, C., Rouse, C.E., and Barrow, L. (2009). *Rewarding Persistence: Effects of a Performance-Based Scholarship Program for Low-Income Parents.* Retrieved on January 20, 2010, from http://www.mdrc.org/publications/507/full.pdf.

> Part of MDRC's Opening Doors demonstration project, evaluates performance-based scholarship programs targeting low-income students at two New Orleans-area colleges. Found that scholarship programs encouraged more students to register for college, increased their persistence in postsecondary programs, and had a positive impact on social and psychological outcomes, such as student engagement.

St. Louis Health Care Workforce Partners. (n.d.). *Nursing Career Paths.* Retrieved on January 21, 2010, from http://www.stlhealthcareers.com/pdf/STLcareer_path.pdf.

Provides an overview of nursing career paths, including certified nursing assistant, licensed practical nurse, registered nurse, and graduate-level positions.

States' Career Clusters Initiative. (2007). *Hospitality and Tourism.* Retrieved on January 21, 2010, from http://www.careerclusters.org/resources/pos_ks/FoundationKSCharts/HT-90-KSCHART.pdf.

Table summarizing required courses, performance elements, and measurement criteria for the hospitality and tourism career cluster.

Stephens, R. (2009). *Charting a Path: An Exploration of the Statewide Career Pathway Efforts in Arkansas, Kentucky, Oregon, Washington and Wisconsin.* Retrieved on January 26, 2010, from http://www.gnbwib.org/PDFfiles/CareerPathwaysReport.pdf.

Describes a framework for statewide career pathway initiatives, including possible target populations and sectors and examples of employer engagement and other support services for participants, and discusses the implementation of pathways in five states.

Tests of Adult Basic Education. (n.d.). Retrieved on January 21, 2010, from http://www.sabes.org/assessment/tabe.htm.

Provides an overview of the Test of Adult Basic Education (TABE), including general information about the test, guidelines for test administration, and testing tips.

U.S. Department of Education. (draft report). *Helping Adults with Low Literacy Skills Transition to and Succeed in Postsecondary Education.* Washington, DC: U.S. Department of Education, Office of Vocational and Adult Education.

Summarizes literature on the transition from ABE to postsecondary education and connections between postsecondary attainment and the labor market. Profiles five studies of various transition models to identify effective strategies and practices that help adult learners enroll in and complete postsecondary education.

Wright, B. (2006). *In Brief: Training Programs for Certified Nurse Aides.* Retrieved on January 21, 2010, from http://assets.aarp.org/rgcenter/il/inb122_cna.pdf.

Summary of the Hernandez-Medina et al (2006) report. Presents key findings from a study of certified nursing assistant (CNA) training programs in 10 states and suggests recommendations for improving training programs.

Glossary

Adult Basic Education (ABE)

As defined by the *Adult Education and Family Literacy Act* (AEFLA) of the *Workforce Investment Act* (WIA) of 1998, the term "adult basic education" refers to instructional services provided to adults age 16 and older, not currently enrolled in school, and seeking improvement in their basic reading, writing, and math skills. Federal adult basic education activities are overseen by the Office of Vocational and Adult Education (OVAE) of the U.S. Department of Education. For more information, go to http://www.ed.gov/about/offices/list/ovae/index.html?src=oc.

Adult Education Content Standards

Established guidelines for the skills and knowledge that adults should possess at different educational levels and within different content areas. For more information, go to http://www.adultedcontentstandards.ed.gov/default.asp.

Articulation Agreements

Agreements signed by partners to establish the alignment of courses and skills between agencies to ensure that adults are sufficiently prepared for further education or training and can move seamlessly from one educational level to the next.

Basic Skills

Skills taught in adult basic education programs, including reading, writing, numeracy, and English language skills, to help adult learners obtain a General Educational Development (GED) credential or enroll in postsecondary education.

Bridge Program

A common component of career pathways, provides basic and workplace skills training for adults whose reading, writing, and math skills are below ninth-grade level, with the goal of preparing them for postsecondary education and employment. For more information, go to http://www.womenemployed.org/docs/BridgeGuideFinal.pdf.

Competency-based Curriculum

A course of study based on the mastery of specific information and skills, usually to prepare students for the application of these skills in specific settings, such as work.

Comprehensive Adult Student Assessment System (CASAS)

A commonly used commercial assessment for measuring adults' reading, writing, listening, speaking, and higher-order thinking skills, designed for both native and non-native English speakers. For more information, go to https://www.casas.org/home/index.cfm?fuseaction=home.showContent&MapID=197.

COMPASS

A computer-adaptive exam commonly used by community colleges to assess entering students' skills and determine their placement in courses. For more information, go to http://www.act.org/compass/index.html.

Contextualized Instruction

Instruction that connects in meaningful ways to students' daily lives and interests, such as incorporating materials students use regularly outside of class (e.g., newspapers, job applications, etc.) and information related to specific contexts, such as work or family.

Data-Sharing Agreement

An agreement between partners to allow access to data typically kept by one agency, usually for the purpose of tracking outcomes over time.

Incumbent Workers

Workers who are currently employed.

Industry-Skill Standards

The knowledge and skills needed for employment at various levels within specific industries, as established by industry governing boards. Often incorporated into integrated curricula to ensure that curriculum and instruction align with the skills needed for employment or advancement in a particular industry.

Performance-Based Assessment

An assessment of students' ability to apply skills and knowledge learned, such as an evaluation of final projects, ongoing observation, and other means agreed upon by teacher and student.

Standardized Assessment

An assessment of students' performance based on responses to a standardized test, which usually includes norm-referenced or criterion-referenced test questions and is scored according to a uniform rubric.

Test for Adult Basic Education (TABE)

A commonly used commercial assessment for evaluating adults' basic reading, math, and language skills. Subject tests are also available in vocabulary, grammar, and spelling. For more information, go to http://sabes.org/assessment/tabe.htm.

Workforce-Readiness Standards

Guidelines for the skills needed to be successful at work, including basic employability skills, interpersonal skills, technology skills, and the ability to learn on the job. For more information, go to http://www.workreadiness.com/.