OPENING DOORS TO APPRENTICESHIP FOR ENGLISH LANGUAGE LEARNERS

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ABSTRACT

Employers and labor organizations in the United States use apprenticeships to provide workers with technical education and paid on-the-job training leading to wage increases and higher-skilled jobs. When English learners participate in apprenticeships, employers benefit from an expanded pipeline of qualified employees and a more diverse workforce, and immigrant workers gain the qualifications and experience they need to realize their potential at work. This research study involved 66 interviews with ESL instructors, program staff, and thought leaders to learn to what extent English learners are participating in apprenticeships, what are the key elements of apprenticeships serving English learners, and what will be needed to sustain and scale apprenticeships equitably. Findings suggest that adult education providers have the tools to support ESL students' successful participation in apprenticeships, and that additional guidance and alignment of public and private resources will be needed to sustain and scale a more inclusive apprenticeship model.

Keywords: adult education, apprenticeship, training, immigrants, English language learners, ESL, integrated education and training, IET, career technical education, CTE, on-the-job training

INTRODUCTION

Apprenticeships are receiving increased attention as a strategy to prepare Americans for higher-skilled jobs. The federal government has invested \$665 million in apprenticeships since 2015, and more than half of the states now have an apprenticeship initiative (Whinnery, Anderson & Kiely, 2019). Pre-apprenticeship, too, is gaining recognition as an important step on the apprenticeship pathway, designed to prepare individuals to enter and succeed in an apprenticeship. Apprenticeship expansion should be good news for the many adult English language learners who remain in low-wage positions because of limited English and technical skills. But are we doing enough to ensure apprenticeships are accessible to English language learners?

This question was significant for me as I reflected on my years of teaching basic English to immigrants and later contextualized English to adults in the workplace. The apprenticeship approach seemed to fit perfectly with the needs of my English as a second language (ESL) students who required income right away and who had years of work experience, but whose limited English excluded them from both good jobs and valued career education. The opportunity to learn both English and work-related skills and earn an income while being trained on the job would be a dream come true for many of my adult education students.

I set out to learn who is offering apprenticeship pathways that benefit English learners and what they are doing to prepare their students to succeed. This article summarizes what I heard in more than 60 interviews with ESL teachers, program administrators, and state and national thought leaders about what can be done to expand immigrants' access to apprenticeship. I found that promising models exist, and that valuable lessons have been learned about the important role adult education providers can play in shaping a more equitable apprenticeship landscape.

BACKGROUND

Limited English proficiency is a significant barrier to immigrants' advancement out of poverty-level employment. In the United States, 60% of immigrant workers in lower-skilled jobs have limited English proficiency (Bernstein & Vilter, 2018), and nearly all jobs that offer higher wages require education beyond secondary school (Wrigley, 2015), for which English fluency is typically a prerequisite.

Integrated education and training (IET), which integrates basic skills education, career training, and workplace readiness instruction, has shown promising outcomes in terms of adult learners' basic and technical skill attainment and employment success (Wachen, Jenkins, Belfield & Van Noy, 2012; Zeidenberg, Cho & Jenkins, 2010) and is now incentivized through the 2014 Workforce Innovation and Opportunity Act (WIOA) and many state initiatives. Key characteristics of successful IET programs for English language learners have emerged in the literature and been promoted in practitioner resources and policy guidance. These include:

- instruction in English that is contextualized for the occupation or industry (Baker, Hope & Karandieff, 2009; Nash & Hewett, 2017);
- ESL and career technical education (CTE) that are co-taught or connected by teachers who integrate content and language instruction. (Fedele-McLeod, Whalen, Mason & McGavock, 2017; Wachen, Jenkins, Belfield & Van Noy, 2012);
- instruction on the culture of the workplace and career training, social and legal issues, and the language used in interactions in these settings. (Wrigley & Wisell, n. d.);
- partnerships with employers to inform curriculum and ensure the relevancy of course content to job qualifications (Wrigley, 2015), and potentially leading learners directly to employment or on-the-job training; and
- advising and supportive services to help students persist and succeed in training and transition to postsecondary education or employment (Rutschow, Beal & Johnson, 2019; Wachen, Jenkins, Belfield & Van Noy, 2012).

Relatively few existing programs combine IET and on-the-job training. A combined model should interest educators, employers, and students for several reasons, including:

• Adults acquire new information well through problem-centered, hands-on, and applied learning modalities (Knowles, 1980).

- Training programs' connection to employers can inform their relevance to the workplace and value in the labor market (McCambly, 2016; MDRC, 2017).
- Apprenticeship, in particular, structures wage increases and higher-skilled employment into progression through the program, with tangible economic benefits for workers and employers (Holzer & Lerman, 2014; Lerman, 2010).
- The IET model's integration of language instruction can make apprenticeships and other work-based learning opportunities accessible to English learners who would otherwise be excluded from participation due to language ability (Sandwall, 2011).

Connecting an ESL or IET program to on-the-job training, such as through apprenticeship, has not been incentivized by public funding, and few adult education students gain access to these work-based opportunities (Cahill, 2016). A shift is occurring, however, as state systems of adult and technical education adopt student outcome metrics related to industry-recognized credential attainment, job placement, and wage increases. In California, for example, the state community college system in 2018 adopted a performance-based funding formula that rewards colleges for graduates' employment within a year of completion, with bonus incentives for serving economically disadvantaged students (Fain, 2018). This is boosting interest in employer engagement, tailoring of curriculum to address requirements for hire, and direct connection to employment.

Little is documented about apprenticeships' reach into immigrant communities or accessibility to English language learners. In 2016, the U.S. Department of Labor (DOL) awarded contracts to "equity intermediaries," charged with supporting the expansion of apprenticeship access to underrepresented groups, such as women, people of color, and individuals with disabilities (Hank, McGrew & Zessoules, 2018); however, no data are collected on how apprenticeships advance economic opportunity for marginalized populations (Crane & Colborn, 2016). Several case studies available on the internet (Bergson-Shilcock, 2018a and 2018b; Murray, 2018; National Immigration Forum, 2016) describe promising practices in this area. What we do know about the positive value of IET and of apprenticeships (Hollenbeck, 2008; Novella & Perez-Davila, 2017; Reed et al., 2012; State of Washington, 2014) points to an opportunity: the integration of ESL, CTE, and on-the-job training to make apprenticeships accessible to English learners.

METHOD AND PARTICIPANTS

I conducted 66 interviews between May 2019 and January 2020 with ESL teachers (8), program staff (38, including coordinators, deans, mentors, counselors), and thought leaders working at a national (8) or a state (13) level.

The interviews were semi-structured, with questions adapted to the individual's role and experience related to the topic. Interviews addressed these research questions:

- Are English language learners participating in apprenticeship pathways?
- What are the key elements of successful apprenticeship pathways serving English language learners?

• What would it take to sustain and scale apprenticeship pathways inclusive of English language learners?

Interviews with ESL teachers also explored their programs' integration of ESL instruction, career education, and on-the-job training; their approach to identifying students' work-related language needs; and their instruction's connection to students' workplace experiences to address these needs.

Are English Language Learners Participating in Apprenticeship Pathways?

Teachers and program staff who participated in interviews represented 30 programs that aimed to integrate ESL, CTE, and on-the-job training. Not all of these programs were preapprenticeships or apprenticeships. Of the programs participating,

- eight involved apprenticeships (with state and/or federal registration);
- eight offered pre-apprenticeships with strong ties/facilitated entry to an apprenticeship;
 and
- fourteen had certain characteristics of pre-apprenticeship but had not partnered with an apprenticeship program or did not facilitate entry into one. Several of these programs were in conversation about developing the program into a pre-apprenticeship or apprenticeship. Others partnered with employers to secure entry into permanent employment, but without the continued training and assured wage increases of apprenticeship. Five of these programs were actively trying to become pre-apprenticeships or apprenticeships.

The participating programs led to employment in hospitality, culinary, healthcare, janitorial, building trades, business, early childhood education, and agriculture professions in California, Idaho, Maryland, Massachusetts, and Washington.

The ESL components of the programs were delivered by a community college (15), an adult school (6), a labor-management partnership (4), a community-based agency (4), or a high school (1). This ESL instruction served a diversity of students who were unemployed/underemployed or currently working; with limited formal schooling, or with professional education overseas; with or without prior experience in the industry; in English-learner-only cohorts or in mixed groups of English learners and non-English learners.

Interviewees described building their programs upon various foundations, depending upon their existing programs and resources. Figure 1 illustrates the core elements of these programs—ESL, CTE, and on-the-job training—and the combinations of these that were the starting points of the pre-apprenticeship or apprenticeship programs. For example, existing IET programs explored potential to provide students with paid on-the-job training by building a new apprenticeship or partnering with an existing one. Workplace English programs looked at ways to leverage their employer partnerships, linking to apprenticeships or serving as a pre-apprenticeship. Existing apprenticeship programs assessed opportunities to prepare English learners for entry through pre-apprenticeship, ease language-related entry requirements, or facilitate English learners' success in apprenticeship.

The programs took several different approaches to integrating English language instruction. About one third (11 programs) used a co-teaching IET approach. Six programs had only a CTE instructor or mentor who supported language learning (in several cases relying on their bilingual skills). Six programs had only an ESL teacher who delivered contextualized language instruction. Three programs used an alternating IET approach, with ESL and CTE teachers coordinating their instruction during separate class times. Finally, three programs recruited English learners who had already reached a required English level and provided more limited ESL support, such as tutoring or optional online ESL modules. A few programs intentionally supported English learning during on-the-job training through a bilingual mentor or supervisor.

Are English learners participating in apprenticeship pathways? The answer is yes, though these programs are few, far between, and typically in a pilot stage. Only one of the programs interviewed was a new pre-apprenticeship-to-apprenticeship pathway created for English learners. Fourteen of the programs were newly created to prepare English learners for apprenticeship (or for other employment opportunities), though many of these had not yet made a "direct entry" connection. Other programs were built to make existing apprenticeship pathways more accessible to English learners, either by adding an English learner cohort to a pre-apprenticeship or apprenticeship program (5) or by adding supports for English learners participating in a mainstream pre-apprenticeship or apprenticeship (10). We might conclude that there is much room for learning and growth in this space, and that adult educators should have a seat at the table as we innovate and develop new program models.

What Are the Key Elements of Successful Apprenticeship Pathways Serving English Language Learners?

Much can be learned from the pioneering efforts of ESL educators and their partners who are expanding access to apprenticeship pathways for immigrant adults. The recommendations below, which emerged from the interviews, are framed as recommendations for adult education program developers and instructors and can be understood as key elements of successful apprenticeship pathways serving English language learners.

Begin With Clarity About "Why Apprenticeship?"

According to interviewees, large investments of time, effort and resources went into creating the pre-apprenticeship and apprenticeship programs, as well as many others that were ultimately not successful. Teachers and administrators emphasized their reasons for persistently pursuing the "gold star" of apprenticeship: paid, high-quality training, and leading to high-quality jobs. Apprenticeship offers a structured career pathway that builds industry-valued competencies in the context of the workplace and doesn't leave graduates hunting for work. A commitment to immigrant students' equitable access to in-demand skills and well-paid employment drives this work.

Assemble the Right Partners to Champion English Learners' Access to Apprenticeship.

Rarely was the adult education provider the lead convener of partners involved in developing an apprenticeship pathway, but it was important that ESL providers—and students—be at the table early and consistently, expanding the conversation about the assets English

learners bring and the return on investment in language education. Leaders in program development—educators, employers, unions, community-based organizations (CBOs), workforce development representatives, and others—brought creativity to the process and established a common sense of purpose around immigrant inclusion. As a collective, they envisioned the pathway, initiated pilots, built momentum, and in some cases have moved on to identify opportunities to sustain and scale.

Work With Employers and Unions to Identify the Right Jobs.

Adult educators connected to employers and labor in various ways, such as via a local workforce development board or other intermediary, a labor-management training fund, a regional sector strategy, or active outreach, and in some cases participated in the selection of target occupations suitable for English language learners. Planning teams identified occupations that anticipated hiring needs, were on a career pathway, and would require an appropriate level of English ability. Sometimes, employer conversations revealed that large numbers of current entry-level employees were English learners, or that English learners were being turned away from apprenticeship slots due to language level, or that bilingual skills would be especially valued in the occupation of interest. In some cases, adult education providers, unions, or immigrant advocates voiced the opportunity to professionalize next-step jobs for entry-level workers by defining competencies and standardizing training pathways. Adult education providers' knowledge of ESL levels and teaching methods contributed to these conversations.

Investigate, Reform, and Align Curriculum With Apprenticeship Entry Requirements.

As trusting relationships developed between ESL providers and other partners, opportunities arose to discuss hiring practices and shine light on possible barriers to entry for English learners. For example, some apprenticeships required candidates to pass technical exams or complete phone interviews in English that systematically excluded immigrants. Opening up a conversation about entry requirements allowed for investigation of the language ability truly needed for success in training and on the job. ESL providers were involved in problem-solving, such as integration of exam preparation into pre-apprenticeships or proposals to revise screening practices to better align with work requirements and accommodate language needs.

Rely on the Cultural Competency of CBOs, Day Laborer Centers, and Unions.

While ESL instruction was a critical component of the apprenticeship pathways interviewed, many also built in an array of supportive and language-appropriate services to ensure immigrant participants' success. Some partnerships included an organization with deep roots in local immigrant and worker communities to provide outreach and recruitment, career coaching, wrap-around support services, barrier removal, and training. Agency staff or union representatives with bilingual skills played important roles in building the trust of potential apprentices, opening communication about the apprenticeship opportunity, addressing challenges during training, and inviting workers' voices in training design and improvements.

Invest in Assessment of Workers' and Employers' Needs.

Programs took a variety of approaches to student needs assessment, using tests such as CASAS or TABE, career interest inventories, interviews, focus groups, and in-class exploration of

communicative needs through role-plays and reflective activities. Because of their employer-driven nature, apprenticeship pathways also responded to employers' needs identified through advisory group meetings, job classification analysis, industry standards, worksite observation, interviews, and focus groups. ESL providers described tailoring curriculum to address workers' communication needs specific to technical skills training, an entry exam or interview, and employment in the targeted occupation; as well as their assets, such as aptitude for technical learning or industry knowledge gained in prior roles. With an understanding of the career pathway and the worker population, programs also determined whether bilingual instruction, sheltered ESL, or mainstream programming with ESL support would be most beneficial.

Get Creative About Layering Supports for English Language Learning.

Designers of these programs were intentional about creating alternatives to prerequisite, remedial ESL classes for immigrants interested in apprenticeship. They consistently sought a "no wrong door" approach, so that English learners would not be turned away. There was no simple formula for their inclusion of ESL instruction and support. Programs offered contextualized, job-specific ESL classes prior to required instructional hours, or used IET to integrate ESL into apprenticeship instruction, or provided access to optional online modules or tutoring to reinforce language development. Several apprenticeship programs included ESL hours within the total required apprenticeship instructional hours, while other programs hoped for this in the future. Language support also came from bilingual and culturally competent CTE instructors, mentors, coaches, and peer cohorts.

Design CTE and On-the-Job Experiences With English Language Learners in Mind.

Having adult educators at the table helped to inform programs' delivery of hands-on, problem-based career education that leveraged immigrant students' assets and did not pose their English language level as a barrier. The apprenticeships supported English learners on the job with bilingual mentors and supervisors who were sensitive to the demands of applying a new language in a professional context. Partners committed to immigrant access and integration advocated for culturally competent work environments where apprentices would feel respected and their contributions as professionals would be valued.

Emphasize Workplace Communication Skills in English Instruction.

Programs described roles for the ESL teacher that went far beyond English grammar and vocabulary to address soft skills, cultural norms, professional identity, confidence, and conversational proficiency. As English learners negotiated the workplace and changing responsibilities, they identified communicative challenges that were shared and worked through in the classroom. Employers expressed the importance of reinforcing these communication skills in class, since technical skills instruction was typically the focus of onthe-job training.

If Pre-Apprenticeship Is Essential to Apprenticeship Access, Give It Value.

Some interviewees prioritized access to apprenticeship itself as the best option for English learners, but others found reason to build on-ramps that prepared workers for

apprenticeship. Federal and many states' guidance describes the importance of preapprenticeships' "documented partnership" with one or more registered apprenticeships, training and curriculum approved by the apprenticeships, and facilitated entry into apprenticeship; yet, there remains confusion about what pre-apprenticeship means and what it must deliver. Interviewees suggested that pre-apprenticeships should be customized to specific talent supply issues and should remediate specific barriers to employment, as determined through local needs assessment. They agreed that pre-apprenticeships should facilitate transition to apprenticeship, but in reality, this more often involved a guaranteed interview or warm introduction, rather than direct entry. They felt pre-apprenticeship should offer benefits to participants who do not transition directly to apprenticeship, such as college credit, certification, or transferable skills. Many insisted that quality pre-apprenticeships should provide income during training, to facilitate participation among low-wage workers.

What Would It Take to Sustain and Scale Apprenticeship Pathways Inclusive of English Language Learners?

The interviews surfaced three recommendations that could inform apprenticeship advocates' and policymakers' efforts to sustain and scale apprenticeship pathways inclusive of English language learners. An overarching theme of these was that building inclusive apprenticeship programs takes time, effort, and intention, but that it can be done using the resources we have and should be done to achieve social equity and economic prosperity objectives. These three actions will support the work of apprenticeship partnerships—inclusive of ESL teachers and students—to innovate and demonstrate effective apprenticeship practices for English learners.

Provide Guidance Related to Adult Education's Role in Apprenticeship Pathways.

The U.S. DOL and many state labor and apprenticeship agencies have issued definitions of quality pre-apprenticeship and apprenticeship programs, but questions remain. Additional guidance is necessary at the state and federal levels to elaborate on the role of adult education in apprenticeship partnerships, provide quality standards related to integrated basic skills instruction for apprenticeship, and define allowable uses of public funding to support apprenticeships for populations with basic skills needs. This guidance could provide practitioners with clear parameters for new program development and, more importantly, with inspiration to seek innovative solutions to local needs.

Align Workforce Development, Community College, and Adult Education Systems Around Apprenticeship Equity.

The WIOA-funded workforce development system, community colleges, and adult schools play important roles in making apprenticeships accessible to immigrants and others with basic skills needs. At the state and local levels, these partners can align planning processes, facilitate collaborative pathway development, and gather data to ensure accountability for serving English learners. They can provide guidance and share best practices related to the use of public funding to deliver on key elements of apprenticeship for English learners, and they can convene and support communities of practice that involve partners across systems.

Facilitate Partnerships Between Adult Education and Employers.

ESL providers need to be part of conversations about how to expand access to apprenticeships, but they may not have established networks with industry and labor leaders driving these conversations. With a seat at the table, adult education can offer solutions to employers' hiring or upskilling needs, building awareness of instructional and support models that can expand and diversify the pipeline of qualified job candidates. In some communities, an intermediary organization helps to establish these ties, or a regional sector strategy or industry advisory board provides a forum for collaboration. More investment and attention may be needed to facilitate and incentivize adult education-industry connections.

CONCLUSION

This research study has shown that adult education providers have the tools to open doors to apprenticeship for English learners. Whether through a pre-apprenticeship program that establishes foundational skills and links learners to apprenticeship, or through an inclusive apprenticeship training model that accommodates language-learning needs, adult educators can partner with apprenticeships in their communities to secure the vital connection between the classroom and career opportunity. These partnerships require effort and resources to establish and nurture, but the rewards are great: employers benefit from an expanded pipeline of qualified employees and a more diverse workforce, and workers gain the qualifications and experience they need to realize their potential at work. Adult education leaders may need to begin the conversation that will push the doors open. \mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb{\mathbb

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REFERENCES

- Baker, E., Hope, L., & Karandjeff, K. (2009). *Contextualized teaching & learning: a faculty primer*. RP Group. http://archive.careerladdersproject.org/docs/CTL.pdf
- Bergson-Shilcock, A. (2018a, July 9). Business investment in upskilling for incumbent workers: lessons from a Pre-Lean ESOL program in Massachusetts. *National Skills Coalition*. https://www.nationalskillscoalition.org/news/blog/business-investment-in-upskilling-for-incumbent-workers-lessons-from-a-pre-lean-esol-program-in-massachusetts
- Bergson-Shilcock, A. (2018b, April 3). Maryland uses nearly \$1 million in WIOA discretionary funds to support career pathways via co-enrollment. *National Skills Coalition*. https://www.nationalskillscoalition.org/news/blog/maryland-uses-nearly-1-million-in-wioa-discretionary-funds-to-support-career-pathways-via-co-enrollment
- Bernstein, H. & Vilter, C. (2018). Upskilling the immigrant workforce to meet employer demand for skilled workers. Urban Institute. https://www.urban.org/research/publication/upskilling-immigrant-workforce-meet-employer-demand-skilled-workers/view/full_report
- Cahill, C. (2016). *Making work-based learning work*. Jobs for the Future. https://jfforg-prod-prime.s3.amazonaws.com/media/documents/WBL_Principles_Paper_062416.pdf
- Crane, S. % Colborn, J. (2016). *Apprenticeship: Training that works*. The Aspen Institute. https://assets.aspeninstitute.org/content/uploads/files/content/docs/pubs/Apprenticeship_Training%20that%20Works.pdf?_ga=2.139227507.1994844578.1574967159-548667024.1574967159
- Fain, P. (2018). As California goes? *Inside Higher Education 12 June 2018* https://www.insidehighered.com/news/2018/06/12/calif-finalizes-performance-funding-formula-its-community-colleges
- Fedele-McLeod, M., Whalen, S., Mason, A.H., & McGavock, C. (2016). *Research Brief No. 14: Integrated Education and Training. California Department of Education*. https://calpro-online.org/documents/CALPRO2017Brief-IET-508.pdf
- Hanks, A., McGrew, A., & Zessoules, D. (2018). *The apprenticeship wage and participation gap*. Center for American Progress. https://www.americanprogress.org/issues/economy/reports/2018/07/11/453321/apprenticeship-wage-participation-gap/
- Hollenbeck, K. (2008). State use of workforce system net impact estimates and rates of return. *Association for Public Policy Analysis and Management (APPAM) conference proceedings*. https://research.upjohn.org/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1006&context=confpapers
- Holzer, H. J., & Lerman, R. (2014). Work-based learning to expand jobs and occupational qualifications for youth. *Challenge*, *57*(4), 18-31.
- Knowles, M. (1970). *The modern practice of adult education: From pedagogy to andragogy*. Cambridge Book Company.
- Lerman, R. I. (2010). Expanding apprenticeship: A way to enhance skills and careers. Urban Institute.
- McCambly, H. (2016). A multipronged approach to improving transitions and outcomes for nontraditional-aged students in select pathways at Oakton Community College. Office of Community College Research and Leadership, College of Education, University of Illinois. https://occrl.illinois.edu/docs/librariesprovider4/ptr/oakton-implementation-brief.pdf
- MDRC (2017). *The power of career- and employer-focused training and education*. MDRC. https://www.mdrc.org/sites/default/files/LookingForward SectorStrategies rev.pdf
- Murray, C. (2018, June 7). Integrating electrical and English instruction to meet demand for electricians in Delaware. *WorkforceGPS* https://apprenticeshipusa.workforcegps.org/blog/general/2018/06/07/16/11/ Integrating-Electrical-and-English-Instruction-to-Meet-Demand-for-Electricians-in-Delaware

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- Nash, A. & Hewett, E. (2017). *Integrated education and training: Implementing programs in diverse contexts.*National College Transition Network. https://www.worlded.org/WEIInternet/inc/common/_download_pub.cfm?id=18643&lid=3
- National Immigration Forum (2016). *Opportunity at work: Skills and opportunity for the New American Workforce Progress Report.* https://indd.adobe.com/view/33b00f7a-45d4-4504-93a3-3075c5e7e57a
- Novella, R. & Pérez-Dávila, Y.S. (2017). Are apprenticeship programs effective? Lessons for Latin America and the Caribbean. Inter-American Development Bank. https://publications.iadb.org/publications/english/document/Are-Apprenticeships-Programs-Effective-Lessons-for-Latin-America-and-the-Caribbean.pdf
- Reed, D. et al. (2012). *An effectiveness assessment and cost-benefit analysis of registered apprenticeship in 10 states*. Mathematica Policy Research. https://wdr.doleta.gov/research/FullText_Documents/ETAOP_2012_10.pdf
- Rutschow, E.Z., Beal, K. & Johnson, C. (2019). Beyond the basics: Integrating workforce and college-readiness training into California's adult basic skills programs. MDRC. https://www.mdrc.org/sites/default/files/ABE_Irvine_Scan_Full_Report.pdf
- State of Washington Workforce Training and Education Coordinating Board (2014). *Workforce Training Results* http://www.wtb.wa.gov/documents/workforcetrainingresults2014.pdf
- Wachen, J., Jenkins, D., Belfield, C., & Van Noy, M. (2012). Contextualized college transition strategies for adult basic skills students: learnings from Washington State's I-BEST program model. Community College Research Center, Teachers College, Columbia University. https://ccrc.tc.columbia.edu/media/k2/attachments/i-best-program-final-phase-report.pdf
- Whinnery, E., Anderson, L., & Keily, T. (2019) 50-state comparison: Statewide apprenticeships. https://www.ecs.org/50-state-comparison-statewide-apprenticeships/
- Wrigley, H. (2015). *Preparing English learners for work and career pathways: Issue brief.* https://lincs.ed.gov/sites/default/files/ELL Context Instruction 508.pdf
- Wrigley, H. and Wisell, T. (n. d.). *Preparing English learners for work and career pathways.* Literacy Information and Communication System (LINCS). Retrieved November 22, 2019 https://lincs.ed.gov/sites/default/files/ELL_Context_Instruction_508.pdf
- Zeidenberg, M., Cho, S.W., & Jenkins, D. (2010). Washington State's Integrated Basic Education and Skills Training Program (I-BEST): New Evidence of Effectiveness. Community College Research Center, Teachers College, Columbia University. https://ccrc.tc.columbia.edu/media/k2/attachments/i-best-evidence-effectiveness.pdf

FIGURE 1. CORE ELEMENTS OF APPRENTICESHIP FOR ENGLISH LEARNERS

