WORKFORCE

Building Talent Pipelines Through Pre-Apprenticeship

How Sector Academies Connect Employers with Job-Ready Candidates

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Abstract. Employers consistently cite skills gaps as a barrier to growth, while many capable job seekers lack the preparation and supports needed to enter registered apprenticeship. Pre-apprenticeship offered through sector academies can bridge that gap. This article reviews the U.S. Department of Labor's 2026 pre-apprenticeship framework, summarizes randomized evidence on sector-based training, and translates both into design strategies, a twelve-month launch sequence, and recommendations for training providers, workforce boards, and employers.

Introduction

Employers across sectors report that the most persistent constraint on growth is not demand but talent. The World Economic Forum (WEF, 2025) identifies skills gaps as the most significant barrier to business transformation and expects nearly 40 percent of workers' core skills to change by 2030. Registered apprenticeship is among the most employer-aligned responses: apprentices earn while they learn, and a ten-state study estimated that they earned approximately $240,000 more over their careers than comparable non-participants (Reed et al., 2012). Yet entry is competitive, and many capable adults and young people arrive without the math fluency, trade vocabulary, safety certifications, or basic supports needed to be selected and to persist. Pre-apprenticeship exists to close that distance.

This article examines how sector academies, which are employer-informed training programs organized around a defined industry, can operate as pre-apprenticeship pipelines. It draws on the U.S. Department of Labor's (DOL, 2026) updated framework, on randomized evaluations of sector training, and on implementation lessons, and it concludes with practical recommendations.

The Policy Framework: What Quality Pre-Apprenticeship Requires

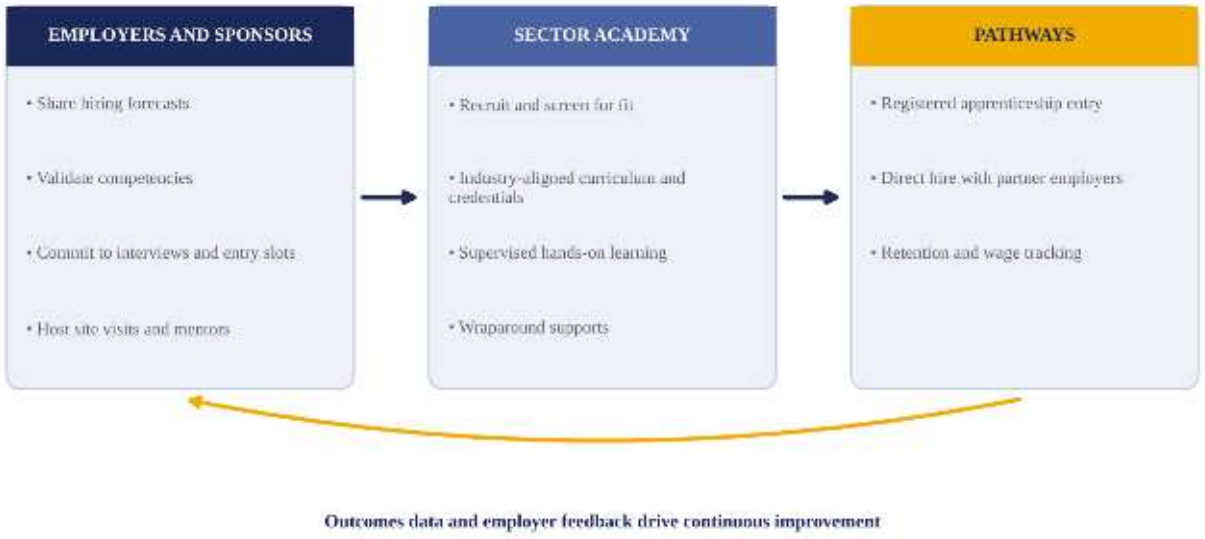
In September 2026, DOL issued Training and Employment Notice (TEN) 05-26, which replaces its earlier guidance with a five-component framework (DOL, 2026). The components are (a) direct pathways into registered apprenticeship through partnerships with sponsors and employers, supported by written agreements; (b) industry-driven training and curriculum aligned to apprenticeship standards, with credentials and essential skills embedded in technical instruction; (c) hands-on, work-based learning and career exposure that does not replace paid workers; (d) broad workforce and education partnerships that widen access and combine funding; and (e) outcomes tracking and continuous improvement,

especially apprenticeship placement and completion. The notice also asks that apprentices report prior pre-apprenticeship participation so the federal data system captures it (DOL, 2026).

Sector academies are a natural delivery model because they already organize employers, curriculum, and supports around an occupational cluster. The Workforce Innovation and Opportunity Act (2014) elevated industry and sector partnerships as a core strategy of the public workforce system, which gives academies a policy and funding foundation. Figure 1 shows how the components fit together as a pipeline with a feedback loop.

Figure 1. How a Sector Academy Connects Employer Demand to Job-Ready Candidates

Adopted from the five components in the U.S. Department of Labor framework (2026)



What the Evidence Shows

Causal evidence on pre-apprenticeship specifically remains limited. The closest rigorous evidence comes from sector-based training programs that share its core logic of employer demand, occupational skills, and support. The WorkAdvance demonstration enrolled 2,564 participants across four providers in a model with five features: intensive screening, sector-specific career readiness, occupational skills training, employer-focused job development, and postemployment retention services (Kanengiser & Schaberg, 2022). Two years after enrollment, earnings effects ranged from no gain at one site to 26 percent at the most effective site (Hendra et al., 2016). Seven years out, the Per Scholas program had increased earnings by 14 percent, three of four sites had raised the share of participants earning at least $40,000, and none significantly changed employment rates, which suggests that gains came through higher wages and advancement (Kanengiser & Schaberg, 2022).

In a separate randomized trial of 410 adults in San Antonio, Project QUEST raised earnings in the ninth year by 20 percent, or $5,490 (Roder & Elliott, 2019). Gains of 15 to 20 percent, about $6,000 per year, were estimated for years nine through 14, although they were statistically significant only through year 12 (Roder & Elliott, 2024).

Figure 2. Sector Programs Can Raise Earnings, but Results Vary by Provider and Design

Estimated earnings gain relative to a randomized control group; follow-up periods differ



Sources: Hendra et al. (2016); Kanengiser & Schaberg (2022); Rader & Elliott (2019, 2024).

Two cautions follow. First, effects varied by provider. Hendra et al. (2016) found that results tracked providers' prior experience with sector programs and how demand-driven their services were, and that full implementation took more than a year for some components and required substantial technical assistance. Second, Holzer (2022) notes that QUEST was studied at a single site in one sector and that federal evidence reviews have rated sector programs unevenly, though he concludes that the best available evidence still places them among the more successful training strategies for disadvantaged workers. Practitioners should treat the model as promising but dependent on execution quality.

Design Strategies for Sector Academies

1. Start with employer demand, in writing

Begin with a labor market scan of occupations that offer family-sustaining wages and defined advancement, then secure written commitments from employers and apprenticeship sponsors: expected hiring volumes, entry requirements, interview guarantees for completers, and named contacts. DOL (2026) calls for such agreements. In an illustrative example, a metropolitan academy preparing adults for electrical apprenticeships might sign agreements with two joint labor-management programs and three contractors, and the sponsors would specify the competencies they require: algebra applied to circuits, blueprint reading, tool identification, and safety certification.

2. Contextualize the curriculum and stack credentials

Teach foundational skills inside the technical content rather than in separate remedial courses. A math unit that uses conduit-bending calculations will engage adult learners more than a generic review of fractions. Embed credentials that employers recognize, such as OSHA 10-hour safety training and CPR and first aid, and ask sponsors to validate the curriculum each year (DOL, 2026).

3. Provide supervised, hands-on learning without displacement

Shop labs, site visits, job shadowing, and short supervised projects let participants test their interest and demonstrate reliability. DOL (2026) specifies that work-based learning should mirror apprenticeship tasks without replacing paid workers and encourages stipends or wages where funding permits, which helps participants who cannot forgo income to remain enrolled.

4. Screen for readiness, and wrap supports around the program

WorkAdvance relied on intensive screening, yet Hendra et al. (2016) identified helping more disadvantaged people gain access as a priority for future work. The balance is to screen for commitment, basic skills, and eligibility for the target occupation rather than for prior credentials or records that sponsors do not actually require. Wraparound supports such as transportation, child care, tools, and career coaching are named in DOL (2026) and can be braided from workforce, education, and philanthropic sources.

5. Measure what employers value and act on it

Track enrollment, completion, credential attainment, apprenticeship placement, retention at 90 and 180 days, and wage progression, and disaggregate results by population to monitor equity. Convene an employer advisory group each quarter to review the data and adjust the curriculum, consistent with the fifth DOL component (DOL, 2026). Figure 3 shows a twelve-month launch sequence in which each milestone is a decision point for that group.

Figure 3. A Twelve-Month Launch Plan for a Pre-Apprenticeship Sector Academy

Illustrative sequence; diamonds mark decision points for the employer advisory group



Recommendations

- Training providers: secure written employer and sponsor commitments before enrolling the first cohort.
- Training providers: phase implementation, expect quality to mature over the first year (Hendra et al., 2016), and budget for technical assistance.
- Workforce boards and funders: fund the full cost of quality. WorkAdvance operating costs ranged from $5,200 to $6,700 per participant (Hendra et al., 2016), a useful benchmark for realistic budgeting.
- Workforce boards and funders: require outcome data on apprenticeship placement and wages, and reward providers that improve them.
- Employers and sponsors: commit interview slots, mentors, and curriculum validation, and treat the academy as a recruiting channel with shared accountability.

- Employers and sponsors: report pre-apprenticeship participation through the required federal systems so outcomes can be tracked (DOL, 2026).

Conclusion

Sector academies work best when they are built as partnerships rather than as courses. The research suggests that employer-aligned training, strong supports, and disciplined attention to outcomes can raise earnings, but results depend on provider capacity and on sustained employer involvement. Organizations that document employer commitments, align instruction to apprenticeship entry standards, and review outcome data with employers each quarter are positioned to build pipelines that serve both job seekers and the industries that need them.

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