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Research Report

ELAINE W. LEIGH, JEREMY WRIGHT-KIM, LAURA RODRIGUEZ LORA, GOPAL TRITAL

How States Align Postsecondary and Workforce Strategies

Examples and Trends from WIOA Plans

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About This Report

State policymakers want to align postsecondary education and workforce development systems, yet limited research systematically examines how states do so. This report presents a first-ever content analysis of Workforce Innovation and Opportunity Act (WIOA) plans submitted by all 50 states to the U.S. Department of Labor for Program Years 2016–2027. We also include the District of Columbia and six U.S. territories and conduct a large language model–assisted content analysis. We organize state strategies across five domains: governance, information provision, connecting education to workforce systems, access to learner supports, and employer engagement.

Findings reveal that states generally comply with WIOA plan requirements: Nearly all of the WIOA plans emphasize career pathways, apprenticeships, and governance structures, and states broadly agree on using employer subsidies to support engagement and provide information to job seekers. More-distinctive strategies include providing incentives for intermediaries to sustain deeper workforce partnerships, attending to adult learner transitions, and offering novel credential options, such as community college baccalaureates. Seven states—Illinois, Indiana, Minnesota, New Jersey, North Carolina, Tennessee, and Texas—demonstrated the most expansive planning approaches across all plan years by consistently emphasizing a variety of strategies relevant to coordinated postsecondary and workforce alignment.

These findings offer new evidence on peer-state practices for workforce development staff in federal and state agencies who are responsible for WIOA planning and for other state higher education agency staff who must coordinate with workforce agencies. State WIOA planners can benchmark their WIOA plans against these national patterns and find example strategies from other states that support opportunities to strengthen cross-agency planning as federal postsecondary and workforce policy become increasingly integrated.

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Summary

State policymakers want to align postsecondary education and workforce development systems, yet limited research systematically examines how states do so. This report presents a first-ever content analysis of Workforce Innovation and Opportunity Act (WIOA) plans submitted by all 50 states, six U.S. territories, and the District of Columbia to the U.S. Department of Labor for Program Years 2016–2027. We conducted this research with a large language model–assisted content analysis. We organized state strategies across five domains: governance, information provision, connecting education to workforce systems, access to learner supports, and employer engagement.

Findings reveal that states generally comply with WIOA plan requirements: Nearly all of the WIOA plans emphasize career pathways, apprenticeships, and governance structures, and states broadly agree on using employer subsidies to support engagement and provide information to job seekers. More-distinctive strategies include providing incentives for intermediaries to sustain deeper workforce partnerships, attending to adult learner transitions, and offering novel credential options, such as community college baccalaureates.

These findings offer new evidence on peer-state practices for workforce development staff in federal and state agencies who are responsible for WIOA planning and for other state higher education agency staff who must coordinate with workforce agencies. State WIOA planners can benchmark their WIOA plans against these national patterns and find example strategies from other states that support opportunities to strengthen cross-agency planning as federal postsecondary education and workforce policies become increasingly integrated.

Key Findings

- Federal requirements drive consistency in state planning. States universally comply with WIOA plan content requirements; nearly all WIOA state plans address career pathways, apprenticeships, and governance structures.
- Non-required strategies vary. Although most state plans include mention of employer funds and subsidies to offset the costs of providing training services (97 percent), offering job search tools (94 percent) and discussing access to career counseling (92 percent), only some plans emphasize adult basic education (21 percent) or credit for prior learning (54 percent)—approaches that can be critical for adult learner success.
- Seven states—Illinois, Indiana, Minnesota, New Jersey, North Carolina, Tennessee, and Texas—demonstrated more-expansive planning approaches by emphasizing not only federally mandated strategies but also non-required and novel approaches. These states consistently complied with federal guidelines and appear to be proactive in their attempts to align their postsecondary education and workforce development systems.

- Plan type and political context shape some strategy emphasis. States with Combined Plans emphasized interagency collaboration and access to training provider information more than states with Unified Plans. Democrat-led states emphasized information and access to learner supports more consistently, while Republican-led states were more likely to emphasize skills training and financial aid supports.

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How States Align Postsecondary and Workforce Strategies: Examples and Trends from WIOA Plans

Postsecondary education and workforce development systems often share a common goal: improving knowledge and skills so individuals can achieve economic mobility through employment. But these systems' activities are often poorly aligned (Strohl, Mabel, and Campbell, 2024; Van Noy and Cleary, 2017;). Students may pursue credentials with little labor market value, especially in very short-term programs (Dadgar and Trimble, 2015; Lenard and Wright-Kim, 2026; Minaya and Scott-Clayton, 2022). Those without postsecondary credentials risk falling behind because higher-paying jobs demand more-advanced skills, while others may need accessible upskilling opportunities to keep pace with shifting industry needs. With postsecondary education increasingly necessary for future employment (Carnevale et al., 2023) and skill shortages projected for all postsecondary degree levels (Smith et al., 2025), state higher education leaders consistently rank economic and workforce development issues as a top priority, second only to state postsecondary system funding (Harnisch et al., 2025).

States have various tools available to help shape how their postsecondary education and workforce development systems function together. Postsecondary institutions can offer need-based aid for high-demand programs (Bonilla and Sparks, 2025; Murphy, 2024). Higher education leaders may tie program progression and completion or, in some cases, positive labor market outcomes to state-appropriated funds through outcomes-based funding mechanisms to change institutional practices. State workforce development boards aim to connect employers and provide targeted job training to their employees, primarily relying on the Workforce Innovation and Opportunity Act (WIOA), which governs and funds the U.S. public workforce development system, to support those goals (see the "What Is WIOA and What Types of Plans Can States Submit?" box below for additional information).

What Is WIOA and What Types of Plans Can States Submit?

The 2014 Workforce Innovation and Opportunity Act (WIOA) was designed to improve the public workforce development system to encourage more cross-agency collaboration and provide more training and wraparound supports to job seekers (National Skills Coalition, 2014; Downs and Polk, 2024; Polk, Adell, and McCarthy, 2024).

States are mandated to submit a WIOA plan to the U.S. Department of Labor (DOL) every four years, with biennial modifications, detailing how they plan to address workforce training. All WIOA state plans must discuss activities under six core programs that receive federal funds:

- WIOA Title I (3 programs)—Adult, Dislocated Worker, and Youth programs administered by the DOL
- WIOA Title II—the Adult Education and Family Literacy Act (AEFLA) program administered by the U.S. Department of Education
- WIOA Title III—the Employment Service program of the Wagner-Peyser Act administered by the DOL
- WIOA Title IV—the state Vocational Rehabilitation (VR) program administered by ED.

States can choose to submit either a Unified or Combined WIOA Plan. Unified Plans must discuss details only for the six core WIOA programs. Combined Plans cover these six core programs along with one or more of the following partner programs, detailing strategies for workforce development within that program:

- programs authorized under the Strengthening Career and Technical Education for the 21st Century Act (Perkins V)
- Temporary Assistance for Needy Families (TANF) and the Community Services Block Grant
- Supplemental Nutrition Assistance Program (SNAP)
- Department of Housing and Urban Development (HUD) employment programs and Jobs for Veterans State Grants (JVSG)
- Trade Adjustment Assistance (TAA)
- Senior Community Service Employment (SCSEP)
- Unemployment Insurance (UI).

In 2016, 27 U.S. states and territories submitted Unified Plans and 30 submitted Combined Plans. For Program Years 2024–2027, states submitting Unified Plans decreased to 18, while nine more states submitted Combined Plans, bringing up that total to 39. The table below highlights key differences in intent and approaches between Unified and Combined Plans.

Comparison Between Unified and Combined WIOA State Plans

Subject Area	Unified Plan	Combined Plan
Plan contents	Only 6 core WIOA programs	All 6 core programs, plus one or more optional partner programs
Goal	Strategic alignment need only be among WIOA workforce partners	Broader coordination between workforce development, education, and human services providers
Planning complexity	Moderate; uses straightforward DOL-ED template	High; requires significant coordination to meet various federal timelines, mandates, and stakeholder interests

SOURCE: Authors' analysis of WIOA plans accessed from DOL, undated-a; and Collins, 2022.

NOTE: For more background on WIOA, see Collins (2022).

We examined WIOA state plans to catalog higher education and workforce alignment strategies that U.S. states and territories prioritize to further inform current priorities, especially as Congress deliberates on WIOA reauthorization. We asked: **What postsecondary education and workforce strategies do states emphasize in WIOA plans to help job seekers, and how have these practices changed over time?** To answer this question, we provide the first systematic analysis of WIOA plans from 50 U.S. states, six U.S. territories, and the District of Columbia submitted to the U.S. Department of Labor (DOL) for Program Years (PYs) 2016–2027. With a separate annex containing a publicly accessible dataset that distills strategies discussed in WIOA state plans, we provide deeper insights into how state higher education and workforce development strategies have evolved and which strategies appear to be consistent or distinctive nationwide (for a link, see the "Dataset of WIOA Strategies" box below). In future work, we will examine whether these identified practices are associated with stronger postsecondary and workforce alignment outcomes.

Dataset of WIOA Strategies

As part of this analysis, we developed a dataset detailing the emphasis or lack thereof of various postsecondary and workforce alignment strategies by state and program year. The dataset includes a data dictionary for all variables used in this analysis and how each variable was categorized across each of our five strategy domains. It also includes various state-level characteristics, such as WIOA plan type and Combined Plan partner characteristics, total WIOA funding per year, and other population characteristics.

The READ ME worksheet, data dictionary, and dataset are available as a separate annex at www.rand.org/t/RRA4766-2.

Users can explore additional trends and relationships among strategies within one state or across sets of peer states. Users can also augment the dataset with additional state education and workforce data of interest to understand how those state variables interact with the WIOA plan strategies that we identified.

Our inventory of postsecondary and workforce alignment strategies in WIOA plans can inform state higher education and workforce development staff who oversee workforce planning by providing examples from peer states and U.S. territories to draw on when considering how to improve their state's efforts to align education and workforce policy. The study findings can also inform federal agency staff as they consider common, unique, and potentially underused strategies for nationwide alignment that may be important to leverage or incentivize in future planning processes, pointing to areas where improved strategy alignment could better support workers and learners in a rapidly changing, knowledge-based economy.

Our Data Sources and Analytic Approach

Our content analysis covers all available WIOA plans for PYs 2016–2027; in other words, the PY 2016–2019, PY 2020–2023, and PY 2024–2027 base plans and the PY 2018–2019 and PY 2022–2023 biennial modifications.

Through an initial qualitative content analysis of the modified plans for PYs 2022–2023 (the most recent available at the time), we developed a codebook and iteratively refined code definitions and illustrative examples to prompt a series of large language model (LLM) agents to later analyze all WIOA plans. We deployed the LLM agents, in conjunction with a similarity search algorithm, to identify text excerpts that aligned with these codebook definitions; a separate LLM agent then assessed whether additional or alternative related codes should be assigned. To improve LLM performance and coding accuracy, we restricted the LLM-assisted analysis to those sections of WIOA plans that are most relevant to explaining state strategies, implementation details, and program design (see Table A.1 in the appendix).

We assessed the quality of LLM-assisted thematic codes and made iterative refinements to the codebook structure, code definitions, LLM prompts, and coding review procedures. From an initial set of 2,913 parent and child codes developed in the LLM-assisted process, we reduced analytic codes (or strategies) used in the study in several phases, combining redundant concepts or removing codes that appeared infrequently (i.e., ten or fewer excerpts identified). We eventually retained 31 codes developed directly from the LLM coding process that became binary indicators of the presence or absence of a given strategy in a state plan program year and assigned 22 additional codes for deeper human review to understand potential strategy submechanisms.

For these 22 codes, reviewers (a team of researchers guided by the lead authors) assessed whether each excerpt fit the assigned code; classified it as *actual*, *aspirational*, or *irrelevant*; and identified whether additional nuance or child-code distinctions warranted further exploration. *Actual* excerpts describe a state program or policy that the state or territory was currently implementing. *Aspirational* excerpts describe future goals for implementing a policy or program, with language indicating that these functions have not yet been established. *Irrelevant* excerpts are unrelated to a relevant state program or policy or are incomplete and did not sufficiently capture the intent behind the code and its definition. Results of this follow-up human review indicated that, among 12,363 coded excerpts, approximately 79 percent were classified as either *actual* or *aspirational*, suggesting that most coded excerpts were substantively relevant to the assigned themes and broadly within the scope of the study. Excerpts deemed *irrelevant* were omitted from analysis for that particular code. We then combined the 31 codes developed from the LLM coding process that did not receive further human review with the resulting human-reviewed codes to construct the final analytic dataset, identified at the state plan year level, provided as a separate annex. Our complete panel dataset reflects 43 parent codes (strategies) and 66 child codes (submechanisms). See the appendix for additional discussion of our codebook development, LLM techniques, coding reduction and evaluation processes, and a full list of codes.

We report most of the analytic results by describing the average percentage of WIOA state plans that mention a strategy across given state plan years. Where a state mentioned a strategy multiple times in a given plan year, we count only one instance as evidence that the state is

emphasizing that strategy. In some cases, we discuss the share of state plans that mention a strategy across any plan year and note in the text when we do so.

Limitations

Our analysis has several limitations. First, we analyze state strategies based solely on documents submitted to the DOL as WIOA plans. The presence or absence of certain strategies does not necessarily mean that a state is not planning to or already enacting a particular strategy. We also acknowledge that these planning documents are not structured to be explicit about how postsecondary education and workforce development policies should work together. We rely on them because they are the only universally available data source detailing state postsecondary and workforce development strategies. These data allow to us track how states explain their education and training approaches in a workforce context over time and in a standardized format, allowing us to compare what states emphasize within the same plan sections.

Second, we examined only the specific portions of the WIOA plans focused on the largest core program, the WIOA Title 1—Adult, Dislocated Worker, and Youth programs. While our LLM-assisted and complementary human-directed analyses sought to identify states' major strategies, our analysis does not encompass all WIOA state plan content, such as strategies for particular worker subgroups (e.g., veterans, individuals with disabilities, low-income workers) and should not be seen as an exhaustive list of state approaches. We encourage continued exploration of strategies prioritized for such groups, similar to that done in prior studies (e.g., McDonnall, Cmar, and McKnight, 2024; Roux, Garfield, and Shattuck, 2019), especially to distill innovative approaches to interagency coordination.

Third, our LLM-assisted analysis includes some codes that were reviewed by humans and some that were not. Human review showed lower precision for several codes that appear in substantive findings, such as Articulation Agreements, Stackable Credentials, Eligible Training Providers, Job Training, Competency-Based Education, and Short-Term Training. We therefore interpret findings involving these codes more cautiously.

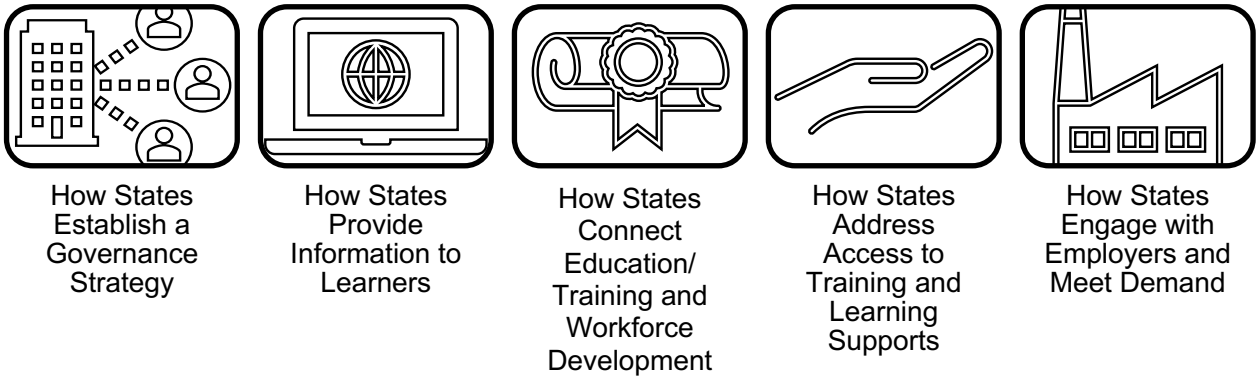
Finally, while we aimed to offer an intuitive framework by grouping strategies into conceptual domains, we recognize that these judgments may be limited and that state approaches may span multiple domains. Given these limitations, we took care not to overstate what states are currently doing to address postsecondary and workforce alignment. Instead, we aimed to be as generous as possible in interpreting what states emphasize in their planning, giving a state credit whenever we found *any* instance of a strategy in our analysis rather than weighting by frequency of mentions.

A Five-Domain Framework for Assessing State Postsecondary and Workforce Alignment

Since its 2014 authorization, WIOA has aimed to strengthen the coordination, collaboration, and alignment of federal, state, and local workforce systems (DOL, undated-a; McGrath et al., 2025; Pub. L. 113-128, 2014). On the supply side, WIOA seeks to improve access to education, training, and wraparound services for job seekers. On the demand side, WIOA aims to increase the quality and quantity of skilled workers that employers and industries need—with the goal of connecting skilled job seekers to employment that is high-wage, high-quality, and in high demand (Bransberger, 2015; DOL, 2025).

To assess how states approach these aims, we have organized our study findings across five domains that research suggests are important for effective state talent planning (see Figure 1). First, we include attention to **state governance** (subsequently referred to as the Governance domain), drawing on policy planning and implementation theories suggesting that state-level agenda-setting processes, levels of collaboration, who is at the table, and governing structures (e.g., centralization) all shape both the policies that states adopt and their potential impacts (Ansell and Gash, 2008; Hearn, McLendon, and Linthicum, 2017). Recent work on state governors' perspectives of WIOA implementation also suggests that state governance structures are evolving and that how workforce agencies align with other departments (e.g., commerce, education) can influence how WIOA is administered (Fuller et al., 2025).

Figure 1. Five Conceptual Domains for Organizing State Postsecondary and Workforce Development Alignment Strategies



We include attention to **how states provide information to learners** (subsequently referred to as the Information domain), given that learners and workers need readily accessible, clear information to take advantage of postsecondary opportunities and workforce initiatives (Kushner et al., 2026; Le, Robinson, and Dobele, 2020; Padilla, Baker, and Beu, 2024; Simões and Soares,

2010; Wiswall and Zafar, 2015). Transparent marketing and recruitment help WIOA-eligible applicants understand not only program components but also expected industry and higher education outcomes (Cormier et al., 2024). Once enrolled, programs must also offer consistent academic and career counseling so that advisers can help students build realistic learning pathways aligned with their career goals (Cormier et al., 2024; Jacobs and Worth, 2019). How states describe strategies to make potential job seekers broadly aware of education and training opportunities can indicate how well they attend to these learners' needs.

Connecting postsecondary and workforce activities (subsequently referred to as the Connect domain) requires intentionality to develop lifelong learning pathways in which learners can move between noncredit and credit-bearing programs, reskill and upskill across different programs, and earn degrees or credentials for potential high-wage, high-quality jobs (Berger et al., 2024; McGrath et al., 2025). Yet credential attainment alone does not guarantee success. One way that states can reinforce education and workforce alignment is by adapting program curricula to industry needs (Bailey, 2008; Bransberger, 2015; Katz et al., 2022; Van Noy and Cleary, 2017), including through work-based learning opportunities or by building relationships with employers and industry to deliver employer-specific training (Cormier et al., 2024; Jacobs and Worth, 2019; Kazis and Mevs, 2025; Van Noy et al., 2016). The variety of programs that a state offers—with attention to how program credentials can be combined to lead to more-advanced degrees (i.e., *stackability*) or can be transferred easily across institutions (e.g., *portability*)—also matters. The extent to which states enable learners to earn stackable credentials, especially to bridge nondegree and degree pathways, reflects a broader commitment to postsecondary and workforce alignment that benefits learners (Bailey, Jaggars, and Jenkins, 2015; Cormier et al., 2024; Ecton and Wright-Kim, 2026; Van Noy et al., 2016).

We also document how states provide **access to training and remove barriers** to learning (subsequently referred to as the Access domain), because wraparound supports are essential to producing positive education and workforce outcomes (Rutschow, Feygin, and Chavarria, 2024). These supports acknowledge that learners and workers face socioeconomic barriers that may prevent successful job placement or program completion. We document how states address financial aid, affordable childcare, housing, food, transportation, and other services connected to postsecondary education and training programs that lead to workforce entry (Bransberger, 2015; Kazis and Mevs, 2025; Jacobs and Worth, 2019; Roumell, Salajan, and Todoran, 2019).

Finally, to ensure alignment, states must **effectively engage employers** (subsequently referred to as the Employer domain), ideally brokering partnerships in which employers and education and training organizations work in sync to develop job-seeker skills (Dunham, Folsom, and Bellotti, 2022; Leavitt and Leigh, 2023) while potentially correcting for ways that, as some argue, WIOA policy favors employer engagement over securing learner and worker economic outcomes (McGrath et al., 2025).

Three Characteristics Shape Our Comparison of State Plans

In addition to organizing our analysis across five conceptual domains, we discuss strategy emphasis across certain state and plan characteristics where distinctions are notable, such as (1) whether the state submitted a Unified or Combined Plan (see the "What Is WIOA and What Types of Plans Can States Submit?" box above for distinctions), (2) the state's political party affiliation based on governorship (a time-varying characteristic for each plan year), and (3) whether topics are required per the DOL's WIOA plan guidance. Prior work suggests that states electing to submit a Combined Plan may, in theory, enact strategies that improve coordination and collaboration among partner agencies—though results in practice are mixed (Downs and Polk, 2024; Downs and Polk, 2025). The political party affiliation of state leadership may also compel states to favor certain workforce development strategies over others. Evidence highlights significant differences in economic, educational, and workforce development strategies conditional on gubernatorial and/or legislative partisanship (e.g., Besley and Case, 2003; Jenkins, Leicht, and Wendt, 2006; Potrafke, 2018; Wright and Schaffner, 2002).

States must discuss certain topics in their state plans based on DOL guidance (see Table 1). When examining state strategies, we distinguished between those required by WIOA guidance (and those implied or conditional on certain plan choices) and those that WIOA guidance does not require—the latter may signal areas open to state innovation or experimentation. While states have wide latitude in how many details they provide around particular strategies required by WIOA guidance, we still erred on the side of coding *any* mention as the presence of that strategy no matter the differences in scope and specificity provided by individual states.

Table 1. Topics to Cover in State Plans per WIOA Guidance

Topic(s)	Inclusion Guidance	Supporting Text
Postsecondary Access Stackable Credentials	Required	*Improving Access to Postsecondary Credentials.* Describe how the State's strategies will improve access to activities leading to recognized postsecondary credentials, including Registered Apprenticeship certificates. This includes credentials that are industry-recognized certificates, licenses or certifications, and that are portable and stackable. (p. 13)
Career Pathways	Required	Describe the strategies the State will implement, including industry or sector partnerships related to in-demand industry sectors and occupations and career pathways, as required by WIOA section 101(d)(3)(B), (D). "Career pathway" is defined at WIOA section 3(7) and includes registered apprenticeship. "In-demand industry sector or occupation" is defined at WIOA section 3(23). (p. 11)
Governance Structure (Leadership & Administration)	Required	Describe how the State board will implement its functions under section 101(d) of WIOA (i.e., provide a description of Board operational structures and decision-making processes to ensure such functions are carried out). (p. 12)
Interagency Collaboration	Required	Describe the methods used for joint planning and coordination among the core programs, and with the required one-stop partner programs and other programs and activities included in the Unified or Combined State Plan. (p. 17)
CTE Programming	Required	*Partner Engagement with Educational Institutions and other Education and Training Providers*. Describe how the State's Strategies will engage the State's community colleges, adult education providers, area career and technical education schools, providers on the State's eligible training provider list, and other education and training providers, as partners in the workforce development system to create a job-driven education and training system. WIOA section 102(b)(2)(B)(iv). Include how the State's strategies will enable the State to leverage other Federal, State, and local investments to enhance access to workforce development programs at these institutions. (p. 13)
Sectoral Strategies	Required	Describe the strategies the State will implement, including industry or sector partnerships related to in-demand industry sectors and occupations and career pathways, as required by WIOA section 101(d)(3)(B), (D). "Career pathway" is defined at WIOA section 3(7) and includes registered apprenticeship. "In-demand industry sector or occupation" is defined at WIOA section 3(23). (p. 11)
One-Stop Center Delivery and Coordination	Required	(*A) Assessment of Core and One-Stop Program Partner Programs*. Describe how the core programs will be assessed each year based on State performance accountability measures described in section 116(b) of WIOA. Describe how other one-stop delivery system partner program services and Combined State Plan partner programs included in the plan will be assessed each year. This State assessment must include the quality, effectiveness, and improvement of programs broken down by local area or provider. Such state assessments should take into account local and regional planning goals. (p. 14)
Internships On-the Job Training Incumbent Worker Training Job Training	Required	*Work-Based Training Models.* If the State is utilizing work-based training models (e.g. on-the-job training, incumbent worker training, transitional jobs, and customized training) as part of its training strategy and these strategies are not already discussed in other sections of the plan, describe the State's strategies for how these models ensure high-quality training for both the participant and the employer. (p. 20)
Registered Apprenticeships	Required	(2) Registered Apprenticeship. Describe how the State will incorporate Registered Apprenticeship into its strategy for service design and delivery (e.g., outreach to sponsors and prospective sponsors, identifying potential participants and connecting them to apprenticeship opportunities). (p. 20)
Rapid Response Services	Required	Describe how the State will utilize Rapid Response funds to respond to layoffs and plant closings and coordinate services to quickly aid companies and their

Topic(s)	Inclusion Guidance	Supporting Text
		affected workers. States also should describe any layoff aversion strategies they have implemented to address at risk companies and workers. (p. 20)
Business Services/One-Stop Employer Outreach	Required	(2) Describe how the State will utilize professional development activities for Employment Service staff to ensure staff is able to provide high quality services to both job seekers and employers. (p. 25)
Eligible Training Providers	Required	*Partner Engagement with Educational Institutions and other Education and Training Providers*. Describe how the State's Strategies will engage the State's community colleges, adult education providers, area career and technical education schools, providers on the State's eligible training provider list, and other education and training providers, as partners in the workforce development system to create a job-driven education and training system. WIOA section 102(b)(2)(B)(iv). Include how the State's strategies will enable the State to leverage other Federal, State, and local investments to enhance access to workforce development programs at these institutions. (p. 13)
Co-Enrollment in Eligible Programs	Implied	(2) The State policies that will support the implementation of the State's strategies (for example, co-enrollment policies and universal intake processes where appropriate). In addition, provide the State's guidelines for State-administered one-stop partner programs' contributions to a one-stop delivery system and any additional guidance for one-stop partner contributions. (p.13)
Industry Representation in Regional Administration	Implied	(3) State Program and State Board Overview. (A) State Agency Organization. Describe the organization and delivery systems at the State and local levels for the programs covered in the plan, including the organizational structure. Include an organizational chart. (B) State Board. Provide a description of the State Board activities that will assist State Board members and staff in carrying out State Board functions effectively. Also, provide a membership roster for the State Board consistent with 20 CFR 679.110-120, including members' organizational affiliations and position titles. (p. 14)
Labor Exchange System	Implied	(1) Describe the State's staffing model for the provision of labor exchange services using State merit staff. States covered by 20 CFR 652.215(b) (Colorado, Massachusetts, and Michigan) must describe the staffing model the State will use to provide labor exchange services under the Wagner Peyser Act, including outreach to MSFWs. (p. 20)
Childcare Supports	Conditional	**If Temporary Assistance for Needy Families (TANF) is selected as a partner in a Combined Plan:** States that include TANF in the Combined State Plan must outline how the State will meet the requirements of section 402 of the Social Security Act including how it will: (a) Conduct a program designed to serve all political subdivisions in the State (not necessarily in a uniform manner) that provides assistance to needy families with (or expecting) children and provides parents with job preparation, work, and support services to enable them to leave the program, specifically cash assistance, and become self-sufficient (section 402(a)(1)(A)(i) of the Social Security Act). (p. 65)

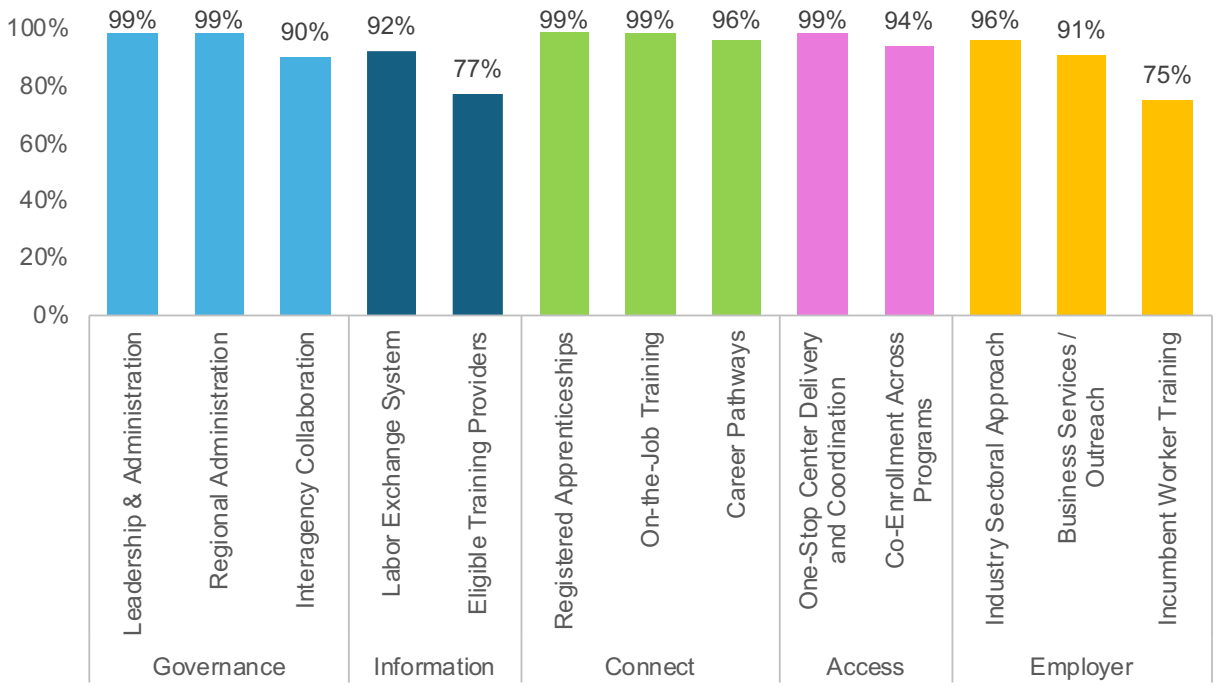
SOURCE: Reproduced excerpts from and authors' analysis of DOL, undated-b.

Three Tiers of State Workforce Strategies: Near-Universal, Discretionary, and Uncommon

Across the five strategy domains, state strategies typically fall into three tiers: (1) *near-universal* strategies that every state mentioned in at least one plan (i.e., strategies mentioned in all plans 90 percent or more of the time, on average), (2) *discretionary* strategies that at least one-third of states emphasized but that have not reached universal adoption (34 to 89 percent range), and (3) *uncommon* strategies emphasized by a small number of states (fewer than 33 percent), indicating potentially important areas of innovation that have not yet reached wide or consistent adoption.

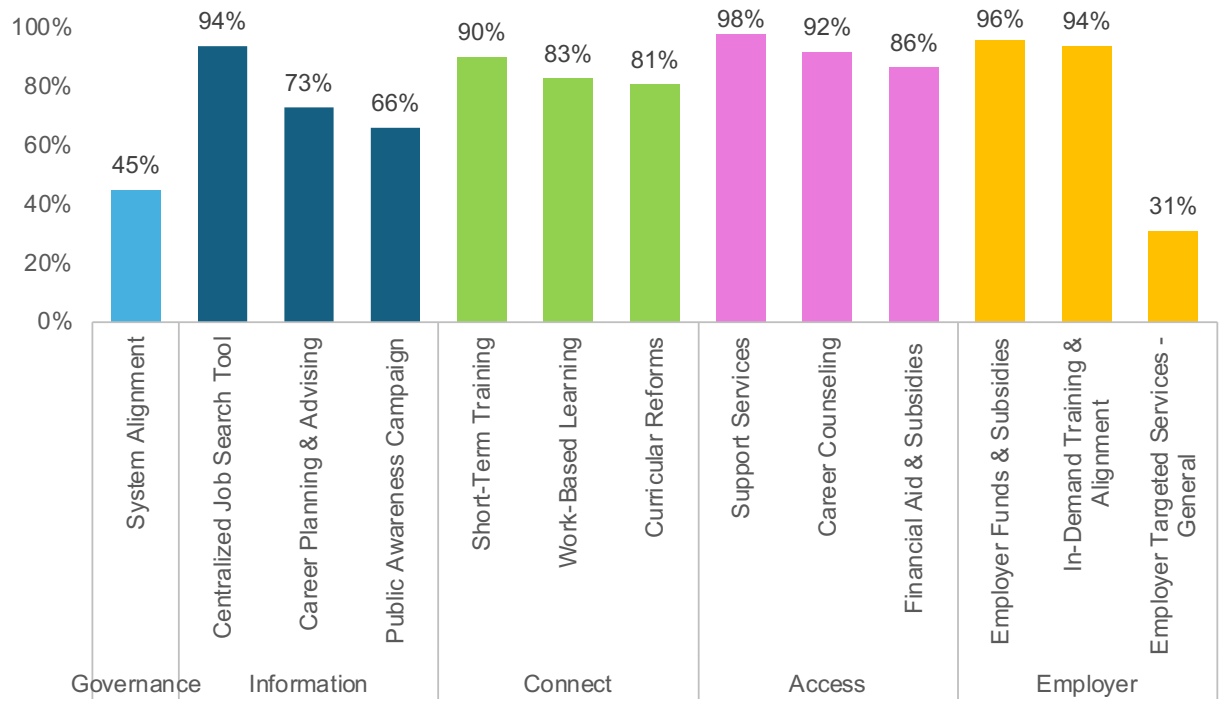
Figure 2 illustrates the most-mentioned state strategies by domain that WIOA planning guidance requires. Figure 3 shows the most-mentioned non-required strategies.

Figure 2. Most Common WIOA-Required or Implied Strategies Emphasized Across State Plans, 2016–2027



SOURCE: Authors' analysis of WIOA plans accessed from DOL, undated-a.
NOTE: Some domains show variation in the number of bars in this figure because the number of required strategies differ (e.g., certain domains have several required strategies, while others have only one or two). We show a maximum of three top strategies for each domain when applicable. See the separate annex for the state plan dataset and data dictionary for parent code definitions.

Figure 3. Most Common Non–WIOA Required Strategies Emphasized Across State Plans, 2016–2027



SOURCE: Authors' analysis of WIOA plans accessed from DOL, undated-a.
NOTE: Some domains show variation in the number of bars in this figure because the number of non-required strategies differ (e.g., certain domains have several non-required strategies, while others have only one or two). We show a maximum of three top strategies for each domain when applicable. "Employer Targeted Services-General" refers primarily to other coordinated programming to support employers in improving recruitment, hiring, or training outside other employer funds and subsidies. See the separate annex for the state plan dataset and data dictionary for parent code definitions.

Although most strategies required by WIOA guidance show high emphasis rates, a 52-point spread separates the most common strategies (e.g., 99 percent of plans mention discussing leadership and administration) from the least common—i.e., rapid response services (48 percent). We find lower emphasis rates for stackable credentials programming and discussion of eligible training providers (ETPs) (64 and 77 percent, respectively), despite both being federally mandated topics. This finding suggests potential compliance gaps or unclear guidance among some states.

The most commonly emphasized strategies show relative stability regardless of plan type or state partisanship. Among the top universally emphasized approaches, we see minimal discrepancies (2 to 6 percentage point differences) between states submitting Combined Plans and states submitting Unified Plans. We also find little variation between Democrat-led states and Republican-led states (fewer than 5 percentage points), suggesting similar thinking and alignment in state officials' interests in workforce development planning. The one exception

occurs in career counseling, which Republican-led states included more often (96 percent) in their plans than did Democrat-led states (89 percent), a gap that has grown over time.

Near-Universal Strategies Reflect WIOA Compliance and Broad Consensus for Employer and Information Supports

Near-universal strategies represent the core policy approaches required by WIOA and span all five conceptual domains. These strategies—including discussing leadership and administration (99 percent), how state authorities will work with regional workforce boards (99 percent), registered apprenticeships (99 percent), on-the-job training (99 percent), services at one-stop centers (99 percent), and a broad focus on designing career pathways (96 percent)—appear in essentially every state plan every year, likely because federal guidance requires them. Strategies that WIOA guidance implicitly asks for, such as supporting co-enrollment into different training programs for learners (94 percent), show emphasis rates comparable to many formally required strategies.

Even without a WIOA mandate, states gave near-universal emphasis to offering employer funds and subsidies to offset training costs and support employee development (96 percent), tools for accessing employment opportunities, such as centralized job search tools (94 percent), and access to career counseling (92 percent). These high emphasis rates reflect widely held and consistent workforce development practices that states pursue without needing federal guidance to prompt them.

Discretionary Strategies Cluster in the Connecting Education and Workforce Development Domain

State emphasis begins to diverge among discretionary strategies. We identified 17 overarching strategies emphasized across approximately 34 percent to 89 percent of state plans. Many of these—7 of the 17 (41 percent)—fall under the Connect domain (see Table 2). These strategies include offering credit for prior learning (54 percent) and emphasizing dual enrollment policies (64 percent) to connect academic structures to workforce needs and honor prior work-related experiences. Discretionary approaches also exist across the four remaining domains, including financial aid (86 percent), mechanisms specifically supporting the education and workforce development of older adults (75 percent), incumbent worker training (75 percent), public awareness campaigns advertising online job search tools and resources for job seekers (666 percent), and system alignment approaches that bring together various sectors to address workforce needs collectively (45 percent).

Table 2. Discretionary Strategies Mentioned in WIOA Plans

Conceptual Domain	Strategy	Average Percentage of Plans That Mention Strategy (%)	Required by WIOA Guidance?
Access	Financial Aid & Subsidies	86	N
Access	Target Population Strategy	79	N
Access	Older Adults Services	75	N
Connect	Work-Based Learning	83	N
Connect	Curricular Reforms	81	N
Connect	Dual Enrollment	64	N
Connect	Stackable Credentials	63	Y
Connect	Credit for Prior Learning	54	N
Connect	Articulation Agreements	52	N
Employer	Incumbent Worker Training	75	Y
Employer	Rapid Response Services	48	Y
Governance	System Alignment	45	Y
Information	Eligible Training Providers	77	Y
Information	Career Planning, Tools, Advising & PD	73	N
Information	Public Awareness Campaign	66	N

SOURCE: Authors' analysis of WIOA state plans accessed from DOL, undated-a.
NOTE: N = no; PD = professional development; Y = yes.

As expected, we find more variation in the relative emphasis of discretionary approaches across plan characteristics. Focusing on the Connect domain, emphasis rates between Unified and Combined Plans differ by 6 to 13 percentage points, respectively, though neither type systematically shows a higher emphasis rate overall. Variation by plan type is smaller across the other four domains.

Some discretionary approaches vary by gubernatorial party affiliation. Democrat-led states more often emphasized articulation agreements (62 percent), compared with Republican-led states (44 percent), an 18-point difference. Democrat-led states also emphasized incumbent worker training more, on average, than Republican-led states (an 8-point difference). Conversely, Republican-led states gave slightly more emphasis to information-related interventions, including public awareness campaigns (72 percent), compared with Democrat-led states (66 percent). Because state gubernatorial election schedules do not always align with the four-year WIOA planning cycles, newly elected governors may inherit workforce strategies from a preceding administration with a different political affiliation. Overall, this mid-cycle shift in political party control occurs relatively infrequently across 18 states and U.S. territories over 20 distinct WIOA plan cycles (4 percent of state-by-year observations; see Table A.4 in the appendix for details). However, this issue should be kept in mind when interpreting the political party–based comparisons.

Mentions of some discretionary strategies also show substantial variation over time. Between PY 2016 and PY 2024, plans emphasizing articulation agreements as tools for connecting education to workforce needs fell by 23 percent; emphasis on dual enrollment pathways also declined substantially (−16 percent). Conversely, emphasis on eligible training provider lists (ETPLs) has grown (+19 percent), as did programming for older adults (+28 percent), rapid response services (+16 percent), and financial aid (+12 percent).

Uncommon Strategies Receive Generally Inconsistent Emphasis over Time

While near-universal and discretionary strategies garner the most emphasis in state plans, we also identified, across most domains, multiple strategies that states are experimenting with through trial and error (and likely not formally testing). These approaches appear in one-third of WIOA plans or fewer and typically fall under the Connect, Employer, and Access domains. Table 3 outlines selected examples of these uncommon strategies.

Overall, these uncommon strategies receive inconsistent emphasis over time. For example, more than half (approximately 58 percent) of U.S. states and territories mentioned community college baccalaureates (CCBs) at some point between PY 2016 and PY 2024, though CCBs appear across plans only 26 percent of the time, on average. Comparable trends appear across all identified uncommon strategies. Some mechanisms in this strategy tier may also be growing quickly. For example, states discussed access to programming related to adult basic education (ABE) in less than one-quarter of the plans (21 percent), but state emphasis on ABE grew by 19 percent from 2016 to 2024.

Table 3. Uncommon Strategies Found in WIOA Plans

Conceptual Domain	Strategy	Average Percentage of Plans Emphasizing Strategy (%)	Illustrative Example
Employer	Incentives for Intermediaries	30	*California (PY 2018–2019): The SlingShot grant program* seeks to seed collaborative efforts by employers and industry, government, workforce and economic development, and education stakeholders within a region to identify and then work to solve employment challenges that slow California's economic engine. Grants are designed to foster the development of regional solutions to regionally defined workforce and employment problems.
Connect	Community College Baccalaureates	26	*Ohio (PY 2020–2023): Applied Bachelor's Degree Programs.* In 2017, the State established a program allowing its community colleges . . . , state community colleges, and technical colleges to offer applied bachelor's degrees. This expanded approach increases Ohioans' access to higher education degree opportunities.
Access	Transfer Supports	21	*Tennessee (PY 2016–2019): Likewise, Programs such as Pathways TN* allow for multiple pathways to high high-skill/, high high-wage employment beginning as early as high school. The variety of pathways allows gives high school students a chance to earn credits for both high school and college through programs providing that enable an the easy transfer of "dual credits" between high school and postsecondary institutions. These previously earned credits contribute to the improved articulation between the state's two-year colleges, as well as between two- and four-year institutions, concerning credits earned in one institution being applicable (and transferrable) to another.
Access	Adult Basic Education	21	*South Carolina (PY 2024–2027):* Not less than 82.5 percent of the state grant funds are used to award grants and contracts under Section 231. Local assistance grants will be distributed based on the ability to meet the requirements of AEFLA [Adult Education and Family Literacy Act] purposes outlined in WIOA: (1) Assist adults to become literate and obtain the knowledge and skills necessary for employment and economic self-sufficiency; (2) Assist adults who are parents or family members to obtain the education and skills that (a) are necessary to becoming a full partner in the educational development of their children; and (b) lead to sustainable improvements in the economic opportunities for their family; (3) Assist adults in attaining a secondary school diploma and in the transition to postsecondary education and training, including through career pathways; and (4) Assist immigrants and other individuals who are English language learners in (a) improving their (i) reading, writing, math, speaking, and comprehension skills in English and (ii) mathematics skills; and (b) acquiring an understanding of the American U.S. system of government, individual freedom, and the responsibilities of citizenship.

Conceptual Domain	Strategy	Average Percentage of Plans Emphasizing Strategy (%)	Illustrative Example
Connect	K-–12 District Incentives	7	*Indiana (PY 2024–2027): Incentivize Completion of Credentials of Value in High School:* The state legislature restructured the existing Career and Technical Education (CTE) Grant under state tuition support to K-–12 schools to incentivize the completion of credentials of value in high school. The state's school funding formula now consists of two separate components: the CTE Program Enrollment Grant, based on enrollment in high-, moderate- and less-than-moderate value programs; and the newly established Credential Completion Grant.

SOURCES: Reproduced excerpts from the California PY 2018–2019 Plan, Indiana PY 2024–2027 Plan, Ohio PY 2020–2023 Plan, Tennessee PY 2016–2019 Plan, and South Carolina PY 2024–2027 Plan (accessed from DOL, undated-a).
NOTE: K–12 = kindergarten through 12th grade.

As with discretionary strategies, we identified variation in some uncommon approaches by plan type and state characteristics: Democrat-led states and those submitting Unified Plans more commonly featured these mechanisms. CCB strategies appear more often in Unified Plans (33 percent) than in Combined Plans (21 percent), with smaller differences between Democrat-led and Republican-led states (29 percent and 24 percent, respectively). K–12 district incentives are also more common (by 5 percent) in plans submitted by Democrat-led states and those with Unified Plans. Democrat-led states were also substantially more likely to incorporate incentives for intermediaries that may coordinate across entities to improve workforce alignment than Republican-led states (42 percent and 22 percent, respectively).

Seven States Consistently Planned Across All Three Strategy Tiers

We examined the breadth of strategies that states mentioned in their overall WIOA planning. We defined this idea of *expansive planning* as state plans that (1) achieved at least 80-percent compliance with WIOA guidance on near-universally emphasized strategies in all plan years, (2) mentioned at least one discretionary strategy in any domain, at any time point; and (3) mentioned at least one uncommon strategy in any domain, at any time point. Our definition reflects the exploratory nature of our analysis: We wanted to examine states that surpassed general compliance standards for WIOA-mandated strategies. We included some acknowledgment of discretionary and more uncommon strategies as a potential signal of states' own unique approaches to workforce planning. We did not require a specific number of discretionary or uncommon strategies, or strategies across all five domains, in order to allow flexibility and the broadest possible interpretation of expansive planning.

Our analysis identified the following seven states as the Most Expansive Planners per our definition: Illinois, Indiana, Minnesota, North Carolina, New Jersey, Tennessee, and Texas. As shown in Figure 4, these states met our expansive planning thresholds for all five plan cycles

(i.e., all 12 years in our state plan dataset). We also found 28 states that were Sometimes Expansive Planners—states that met our defined thresholds in more than one plan cycle but not in all plan years. We identified four New Expansive Planners as states that met our defined thresholds only in the most recent PY 2024–2027 plan. Finally, we identified 11 One-Time Expansive Planners that met our defined thresholds in one plan cycle other than the most recent one (PY 2024–2027).

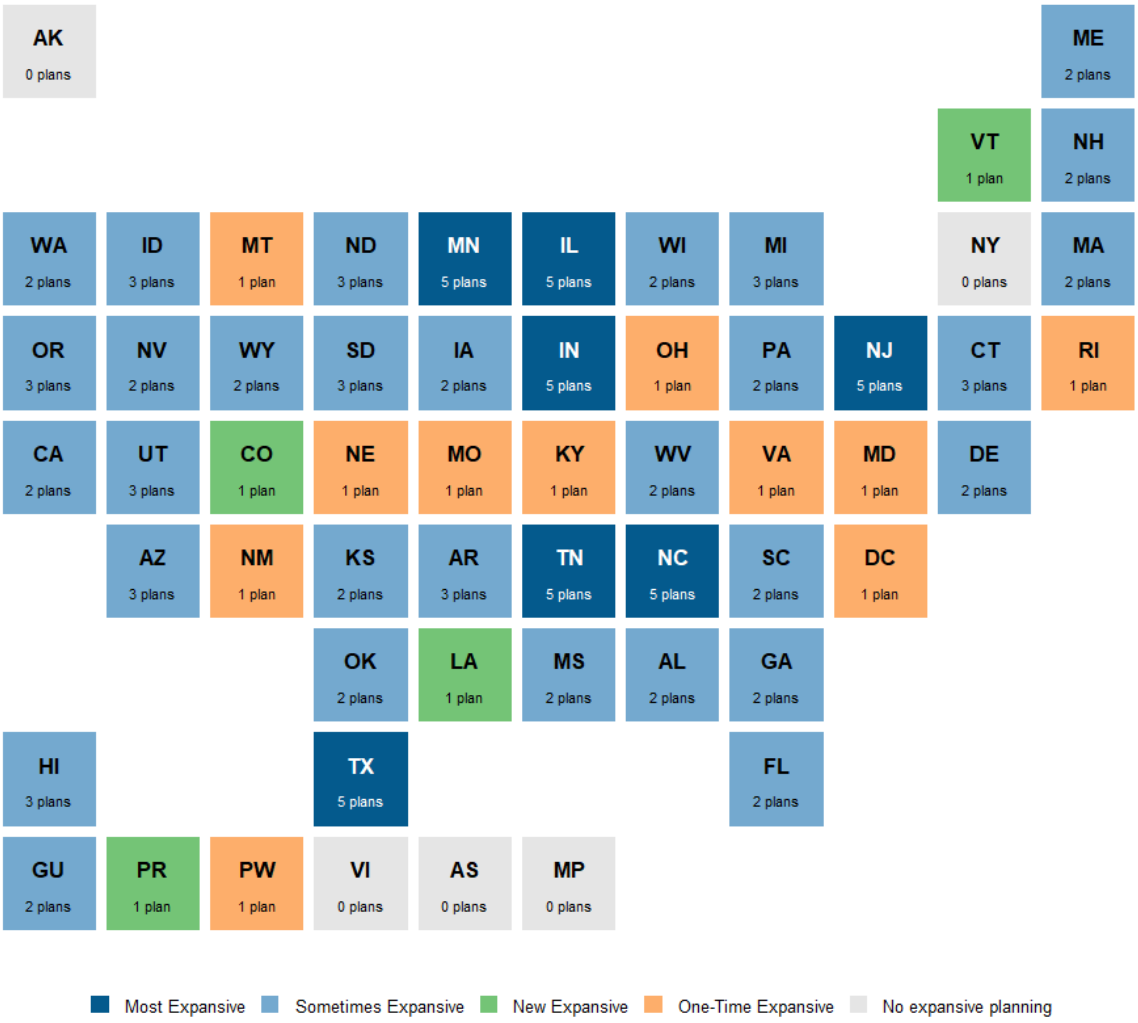
These expansive planners show evidence of proactively complementing federally mandated strategies with interesting, uncommon strategies to strengthen workforce and educational system alignment. For example, New Jersey advanced competency-based education (CBE) through such initiatives as the ExPAND grant, which helps high school students develop career-focused skills aligned with key state industries. Additionally, the state supports the New Jersey Pathways Leading Apprentices to College Education (NJ PLACE) 2.0 degree apprenticeship program to integrate academic postsecondary education with structured, on-the-job competency training.[1] Tennessee uses Governor's Investment in Vocational Education (GIVE) grants and Lottery for Education Afterschool Programs (LEAP) grants to facilitate collaboration between educational institutions and local workforce agencies in distressed and at-risk counties.[2] These incentives encourage regional partners to build cross-sector advisory committees, align community workforce resources, and drive long-term program sustainability for populations who face high barriers to educational and economic success.

Among state characteristics, four of the seven Most Expansive Planner states (Minnesota, New Jersey, Tennessee, and Texas) submitted Combined Plans in the most recent plan cycle and three submitted Unified Plans (Illinois, Indiana, North Carolina). Four were Democrat-led states and three were Republican-led when they submitted their plans. Among the 28 Sometimes Expansive Planner states, 11 submitted Unified Plans and 17 submitted Combined Plans; they split equally by gubernatorial party affiliation (14 each). Three of four New Expansive Planner states submitted Combined Plans. Among One-Time Expansive Planners, eight of 11 (73 percent) submitted Combined Plans and 64 percent were Democrat-led states.

[1] We noted this strategy in the New Jersey PY 2020–2023 Plan (accessed from DOL, undated-a).

[2] We noted this strategy in the Tennessee PY 2024–2027 Plan (accessed from DOL, undated-a).

Figure 4. Expansive Planning Status of U.S States and Territories



SOURCE: Authors' analysis of WIOA state plans submitted for PYs 2016–2027 (accessed from DOL, undated-a).
NOTE: Each tile in the map represents one U.S. state or territory, and the number of plans reflects how many plan cycles (of the five examined) in which that U.S. state or territory submitted a plan. New York, Alaska, and three U.S territories are labeled as having "No Expansive Planning" because they did not meet our defined thresholds of a state simultaneously achieving at least 80-percent compliance with WIOA guidance by including near-universal strategies in all plan years, plus at least one discretionary and one uncommon strategy in any plan year. Abbreviations for U.S. territories and associated jurisdictions in this map are as follows: AS = American Samoa; DC = District of Columbia; GU = Guam; MP = Northern Mariana Islands; PR = Puerto Rico; PW = Palau; and VI = U.S. Virgin Islands.

We encourage further exploration of how these differences in WIOA planning among states actually translate into differences in state workforce outcomes and the overall strength and integration of postsecondary and workforce development approaches. By some industry standards, our Most Expansive Planner states are leading innovators in both postsecondary and workforce initiatives (e.g., Propel NC, Tennessee Reconnect) (Bruns, 2026; Murphy, 2026). Other states may also be postsecondary and workforce innovators (e.g., FastForward Virginia),

but their strategies may not all be intentionally integrated into WIOA planning to qualify them as Most Expansive Planner states. Exploring states' precision in inventorying their critical education and workforce initiatives during their WIOA planning could provide an important early signal of states implementing effective postsecondary and workforce alignment practices that may warrant future study.

How States Establish a Governance Strategy

States Prioritized Centralized Governance and Focused on Sector-Based Regional Coordination

WIOA guidance requires that states describe State Board Functions, including "a description of Board operational structures and decisionmaking processes" (DOL, undated-b, p. 12). Otherwise, states have fairly wide latitude in how they discuss their state workforce governance structures. In discussing the organizational administration of WIOA, state plans consistently focus on centralized structures to administer workforce policies (95 percent); long-term strategic planning (93 percent); overseeing program evaluation, metrics, and quality compliance (90 percent); and outlining state board functions (75 percent). Only about two-thirds of states explicitly discussed how local workforce boards might execute state mandates (65 percent).

Similarly, about two-thirds of states (66 percent) discussed, on average, the nature and role of advisory boards, panels, or committees made up of employers, colleges, and other workforce stakeholders and how those would be managed. These topics appear at least once in 93 percent of state plans and seem to be trending upward (a 9–percentage point increase) from 2016 to 2027, compared with other discussions that remain largely unchanged over time. Table 4 outlines state plan examples for the variety of governance strategies that we observed.

When states discussed system alignment, they focused largely on sector-based regional coordination (80 percent, on average), including how local workforce development boards coordinate with industry leaders and whether states promoted special business parks, industry hubs, or incubators. Some states discussed specific ways that community and technical college partnerships could improve system alignment (21 percent of states mentioned this at least once) or used sector-based or career pathway strategies to support further postsecondary and workforce system alignment (25 percent of states mentioned this at least once), but on average these strategies rarely appeared, only found in 10 percent of plans. This relative lack of emphasis could be due to shifting state priorities or to the perception that these postsecondary-leaning strategies are not directly relevant to talent planning and, thus, do not need to be mentioned in WIOA plans, even though they could be.

States with Combined Plans Emphasized Advisory Panels and Interagency Collaboration More Than States with Unified Plans

We might expect states with Combined Plans to describe more avenues for collaboration among state agencies and with other workforce stakeholders implementing WIOA policy than states with Unified Plans (Downs and Polk, 2025). In practice, states with either Combined or Unified Plans typically emphasized similar governance strategies at similar rates. However, they diverged notably in a few key areas.

First, states with Combined Plans discussed various collaborative, interagency structures organized under state workforce board functions about 10 percentage points more than did states with Unified Plans, on average—this difference in emphasis was about 15 percentage points at its peak (67 percent vs. 52 percent). Similarly, states with Combined Plans gave about 9 percentage points more emphasis to how interagency collaborations could ease communication, share data, or establish formal agreements (e.g., memorandums of understanding) than states with Unified Plans. Additionally, states with Combined Plans discussed creating advisory panels, task forces, or other technical assistance collaborations about 12 percentage points more than states with Unified Plans. Together, these results suggest that states with Combined Plans gave more specific attention to collaborative structures than did states with Unified Plans.

Over time, gaps between states with Combined and Unified Plans widened: States with Combined Plans steadily increased their discussion of collaboration for certain strategies, while states with Unified Plans decreased their emphasis on those same strategies. For instance, discussion of interagency structures under state workforce board functions drop 19 percentage points in Unified Plans between PY 2016 and PY 2027 but increased by about 3 percent in Combined Plans over the same period. Discussions of easing communications between agencies and sharing data increase by about 30 percentage points in Combined Plans between PY 2016 and PY 2027, while dropping 4 percentage points in Unified Plans.

Governance and collaboration structures remain relatively consistent between Democrat- and Republican-led states, suggesting that party leadership does not drive differences in how states establish workforce development operations. Growth rates suggest that in some cases—such as discussions of advisory panels and task forces—Republican-led states increased their level of attention to these strategies over time, while Democrat-led states remained relatively unchanged in their emphasis of these strategies.

Table 4. Examples of Governance Strategies from WIOA State Plans

Strategy	State (Plan Year)	Illustrative Example
Leadership & Administration: Advisory Panels	Arizona (PY 2022–2023)	Arizona has additional groups that advise different ARIZONA@WORK program areas, including (1) the Arizona Apprenticeship Advisory Committee, which provides advice and guidance to the Arizona Registered Apprenticeship Program to support LWDBs [Local Workforce Development Boards] to increase apprenticeship opportunities; and (2) the Arizona State Rehabilitation Council, which advises, evaluates, and partners with the State's vocational rehabilitation program.
Leadership & Administration: Centralized	Georgia (PY 2022–2023)	(1) State Board Functions: The active collaboration between SWDB [State Workforce Development Board], OWD [Georgia's Office of Workforce Development], and the State's one-stop delivery system is the key component of workforce development in Georgia. This collaboration begins with the Governor, who is responsible for the appointment of the SWDB members. SWDB's duties include the development of a statewide strategic plan, which establishes the four-year strategy for the Statewide Workforce Development System. SWDB is also responsible for assisting the Governor with additional functions designated by WIOA.
System Alignment: Community College Alignment	Alabama (PY 2022–2023)	The focus of the Career Centers will be on job search activities for Able-Bodied Adults without Dependents (ABAWDs). Referrals to the Career Center's come to AlabamaWorks! (AW!) electronically and allow for any SNAP [Supplemental Nutrition Assistance Program] E&T [Employment & Training program] ABAWD[s] to have access to services immediately at any of those 38 Career Centers. The plan is to work with local DHR [Department of Human Resources] offices and Career Centers in those 42 counties to continue to establish policies, priorities, and outreach for this population within the first quarter of 2023. SNAP E&T is also in the planning stages of a partnership with the Alabama Community College System Adult Education program. This partnership started with a pilot program for 50/50 Administrative match program in Mobile County. This partnership will include two community-based organizations in this area, as well as the local Career Center. The focus of this partnership is to look at barriers ABAWD[s] may have to employment in this area and match the services needed to overcome employment barriers and match them to the local workforce needs of that area.
System Alignment: Regional Coordination	Louisiana (PY 2024–2027)	Success in managing formula-fund dollars will hinge on fostering strong collaboration between the Local Workforce Development Areas (LWDAs) and the Louisiana Workforce Commission (LWC). This partnership presents an opportunity to partner with LWDBs to adopt a more proactive, strategic, and engaged approach across both stakeholders. Additionally, local areas are encouraged to actively seek other funding opportunities to assist individuals in their communities, which are not limited by WIOA restrictions. This cooperative effort is crucial for enhancing the effectiveness and reach of workforce development initiatives across the state.

SOURCES: Reproduced excerpts from the Alabama PY 2022–2023 Plan, Arizona PY 2022–2023 Plan, Georgia PY 2022–2023 Plan, and Louisiana PY 2024–2027 Plan (accessed from DOL, undated-a).

How States Provide Information to Learners

States Widely Mentioned Online Tools and Streamlined Resources to Provide Information to Job Seekers

We identified five types of strategies that states described in their WIOA plans for sharing information about workforce opportunities with job seekers and for aligning such opportunities with employers. Over time, states showed substantial emphasis on WIOA-mandated strategies, including the use of a labor exchange system (92 percent) to offer a centralized entry point for employers to post openings and job seekers to access application information, and ensuring that ETP information is easily accessible on websites and other resources intended for job seekers (77 percent). Most states (98 percent) emphasized the use of public awareness campaigns in at least one WIOA plan to make potential job seekers aware of available resources. These resources have included centralized job search tools (94 percent) and additional career planning, advising, and resources (73 percent) over time. Table 5 outlines examples of tools to support information dissemination and awareness for adult learners from WIOA state plans.

States Shared Information Similarly Across Plan Types and Political Party, But Diverged on Their Emphasis of Eligible Training Providers

Unified Plans show slightly higher average emphasis on ETP investments and career planning tools than Combined Plans, while Combined Plans show a higher average emphasis on the three other information strategies (shown in Table 5) than Unified Plans. Analysis by plan type also revealed differences in growth rates over time: Mentions of public awareness campaigns grew by 17 percentage points in Combined Plans and declined by 7 percentage points in Unified Plans. Differences in emphasis on information strategies by gubernatorial party affiliation are similarly mixed, on average, although growth rates suggest an increasing interest in career planning, advising tools, and public awareness campaigns among Democrat-led states.

Among the identified information-sharing and awareness tools, emphasis on ETPs grew the most, increasing by 19 percentage points from PY 2016 to PY 2027. Much of this growth occurred in states with Unified Plans rather than in those with Combined Plans (39– vs. 8–percentage point increase) and in Democrat-led states instead of Republican-led states (11– vs. 10–percentage point increase). This divergence also reflects how states supported access to their ETPs: In 22 percent of states, they invested in web-based tools or cross-posted ETPLs across government departments and job seeker resources. Such actions occurred more frequently among Democrat-led states (32 percent) than in Republican-led states (15 percent). Access-oriented ETP approaches are growing in Democrat-led states and declining elsewhere. One state—Arizona—also emphasized a reciprocal ETP process, an uncommon approach, in which WIOA Title I-B

participants can attend training programs on neighboring states' ETPLs when a comparable program is not available in Arizona.[3]

Table 5. Examples of Information-Sharing Strategies from WIOA State Plans

Strategy	State (Plan Year)	Illustrative Example
Career Planning, Tools, Advising & PD	Connecticut (PY 2024–2027)	As part of the state's journey toward an all-digital state government and [to] provide easy access to information for individuals, the Governor's Workforce Council (GWC), in collaboration with the Department of Administrative Services, launched a new jobs portal to assist Connecticut residents—and those seeking to become Connecticut residents—in their job search. Through jobs.ct.gov, job seekers can access powerful job search tools [and] tips and resources to help land a job; [it] directs individuals to free and low-cost training and certification opportunities and services available in the workforce system, and [it gives] employers [access] to resources to help hire, train and retain talent.
Centralized Job Search Tool	Guam (PY 2020–2023)	Guam Community College (GCC) handles the [WIOA] Title II program and is collaborating with the Guam American Job Center (AJC) team to register shared participants requiring education, in-class or work-based training and employment. Career counselors have participated in the Workforce Development Specialist training, ensuring a standardized approach with the Guam AJC team efforts (who received the same training). Counselors assist the adult education participants and are being trained on the shared case management system of hireguam.com (Virtual One-stop System) to co-enroll onsite as needed. This allows the counselors to work with case managers at the AJC to ensure that students' career pathways match the individual employment plan that is identified on the shared case management system.
ETPs	South Dakota (PY 2018–2019)	The Board of Technical Education (BOTE) was established on July 1, 2017. The board is charged with addressing the state's skilled workforce pipeline and education through oversight [of] the four technical institutes in South Dakota. These technical institutes are located in Sioux Falls, Rapid City, Mitchell, and Watertown. There are nine members on this board that represent a diverse geographic area and industry sectors. At this time, a member of BOTE is also represented on the WDC [Workforce Development Council]. Several of the training programs offered through the technical institutes that lead to high-wage, high-demand occupations are included on the WIOA Title I Eligible Training Provider List. Several of these programs are also included on the Build Dakota Scholarship program. This program offers students entering South Dakota technical institutes an opportunity to earn a degree with no student debt and a skill set that applies to a high-demand occupation. Employers see the benefits through a workforce prepared with the skills they are seeking.
Labor Exchange System	Palau (PY 2016–2019)	The Labor Market Information (LMI) Office under the Ministry of Finance is currently being combined with the Office of Job Placement in collaboration with the Division of Labor and the Palau Workforce Innovation and Opportunity Office (herein Palau WIOA Office) to collect, compile, and deliver high-quality data and analysis about the state's economy. This helps and supports Palau's businesses, its workforce and economic development system, and the workers of today and tomorrow

[3] We noted this strategy in the Arizona PY 2016–2019 Plan (accessed from DOL, undated-a).

Strategy	State (Plan Year)	Illustrative Example
		to make informed decisions. It is [part of an] ongoing effort to gather, analyze, and disseminate economic data on Palau's business community, workforce, and job market. It provides key economic indicators, employment projections, job vacancy data, and regional and statewide industry and workforce analysis along with information aimed at helping individuals make informed career decisions.
Public Awareness Campaign	Massachusetts (PY 2022–2023)	Develop resource guide for workforce system customers and staff with Learn to Earn communication materials: The Administration's Learn to Earn Initiative is creating a messaging campaign focused on different public assistance cohorts to amplify changes to public benefit programs that incentivize work. WIOA partners will work together to finalize and distribute messaging through training for front-line staff providing workforce services to individuals receiving public benefits who want to go to work but are fearful they will hit a "benefit cliff" if they increase their wages.

SOURCES: Reproduced excerpts from the Connecticut PY 2024–2027 Plan, Guam PY 2020–2023 Plan, Palau PY 2016–2019 Plan, Massachusetts PY 2022–2023 Plan, and South Dakota PY 2018–2019 Plan (accessed from DOL, undated-a).

How States Connect Postsecondary Education and Workforce Development

States Converged on Emphasizing Short-Term Training, Work-Based Learning, and Curricular Reforms

WIOA guidance outlines a robust array of strategies that states must use to connect their education and training systems to workforce needs. Broadly, these strategies target designing structural pathways to bridge career and technical education with advanced credentials that meet workforce needs (e.g., career pathways, stackable credentials, CTE programming, CCBs), promote various credit articulation strategies to recognize prior learning experiences (e.g., articulation agreements, credit for prior learning, competency-based education, dual credit), or focus on support and incentives for individual skill development for particular careers (e.g., job training, K–12 district incentives).

These strategies are not mutually exclusive—states tend to suggest various partnership, curricular, or funding structures to promote postsecondary and workforce connections. At minimum, states must discuss general job training strategies, registered apprenticeships, on-the-job training (e.g., internships), broad career pathways, CTE programming, and stackable credentials. These are near-universally mentioned, with emphasis rates between 90 percent and 99 percent across plans over time (with one exception, stackable credentials, at 64 percent). Beyond these mandated levers, states appear to be converging around short-term training (90 percent), work-based learning (83 percent), and curricular reforms (81 percent) to align their workforce and educational systems. Several of these strategies, however, show subtle differences

in emphasis as states planned for postsecondary and workforce alignment. Table 6 shows illustrative examples of this variation.

States Commonly Addressed Industry or K–12 Partnerships in CTE Programming when Discussing Structural Pathway Reforms

All states emphasized CTE programming, and 79 percent discussed industry-aligned programming through partnerships, curricula updates, or sector-focused initiatives in their WIOA plans. About half of states (56 percent) also focused on K–12 partnerships to expand the accessibility and uptake of CTE offerings. Fewer plans emphasize specific funding mechanisms to support the growth of CTE programs (20 percent).

Consistent patterns emerge related to CTE programming across plan characteristics. States with Unified Plans emphasized CTE alignment to industry needs through new partnerships or curricula more, on average, than states with Combined Plans (84 percent vs. 76 percent); smaller differences existed between Democrat- and Republican-led states. Unified Plan states also discussed CTE funding mechanisms more than Combined Plan states (26 percent vs. 16 percent). However, states with Combined Plans more frequently emphasized K–12 partnerships than did states with Unified Plans (57 percent vs. 51 percent), as did Republican-led states over Democrat-led states (63 percent vs. 54 percent)—potentially reflecting coordination efforts related to the Strengthening Career and Technical Education for the 21st Century Act (Perkins V) (Pub. L. 115-224, 2018). Mentions of K–12 partnerships and CTE programming drop notably over time in Unified Plans (by 30 percentage points from PY 2016 to PY 2027), compared with a 4–percentage point increase among Combined Plans, reflecting growing divergence between the two plan types.

Two-thirds of states discussed stackable credentials, primarily by providing information or marketing materials to create awareness among learners (44 percent). A few states discussed using microcredentials to build stackable credential pathways (15 percent). We found minimal differences by plan type or by political affiliation of state leadership.

Around career pathways, states discussed overlapping approaches—either focusing on partnerships to improve career pathway design, including with nonprofits, institutions, and businesses (67 percent) or addressing how credit transfer between K–12 and higher education or from associate's to bachelor's degrees (56 percent). These emphasis rates differ minimally by the political party of state leadership, but states with Unified Plans typically emphasized partnerships to improve career pathway design more than states with Combined Plans did (73 percent vs. 63 percent), and the two plan types diverged by 21 percentage points in growth rate over time.

Only 14 percent of states ever mentioned specific initiatives targeting one major state employer, but this trend was on the rise, growing anywhere from 1 to 11 percent regardless of plan type or the political party of state leadership.

Credit Articulation Strategies Declined as Support for Broader Career Pathways Alignment Increased

Notably, while states regularly used broad language about curricular reforms to address student pathways and workforce needs, their mentions of many specific submechanisms were rare or declining. Emphasis on dual enrollment and articulation agreements declined by roughly 16 and 23 percentage points, respectively, from PY 2016 to PY 2027, suggesting that states may be moving away from traditional credit-based mechanisms. Concerning articulation agreements, we found rare instances in which plans specified other types of credit articulation: Anywhere from 2 to 8 percent of plans mention noncredit-to-credit transfer, statewide articulation agreements, specific course articulation pathways, early college credit, or student-facing tools to understand and track credit transfer.

Unified and Combined Plans show subtle differences. States with Combined Plans emphasized statewide articulation agreements more frequently than states with Unified Plans did, on average (10 percent vs. 5 percent). These rarer strategies showed no meaningful difference based on the political party of state leadership. These trends are tentative, given the LLM-coding performance with plan excerpts regarding articulation agreements (see the appendix for details).

Alternatively, states seem to be moving toward more-flexible, employer-aligned models, such as CBE (31 percent) and credit for prior learning (54 percent), as pathways for credit and curriculum alignment with workforce needs. States discussed CBE in three main ways: (1) how competency-based mechanisms could align with particular career paths, (2) how CBE could align with state high school graduation or equivalency requirements, and (3) promoting noncredit initiatives related to CBE. For example, Maine used CBE to accelerate workforce entry by lowering the costs of assessing prior learning experiences and integrating foundational skills into credit-bearing classes along defined career pathways.[4] Washington focused its competency alignment on high school equivalency attainment, allowing out-of-school youth and adults to carry over earned competencies into a dedicated adult competency–based diploma program.[5] New York prioritized nondegree credentials, continuing education, and noncredit workforce development initiatives related to CBE across its large public university system.[6] Only about 2 to 4 percent of state plans discuss these strategies, on average, with few differences by plan type or the political party of state leadership. Only attention to noncredit CBE initiatives increased across plan types and by the political party of state leadership, by 4 to 8 percentage points over time—though such initiatives were still quite rare.

[4] We noted this strategy in the Maine PY 2018–2019 Plan (accessed from DOL, undated-a).

[5] We noted this strategy in the Washington PY 2016–2019 Plan (accessed from DOL, undated-a).

[6] We noted this strategy in the New York PY 2024–2027 Plan (accessed from DOL, undated-a).

States Emphasized Soft Skills when Discussing Job Training

Most plans emphasize initiatives to help potential workers gain soft skills (e.g., interview training and communication) to improve job seekers' access to the labor market (90 percent). About 77 percent of plans, on average, also focus on targeted training for technical skills for specific industries. Fewer plans discuss training opportunities for specific industries alongside efforts to strengthen accessibility of ETPLs to help learners navigate opportunities (31 percent). Republican-led states typically emphasized skill-training mechanisms more frequently than Democrat-led states did. We found no consistent indication that any particular job training mechanism increased in emphasis over time.

A few states discussed setting aside funds for K–12 district incentives—either to reward school districts whose graduates earned CTE credits or degrees in workforce-aligned programs or to foster collaboration between K–12 districts and local employers.

Table 6. Examples of Strategies for Connecting Postsecondary Education and Workforce Development from WIOA State Plans

Strategy	State (Plan Year)	Illustrative Example
Career Pathways	Ohio (PY 2020–2023)	Ohio will improve access to recognized postsecondary credentials, included Registered Apprenticeships, certificates, and licenses that are portable and stackable. The State is currently working with partner agencies to identify lists of credentials maintained by each agency. [The] Office of Workforce Transformation and the Governor's Office will work together to simplify and reduce the number of credential lists used across state government. The objective is to improve clarity for institutions of education and training providers that frequently use lists offered by the state, and to help job seekers make better-informed decisions about their career pathways. Moreover, Ohio will explore creating consistent methods and approaches for the core programs to use when vetting and approving training providers that offer instruction for the Industry-Recognized Credentials of Value.
CTE Programming	Alabama (PY 2016–2019)	The Alabama Community College System (ACCS) is implementing and will continue to implement several strategies to improve access to postsecondary credentials. The ACCS has long been a nationally recognized leader in the number of articulated CTE courses between secondary and postsecondary, allowing high school students an edge in accessing college credentials. In addition to articulation, Alabama has become a national leader in providing high school students dual enrollment for dual credit in CTE and academic courses. Alabama has increased the numbers of students taking advantage of this opportunity each year and has realized tremendous growth in the last five years as more students and parents learn of the significant savings that are available in terms of time and money. Tremendous momentum is in place and should continue as more systems, parents and students learn of the advantages of these opportunities. Our funding for CTE dual enrollment scholarships has tripled in the last three years and we anticipate increased funding so students will have greater access to postsecondary credentials.

Strategy	State (Plan Year)	Illustrative Example
On-the-Job Training	Guam (PY 2020–2023)	Training Services: In the pre-screening process with the employee and the interaction with the employer the training needs for the participant to sufficiently compete in the job pool becomes evident. CSTs [Career Services Teams] and BSRs [Business Services Representatives] have the flexibility to recommend training for participants if they believe that employment, because of that training is likely, even if the participant has not been provided an employment commitment. The requirements that employers are loo king for from the "pool(s) of job ready employees that have been identified by the CST and BSR staff are many times well understood. The BSR's, working with approved training providers and the Guam Community College routinely survey businesses to identify the certified skills in most demand. In addition, BSRs are regularly canvassing all sectors of the economy looking for areas of growth and networking with businesses to anticipate the nature and magnitude of the demand for workers in the near and medium term. However, training for anticipated growth is the exception and not the rule and requires approval from AJC [American Job Center] management to be allowed.
Pre-Apprenticeships	California (PY 2024–2027)	These programs include, but are not limited to, the following: Apprenticeships[,] Pre-apprenticeships[,] Incumbent worker training[,] Transitional and subsidized employment[,] Paid internships and externships[, and] Project-based compensated learning. The principles of earn and learn are broad enough to allow for flexible program design. As such, programs may be customized to serve clients on the basis of their given level of skills and their particular educational or training needs. Transitional and subsidized employment programs can be used to provide work experience to those who have none, facilitating the hiring of individuals that employers might not otherwise employ. Incumbent worker training serves the purpose of keeping the state's workforce productive and its businesses competitive. Similarly, pre-apprenticeship and apprenticeship programs can provide access to formal skills training opportunities in a variety of occupational fields that typically provide good wages and a middle-class income.
Registered Apprenticeships	Michigan (PY 2020–2023)	The Department of Labor and Economic Opportunity's work-based learning efforts align and leverage resources and cultivates partnerships to meet industry-driven demands related to workforce skills gaps. Technical and advanced worker skills gaps are addressed through apprenticeships (including Registered Apprenticeships with the U.S. Department of Labor) and customized training programs, including the Michigan Advanced Technician Training Program, the Community College Skilled Trades Equipment Program, and the Going PRO Talent Fund Program[;] employers, Michigan's workforce development system partners and other stakeholders are actively engaged to achieve industry-driven talent goals and objectives.

Strategy	State (Plan Year)	Illustrative Example
Stackable Credentials	Arizona (PY 2018–2019)	*Establish Model Career Pathways,* Including Portable and Stackable Credentials and Soft-Skills Training, for Designated Industry Sectors: Preparing the greatest number of people with portable, stackable career growth facilitates hiring and upward mobility for new entrants into careers. Arizona has successfully piloted career pathway models for adult learner cohorts for several years. Under WIOA, Arizona recognizes the need to expand opportunities statewide and develop robust career pathways that allow individuals with barriers and disabilities to participate and gain industry recognized credentials. Arizona will develop career pathways that include multiple aligned programs with funding by a variety of sources and driven by industry needs as defined through sector strategies and partnerships. Arizona chose the U.S. DOL's Career Pathways Toolkit and the Shared Vision, Strong Systems Framework (CLASP, June 2014) as resources to develop an Arizona -specific definition that aligns with the WIOA definition and requirements for career pathways. This definition will serve as a foundation for the development of a state process for recognizing and evaluating career pathway programs.

SOURCES: Reproduced excerpts from the Alabama PY 2016–2019 Plan, Arizona PY 2018–2019 Plan, California PY 2024–2027 Plan, Guam PY 2020–2023 Plan, Michigan PY 2020–2023 Plan, and Ohio PY 2020–2023 Plan (accessed from DOL, undated-a).

How States Address Access to Training and Learning Supports

States Focused on Supporting Job Seekers over Time, Especially Through Adult Basic Education, Older Adults Services, and Financial Aid

All states discussed intentions to ensure that learners would be co-enrolled in eligible training programs and (WIOA-mandated) services. For example, the Oklahoma PY 2018–2019 Plan describes how the state could better coordinate transportation services for Oklahomans in rural and urban areas to address the fundamental challenge of connecting people who need education, training, and work opportunities with those resources.[7] States also consistently noted use of one-stop centers to coordinate services, discussed broad support for job seekers, offered career counseling, and targeted supports to specific groups. Typically, state plans mention either childcare supports (60 percent) or housing supports (58 percent) when describing supports for job seekers, and plans from Democrat-led states tend to emphasize these types of supports more frequently than do plans from Republican-led states.

States discussed providing services to older adult job seekers about 75 percent of the time, on average, a rate that has grown 28 percentage points in mentions over time. While only 21 percent of plans, on average, discuss ABE supports, mentions of these strategies have grown about 19 percentage points from PY 2016 to PY 2027 and show consistent growth by plan type and the political party of state leadership.

[7] We accessed this plan and all WIOA state plans from DOL (undated-a).

While 86 percent of state plans discuss how financial aid can support learner access to education and training programs aligned with workforce needs, roughly 30 to 54 percent of plans provide further details on how to leverage state financial aid programs for high school graduates, financial aid or waivers to cover dual enrollment costs for current high school students, or federal and state work-study dollars to advance workforce goals. Attention to financial aid programming has grown over time across plans, and states with Unified Plans, as well as Republican-led states, were most likely to mention these nuances in financial aid programming. Table 7 provides examples of the various submechanisms in the Access domain.

Table 7. Examples of Access Strategies from WIOA State Plans

Strategy	State (Plan Year)	Illustrative Example
Adult Basic Education	U.S. Virgin Islands (PY 2016–2019)	All Adult Education students are assessed with the Test of Adult Basic Education [TABE]. Students who score 6.9 or below on the TABE are enrolled in skills classes. Basic Skills Enhancement courses are available for students who need goal-specific elementary or secondary level basic skills such as work-related math, functional literacy[,] and reading or writing assistance. For English language learners, English as a Second Language classes from the pre-literacy to the advanced level are available to help the adult learner develop speaking, listening, reading[,] writing and grammar skills to communicate effectively and function successfully with their workplaces and community.
Financial Aid: Federal Work Study	Indiana (PY 2022–2023)	WIOA Youth can assist teen parents in the transition to higher education. It can offer programs in high school to complement ongoing academic instruction with weekly classes or workshops covering the college application process, time management skills, and self-confidence. [. . .] Incorporating an opportunity to earn an income while enrolled—through a paid internship, the Federal Work Study program, or a part-time job[—]may also increase the likelihood of teen parents persisting through their studies. If the opportunity to earn can complement learning, through work-based learning, we can remove a significant barrier for teen parents.
Integrated Services: Co-Enrollment	Oklahoma (PY 2020–2023)	Oklahoma believes the coordination, alignment and provision of services will further enhance the customer experience. In order to promote a seamless service delivery, key stakeholders such as the State Administration, Workforce Development Boards (WDB), Oklahoma Works Centers, and other Core Partners will collaborate to develop an integrated approach to providing quality, customer driven, value-added services. As a state, we realize the importance of nurturing a partnership with the core programs defined in WIOA and business. Creating this partnership will allow all stakeholders to have input and buy-in to the one-stop seamless delivery of services. This approach will effectively organize staff and facilities in a manner that further streamlines customer service delivery, capitalizing] on the strengths of staff, location, and technology capabilities. All these efforts will reduce duplication, save diminishing resources, increase customer satisfaction, and better develop our valued service delivery professionals.

Strategy	State (Plan Year)	Illustrative Example
Support Services	Michigan (PY 2022–2023)	Partnered with the UI [Unemployment Insurance] to deliver the Re-employability Eligibility Assessment (REA) pilot program. This program provided one-on-one services to claimants who would most likely exhaust their unemployment benefits prior to obtaining employment. Currently, Workforce Development is implementing similar services called [the] Reemployment Services and Eligibility Assessment (RESEA) program that is statewide. This program provides customized services to claimants who are most likely to exhaust their unemployment benefits but now mandates a second RESEA appointment for 50 percent of claimants still unemployed five weeks after their initial [RESEA] appointment.
Support Services: Housing	Illinois (PY 2024–2027)	Homeless Veterans Reintegration Program is a DOL-VETS [Veterans' Employment and Training Service] grant program with multiple grantees in Illinois. DVOP [Disabled Veterans Outreach Program] specialists are outstationed at the HVRP [Homeless Veterans' Reintegration Program] Grantee sites to assist with employment. In addition, to the extent possible, IDES [Illinois Department of Employment Security] supports Stand Down (all veterans) and Stand Up (women vets) events, coordinated by the Department of Veterans Affairs and other DOL-VETS approved grantees to provide resource services to homeless veterans. IDES supports these events with assistance from our DVOP staff.
Transfer Support	Puerto Rico (PY 2016–2019)	Puerto Rico will strive to guarantee that its students will be able to transfer applicable credits for admissions and degree requirements. Since the program of study covers secondary and postsecondary levels, Puerto Rico Department of Education has identified the appropriate alignment of related industry recognized credentials and certifications. If the student earns a credential at the secondary level, that credential will be recognized at the postsecondary level through the articulation agreement.

SOURCES: Reproduced excerpts from the Illinois PY 2024–2027 Plan, Indiana PY 2022-2023 Plan, Michigan PY 2022–2023 Plan, Oklahoma PY 2020–2023 Plan, Puerto Rico PY 2016–2019 Plan, and U.S. Virgin Islands PY 2016–2019 Plan (accessed from DOL, undated-a).

How States Engage with Employers and Meet Demand

Sectoral Approaches Dominate State Workforce Development Strategies

States consistently framed workforce training through a sectoral lens, emphasizing employer demand, in-demand industries, and labor market alignment. Nearly every plan (96 percent) highlights the importance of industry-based sectoral approaches to workforce development, and 94 percent of plans emphasize ensuring training opportunities align with high-demand fields. This emphasis reflects both the required nature of these mechanisms under WIOA guidance and their central role in state workforce development planning. Support for sectoral approaches is broad regardless of plan type or the political party of state leadership.

Specifically defined interventions, however, were less common. Many plans (60 percent) describe the roles of parties involved in determining sectoral partnerships, including workforce boards, education providers, and specific agencies. Fewer plans describe concrete interventions, though some exceptions stand out—such as the regional planning structures described in the

Massachusetts PY 2020–2023 Plan, which require community college and technical school representation to ensure strong bonds between educational offerings and sectoral needs, or the use of state toolkits (16 percent of plans) that offer state-sponsored resources to help employers and learners navigate sectoral pathways. We also found evidence of states responding to rapid shifts (e.g., layoffs) and growing sectoral needs (e.g., advanced credentials) by offering training for incumbent workers (75 percent) or rapid response services to employers (48 percent). Notably, both of these are mandated areas of WIOA reporting but show relatively low emphasis rates compared with other WIOA-required mechanisms.

Business Services and Subsidies Drive Near-Universal Employer Engagement

Broad employer outreach through business services and streamlined one-stop initiatives is a near-universal strategy across state plans (91 percent). Funding is the primary state mechanism to support employers, with nearly all plans noting the use of employer and training subsidies (95 percent and 96 percent, respectively). These resources could reduce the financial barriers to training and help ensure employer alignment with broader workforce trends. We also found some evidence of nonmonetary employer engagement techniques, but states mentioned them relatively infrequently. For example, Alabama offered customized workplace training on disability etiquette and accessibility, along with remote work support to help businesses retain employees affected by injuries or illness.[8] Alaska, on the other hand, offered specialized recruitment services, such as job fairs and candidate screenings, as well as layoff prevention strategies through rapid response services.[9] There is a 10 percentage point difference by gubernatorial party affiliation, with Republican-led states more likely (37 percent) than Democrat-led states to use broad employer-targeted services.

In some cases, states are also subsidizing entities beyond individual employers to help coordinate systems that more effectively meet labor demand. Roughly one-third (30 percent) of plans describe policies that offer financial incentives (e.g., money transfers, grants) to relevant entities to advise on workforce matters. Democrat-led states are more likely than Republican-led states to emphasize these tools, by a 20–percentage point difference. For example, Oregon created the Strategic Innovation Grant to help potential partners outside the traditional workforce system develop initiatives that support the state's workforce development board goals.[10] Infrequently, states have used these tools to directly reward workforce development areas for serving specific populations in need or high-priority industries (6 percent). Table 8 provides several state plan examples of employer engagement strategies.

[8] We noted this strategy in the Alabama PY 2018–2019] Plan (accessed from DOL, undated-a).

[9] We noted this strategy in the Alaska PY 2018–2019 Plan (accessed from DOL, undated-a).

[10] We noted this strategy in the Oregon PY 2020–2023 Plan (accessed from DOL, undated-a).

Table 8. Examples of Employer Engagement Strategies from WIOA State Plans

Strategy	State (Plan Year)	Illustrative Example
Business Services & One-Stop Employer Outreach	Georgia (PY 2022–2023)	TCSG [Technical College System of Georgia], OWD [Office of Workforce Development]: The State of Georgia makes use of many activities to assess the successful provision of workforce services and the delivery of the Governor's strategic vision and goals. The activities discussed below all play a role in ensuring that the state is able to make continuous and quality improvements in terms of adhering to federal and state regulations, providing quality services to the workforce system customer, and meeting federal and state outcome expectations. The assessment activities will also monitor the state's progress towards accomplishing the vision and goals for the workforce development system discussed previously. OWD will place special emphasis on assessment and monitoring of LWDAs [Local Workforce Development Areas] for WIOA integration and WIOA compliance to ensure that timely progress is being met in local area systems change and one-stop integration. If core partners determine areas of weakness in WIOA implementation, appropriate and timely technical assistance will be provided.
Employer Targeted Services	Missouri (PY 2018–2019)	Missouri's Employment and Training program for Food Stamp recipients is SkillUP. Division of Workforce Development (DWD) partners with Family Support Division to operate the SkillUP program through the Missouri Job Centers. The vision of SkillUP is to provide a streamlined access to industry aligned training that lead[s] to family supporting employment and sustainability. DWD's model is intended to serve the needs of employers by providing employers with a skilled workforce and to fill the workforce gap. In addition, Missouri Pre-apprenticeship Academy has partnered with three industries (plumbing, laborer, and construction) for training and curriculum based on industry standards. This will ensure the preparation and training of individuals needed to enter one or more Registered Apprenticeship programs and further meet the needs of employers.
Employer Targeted Services	Vermont (PY 2022–2023)	Businesses work with staff to register jobs into our Vermont Job Link (VJL) system, search for and screen applicants, conduct hiring events and job fairs, access current labor market information, hire interns, apprentices, and OJTs [on-the-job training programs], access information about tax credits, find support to avoid layoffs, tap rapid response services, learn about grants for job training for new and incumbent workers, and gain assistance with employment and labor law questions. For job seekers, services include skill assessment, skill training, labor market information, career counseling, and job placement assistance.
Incentives for Intermediaries: Performance Target	West Virginia (PY 2018–2019)	Grants will be awarded based on a regional allocation structure in order to establish a network of providers throughout the state and ensure that services continue to be provided in areas of those most in need. The State will use a hybrid model to determine this allocation structure. This model will take into consideration regional LWIB [Local Workforce Industry Board] needs, economic and job outlooks, availability of post-secondary education and training partners, WIOA prioritized populations[,] and previously funded and established programs.

Strategy	State (Plan Year)	Illustrative Example
Incentives for Intermediaries: Seed Capital and Innovation	Wisconsin (PY 2024–2027)	A cornerstone of the partnership between Wisconsin Economic Development Corporation (WEDC), the Department of Workforce Development (DWD), and other partners is the Workforce Solutions Initiative, a $158-million investment by Gov. Tony Evers to address the state's workforce needs and support innovative pandemic recovery efforts. This investment in ARPA-SLFRF [American Rescue Plan Act-State and Local Fiscal Recovery Funds] funding included: Workforce Innovation Grants: The $128-million Workforce Innovation Grant Program is a collaboration between WEDC and DWD to invest in a wide range of innovative strategies to address local workforce and economic concerns. These grants support 27 unique projects addressing shortages of workers in healthcare, childcare, education, advanced manufacturing, skilled trades, and more.
Industry Sectoral Approach	Vermont (PY 2018–2019)	The workforce development system directs its resources to support programs that align with the business community's hiring needs and the state's occupational projections and priority sectors. Vermont's current priority sectors are (1) manufacturing[,] (2) health care[,] (3) construction and (4) tourism. These were identified in Vermont's CEDS [Comprehensive Economic Development Strategy] report. The Agency of Education, Department of Labor, and Department of Economic Development align their grant opportunities with these sectors to maximize return on investment. Further[,] the Agency of Education sequences the development of career pathways with these priority sectors as well.
Rapid Response Services	Iowa (PY 2022–2023)	Rapid Response Assistance and Layoff Aversion Rapid Response (RR) efforts in Iowa continued to play an important part in business engagement. As Worker Adjustment and Retraining Notifications (WARN) are received, RR staff immediately begin working with company officials and local area leadership to organize and deploy RR activities. Iowa legislated that employers with any layoffs of more than 25 employees must notify IWD [Iowa Workforce Development]. This state requirement is in addition to the federal requirement to notify in the event of a layoff impact of 50 [employees] or greater.

SOURCES: Reproduced excerpts from the Georgia PY 2022–2023 Plan, Iowa PY 2022–2023 Plan, Missouri PY 2018–2019 Plan, Vermont PY 2018–2019 Plan, Vermont PY 2022–2023 Plan, West Virginia PY 2018–2019 Plan, and Wisconsin PY 2024–2027 Plan (accessed from DOL, undated-a).

Summary and Policy Implications

This study provides the first systematic analysis of postsecondary and workforce development strategies across all 50 U.S. states, six U.S. territories, and the District of Columbia, using WIOA plans submitted for PYs 2016–2027. Through a rigorous LLM-assisted content analysis, we identified how states approach postsecondary and workforce alignment across five conceptual domains: governance, information, connect, access, and employer.

We found that state WIOA planning is fairly consistent. The political party of state leadership rarely produces major differences in this planning, and states with Unified Plans and states with Combined Plans differ only modestly in their emphasis on collaborative governance structures. Table 9 summarizes our main findings across domains. We discuss policy implications for these findings below.

Table 9. Main Findings Across WIOA State Plans, by Strategy Domain and by Plan and State Characteristics

Strategy Domain	Key Finding	By Plan Type	By Political Party of State Leadership
Governance	States consistently describe centralized leadership structures (95 percent) and sector-based regional coordination (80 percent).	States with Combined Plans emphasize collaborative governance mechanisms—including interagency structures and advisory panels—10 to 12 percentage points more frequently than states with Unified Plans do. This gap widened over time.	No major differences by political party
Information	States near-universally provide centralized job search tools (94 percent) and career counseling (92 percent), but fewer than one-quarter discuss making ETPLs more accessible through web-based tools.	States with Unified Plans emphasize access to ETP information more over time than states with Combined Plans do.	Democrat-led states have increased their emphasis on providing access to ETP information more than Republican-led states have over time.
Connect	States emphasize how to connect structural pathways to industry needs (e.g., through CTE programming and partnerships). Specific credit articulation mechanisms are declining, and states appear to be shifting toward more-flexible approaches for awarding credit based on prior learning or competencies.	States with Unified Plans emphasize CTE alignment to industry needs through new partnerships or curricula and emphasize improvements to career pathways design more than states with Combined Plans do.	Republican-led states emphasize skills training more than Democrat-led states do.
Access	Fewer than half of plans, on average, discuss adult basic education, supports for older adults, or financial aid for certain groups (e.g., recent high school graduates) or educational programs (e.g., dual enrollment), but attention to these supports appear to be growing over time.	No major differences by plan type	Democrat-led states discuss child care and housing supports more frequently than Republican-led states do; Republican-led states emphasize financial aid more than Democrat-led states do.
Employer	Sectoral approaches (96 percent) and providing employer subsidies for job training are near-universal. States less frequently describe concrete employer engagement interventions beyond funding mechanisms.	No major differences by plan type	Democrat-led states are more likely to emphasize employer engagement tools than Republican-led states.

SOURCE: Authors' analyses of WIOA state plans (accessed from DOL, undated-a).

Federal Guidance Shapes State Planning, but Gaps Remain

Near-universal adoption of WIOA-mandated strategies confirms that federal planning guidance directs state attention. Some mandated mechanisms, including stackable credentials (mentioned in 64 percent of plans, on average) and ETPs (78 percent) fell short of expected emphasis rates, suggesting compliance gaps among states. Other levers that could be effective tools in strengthening education and workforce development, such as CBE (31 percent) and K–12 district incentives (7 percent), are not federally mandated and receive inconsistent attention across state plans, further highlighting opportunities to expand the federal guidance offered to states.

State Plans Emphasize System Alignment and Partnerships More Than Specific Programs or Policies

Across domains, states more frequently describe governance structures, partnership intentions, and broad strategic directions than concrete program designs, eligibility criteria, or funding mechanisms for target programs. This pattern is consistent with WIOA planning guidance, which requires states to describe strategies rather than operational details, but it limits the utility of state plans for understanding actual implementation.

Combined Plans Show More Collaborative Intent Than Unified Plans, and That Gap May Be Widening

By electing to submit a Combined Plan, states signal some additional intent to work across partner programs and agencies (especially for Perkins V), although submitting a Unified Plan does not necessarily mean that states are not collaborating across agencies. Yet, the 10– to 15–percentage point differences between mentions of collaborative governance mechanisms in Combined Plans and Unified Plans suggest that submitting a Combined Plan correlates with more detailed attention to interagency structures. This gap has widened over time: Combined Plans increasingly emphasize data sharing and interagency collaboration, while Unified Plans show decreased attention to those areas. This divergence may indicate that states with Unified Plans are missing opportunities to strengthen cross-agency coordination, even without formally adding partner programs.

States Have Moved Away from Traditional Credit-Based Alignment Mechanisms Toward More-Flexible Pathways

Substantial declines in discussion of articulation agreements (−23 percentage points) and dual enrollment (−16 percentage points) between PY 2016 and PY 2027 (based on our chosen measures), paired with modest growth in CBE and stable emphasis on credit for prior learning, suggest that states may be reconsidering how to recognize and transfer learning. This shift may

reflect employer demand for more-flexible, skills-based credentials or recognition that traditional articulation structures are insufficient for adult learners and workers who wish to change careers.

Learner Support Strategies Receive Less Systematic Attention Than Other Structural Reforms

While states consistently discuss career pathways and CTE programming, specific mechanisms to address learner barriers—such as ABE; child care, housing, and transportation support; and targeted financial aid—appear less frequently and in more varied ways in WIOA state plans. Growing attention to ABE, older adult services, and financial aid over PYs 2016–2027 is encouraging, but state plans inconsistently document the workforce system's strategies to address nonacademic barriers to education and training.

Employer Engagement Strategies Rely Heavily on Subsidies Rather Than Systemic Partnerships

Near-universal emphasis on employer funding mechanisms contrasts with lower shares of WIOA plans that describe coordinated employer services (31 percent) or intermediary incentives (30 percent). This pattern suggests that states may be prioritizing transactional employer relationships over deeper sectoral partnerships that research suggests produce more-durable workforce outcomes. Some states are directing incentives to establish and sustain workforce intermediaries, but planning details about how those intermediaries will function remain thin. This means that it is not yet clear how states will ensure intermediary strategies can tackle postsecondary and workforce goals in tandem.

Recommendations

The following recommendations target federal agency staff charged with providing guidance on WIOA planning, state workforce development agency staff responsible for WIOA planning, and other state higher education agency staff involved in cross-agency coordination and workforce system improvements. They draw on patterns we identified across all 57 U.S. state and territory plans and highlight opportunities to strengthen alignment between postsecondary education and workforce development systems.

Treat WIOA Planning as a Strategic Exercise, Not Just a Compliance Requirement

WIOA planning offers a structured opportunity for cross-agency dialogue that few other processes provide. The seven states with the most expansive plans consistently used the planning process to specify a variety of strategies beyond those that WIOA guidance mandates. Viewed strategically, WIOA planning can align goals, measures, and outcomes that bridge federal requirements and standards for reporting across many programs (e.g., Perkins V, new reporting

required for complying with the Workforce Pell Act [Pub. L. 119-21, 2025, Section 83002], and each of WIOA's title programs).

- States could consider aligning WIOA plan development timelines with state strategic planning processes so that workforce priorities inform broader economic development goals.
- Federal guidance could more concretely structure this exercise for states by elaborating on the key details expected in WIOA plans; publishing model plans or exemplary descriptions of plan elements; refining required reporting elements; providing templates or further guidance to help states develop clearer interagency specific, measurable, and achievable, relevant, and time-bound (SMART) goals achievable in a four-year time frame; or making more explicit which strategies can align postsecondary and workforce sectors more efficiently.

Strengthen Collaborative Governance Regardless of Plan Type

States with Combined Plans give more detailed attention to interagency collaboration, and states with Unified Plans can adopt a similar practice without formally adding partner programs. Advisory panels, data-sharing agreements, and joint accountability structures do not require Combined Plans, and in many respects, states with Unified Plans already pursue similar alignment strategies across domains as those pursued by states with Combined Plans.

- Workforce policymakers can use plan submission and modification timelines to establish at least one concrete mechanism to formalize cross-agency coordination, even if focused solely on planning for WIOA core programs.

Reassess Credit Articulation Strategies to Adapt to Changing Learner Needs

The decline in articulation agreements and dual enrollment emphasis in WIOA plans may reflect appropriate adaptation to adult learner needs, or it may signal that states are moving away from structures that benefit traditional-age students without adequate replacements.

- States should ensure that shifts toward competency-based approaches do not inadvertently reduce pathways for populations well served by existing articulation structures or overlook the benefits of these established policy levers (e.g., reducing credit loss [National Task Force on the Transfer and Award of Credit, 2021]).

Additionally, while credit for prior learning appears in 54 percent of plans, implementation often remains institution-by-institution rather than statewide. Institution-driven approaches may be effective and useful blueprints for scaling, but state-level approaches better support sustainable and equitable practices (Klein-Collins and Shafenberg, 2023).

- States should develop statewide crosswalks of courses and programs with similar learning objectives and outcomes to further smooth credit articulation for target populations, such as adult learners with industry credentials (Kushner et al., 2026; Leigh and Daugherty, 2025).

For adult learners and career changers, scaling prior learning assessment could significantly reduce time-to-credential completion. Evidence suggests that doing so effectively, however, requires more than the presence of prior learning assessments and a mechanism to pay for those assessments: The most robust strategies rely on structured advising connected to automated learning assessments to ensure that as many students as possible can benefit (Palmer and Nguyen, 2019).

Move Beyond Broad Career Pathways Language to Specific Program Designs

Nearly all states discuss career pathways, but fewer describe the concrete features that research suggests make pathways effective: stackable credentials, embedded work-based learning, integrated support services, and clear transitions between education levels. Generic pathway language in WIOA state plans may not translate to coherent learner experiences.

- Federal guidance should more explicitly help states prioritize two to three priority sectors and provide templates for documenting the specific credentials in the pathway and their labor market value, how learners transition between credentials, what support services will be available at each stage, and how employers will engage in pathway design.

Document Specific Mechanisms for Addressing Nonacademic Barriers

States consistently reference support services but less frequently describe concrete programs addressing child care, housing, transportation, or emergency assistance. We do not assume these programs are absent from states, but WIOA plans should better articulate how specific support mechanisms—rather than general intentions—will work, how service gaps will be identified, and how they will coordinate supports across different funding streams.

- States should use their WIOA planning process to create an inventory of support services available to WIOA program participants, including funding source, eligibility criteria, and geographic availability, and identify populations or regions where access to specific supports is limited.

More Explicitly Align Financial Aid Strategies with Workforce Development Goals

While 86 percent of plans discuss financial aid, fewer than half describe specific mechanisms, such as aid for short-term programs, dual enrollment waivers, or work-study alignment. This emphasis may shift with the advent of Workforce Pell requirements, which will ask states to identify eligible programs meeting specific performance criteria for which learners can receive Pell Grant dollars. States are already establishing financial aid programs for short-term credentials (Murphy, 2024). As demand for shorter-term credentials grows, ensuring that financial aid structures support workforce-relevant training, ideally in ways that complement and not duplicate higher education offerings, becomes increasingly important.

- States should more explicitly address how states' need-based and short-term or noncredit financial aid programs can support WIOA goals when outlining their plan strategies.

Diversify Employer Engagement and Invest in Intermediary Capacities

Near-universal reliance on employer funding mechanisms may create transactional relationships that do not persist beyond subsidy periods. States should consider how to use existing mechanisms—such as ongoing employer surveys—to continue examining the value of investing in the public workforce system. Additionally, only 30 percent of plans describe incentives for *intermediary organizations*: entities that coordinate among employers, education providers, and workforce agencies. These intermediaries can sustain partnerships that individual agencies lack the capacity to maintain.

- States should use their WIOA planning process to expand on how they plan to support intermediary capacity-building, specifying who will be responsible and how short- and long-term progress will be assessed.

Conclusion

As Congress deliberates on the reauthorization of WIOA (Grigas and Moore, 2026), this first-ever comprehensive analysis of WIOA plans and the state plan dataset (available as a separate annex at www.rand.org/t/RRA4766-2) provide a baseline on the variety and frequency of strategies that states emphasize.

In future work, we plan to identify which state strategies or strategic domains are associated with improvements in postsecondary and workforce alignment, such as producing more credential holders in high-demand sectors to fill workforce needs. We encourage others to use our open-source data to conduct similar analyses, such as examining which state characteristics (e.g., centralized vs. decentralized governing bodies) or combinations of funding relate to different strategy approaches. Additionally, researchers should compare whether WIOA plans reflect policies that states actually implemented and to what end. Finally, research should further distill distinct strategies for low-income workers, migrant workers, veterans, youth, and people of color.

Consolidating and integrating workforce programs into a more streamlined and coherent system is a cornerstone of the federal government's vision for workforce planning (DOL, U.S. Department of Commerce, and U.S. Department of Education [ED], 2025). Making state workforce planning a more explicit part of that coordination effort can build on the strides that states have made in developing consensus on several desired approaches while continuing to experiment with others. Efforts to encourage such coordination appear to be materializing: Most recently, ED and DOL reported that 21 states submitted Combined Plans that included integration with CTE programs funded under Perkins V, compared with only nine states doing so in 2024 (DOL, Employment and Training Administration, 2026). While improving state workforce planning and postsecondary-workforce alignment will require quality implementation, how states use WIOA planning to clarify their crosscutting efforts can help build a robust ecosystem that supports job seekers in learning, working, and thriving.

Appendix. How We Conducted the WIOA Plan LLM-Assisted Content Analysis

We conducted our qualitative content analysis of WIOA plans in three stages: (1) preliminary exploration and initial codebook development, (2) LLM-based coding procedure and codebook development, and (3) human coding and assessment.

Preliminary Exploration and Initial Codebook Development

During a preliminary exploration period related to this project in 2023, we used the latest WIOA plans for PY 2022–2023 (a modification plan year), retrieved from the WIOA State Plan Portal (DOL, undated-a), to better understand the type of content available in WIOA plans. We divided these state plans among three research team members, including two of the authors, and hand-coded specific WIOA plan sections (Table A.1) in NVivo, a qualitative analysis software.

Table A.1. WIOA Plan Sections Analyzed by LLM

Chapter	Section	Subsection Title
I. WIOA State Plan Type and Executive Summary	• A. WIOA State Plan Type • B. Plan Introduction or Executive Summary	• N/A
II. Strategic Elements	• Economic, Workforce, and Workforce Development Activities Analysis	• A2. Workforce Development, Education and Training Activities Analysis
	• B. State Strategic Vision and Goals • C. State Strategy	• N/A • N/A
III. Operational Planning Elements	• State Strategy Implementation – A1. State Board Functions – A2. Implementation of State Strategy	• A2,A. Core Program Activities to Implement the State's Strategy • A2,B. Alignment with Activities Outside the Plan • A2,C. Coordination, Alignment and Provision of Services to Individuals • A2,D. Coordination, Alignment and Provision of Services to Employers • A2,E. Partner Engagement with Educational Institutions and other Education and Training Providers. • A2,F. Improving Access to Postsecondary Credentials • A2,G. Coordinating with Economic Development Strategies
	• State Operating Systems and Policies	

SOURCE: Authors' analysis of WIOA state plans (accessed from DOL, undated-a).
NOTE: N/A = not applicable.

We determined in an initial review of a subset of plans that the sections shown in Table A.1 would contain the most relevant information on postsecondary education and workforce alignment strategies. Others have noted that WIOA plan documents are at times unnecessarily lengthy and complex, making them less useful as actionable documents and more a symbol of policy compliance (Fuller et al., 2025; McGrath et al., 2025). We found this to be true as well, given that many state plans reiterate the same information across multiple sections, which led us to define the most necessary plan sections for analysis.

We developed an initial codebook deductively, organizing codes around the initial five domains and allowing new codes to emerge inductively as we read each section of WIOA state plans. Our codebook contains parent-, child-, and grandchild-level codes, and we discussed as a research team when we added new codes or merged and redefined existing ones. We coded 52 plans (excluding American Samoa, Guam, Northern Marianas, Palau, and U.S. Virgin Islands because of time constraints), which amounted to approximately 2,383 pages of text. This manual coding effort served as the foundation for LLM-based coding.

LLM-Based Coding Procedure Development

After this preliminary codebook development, our goal was to develop a set of LLM agents that could apply our initial codebook to the entire corpus of PY 2016–2019 plans, PY 2018–2019 plan modifications, PY 2020–2023 plans, PY 2022–2023 plan modifications, and PY 2024–2027 plans—the most recent plan year available at the time of the study. Throughout the remainder of this appendix, we refer to all manually coded text excerpts as *manual annotations* to differentiate them from those coded using LLM-based methods.

We conducted all LLM operations using OpenAI's GPT-4 Turbo model accessed through RAND's secure infrastructure. We generated embedding representations using the text-embedding-3-large model, which produced 3,072-dimensional vector embeddings optimized for semantic similarity tasks. These were the latest models available to RAND at the time we made coding assignments for this study. We accessed both models via the OpenAI application programming interface with a default temperature of 0 and maximum token limits of 4,096.

Data Preparation

We considered three factors when preparing the data for LLM-based coding to improve thematic extraction performance. First, language model outputs are sensitive to prompt design, and context-rich prompts that include policy context, detailed task descriptions, and carefully constructed examples may improve response quality compared with underspecified prompts (Liu et al., 2023). Second, language models are pretrained on large amounts of data not necessarily related to workforce and education policy, so they may not be adequately attuned to technical terminology and thematic relationships at the level of subject-matter expertise (Gururangan et al., 2020). Third, trade-offs exist between input text length and thematic coherence: Shorter inputs

may omit essential context, while longer inputs may encompass multiple themes, leading to inconsistent code assignments (Liu et al., 2024).

We used the following strategies to address the first two concerns. First, we revised our codebook to include detailed explanations of each code, incorporating as much policy context as possible based on our subject-matter expertise. We supplemented these explanations with example excerpts drawn from manually coded WIOA plan documents, with the caveat that manual annotations did not cover all codes; we used all examples (annotated excerpts) available for a given code after omitting any that were voluminous or irrelevant. We then fuzzy-matched codes between manual annotations and the codebook to correct minor discrepancies in capitalization, punctuation, or formatting in code names and to ensure that we pulled examples for the same code from the manual annotations as in the revised codebook. Throughout the remainder of this appendix, the term *code description* refers collectively to the code definitions, extended code explanations, and supplemental example excerpts drawn from manual annotations, when available.

Second, we documented the hierarchical code structure for each code in our codebook up to five levels of parent, child, and grandchild relationships. These two strategies helped us design contextually rich prompts while clarifying the thematic relationships that we expected to observe within our research scope.

To address the third concern and avoid out-of-scope input data, we segmented input WIOA plan document text into semantically coherent units defined by source location and text length. As Table A.1 shows, we analyzed specific WIOA plan chapters and sections, which are consistently structured across all state plans. We extracted all paragraphs between Chapters I and IV and then segmented them into smaller units of complete sentences that did not exceed a total length of k.

To address the trade-off between input text length (k) and thematic coherence and to find an optimal value for k, we randomly sampled 218 paragraphs across three randomly chosen plans and segmented them at k = 100, 250, 500, 800, and 1,000 words, then manually evaluated the extent of thematic overlapping in the extracted text. We found that k = 250 offered the most complete description of a singular coherent theme and used k = 250 for all subsequent analysis. To maintain contextual traceability, we appended each text segment with metadata specifying the chapter, section, and subsection from which it was extracted. We later used this metadata to group and analyze codes within their original document structure. Throughout the remainder of this appendix, we refer to each text segment together with its associated metadata as an *input paragraph*.

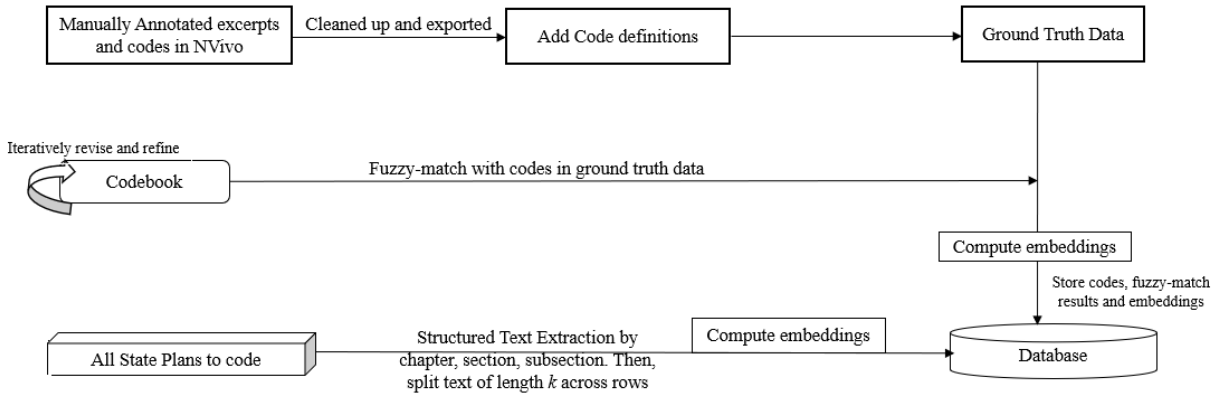
Finally, we stored our comprehensive codebook, along with the hierarchical code structure, manual annotations, and input paragraphs, in an SQLite database—a lightweight data management system that offers efficient text storage and retrieval for further processing as described in the next section.

Data Processing for LLM-Based Coding

Using an OpenAI embedding model available through RAND's secure infrastructure, we encoded our code descriptions, manual annotations, and input paragraphs into numerical representations called *embeddings*, which capture both the meaning and context of the original text. These embeddings enable a numerical computation of semantic similarity between two pieces of text using a mathematical measure called *cosine similarity*, which we used for our coding procedure as described below.

Figure A.1 briefly outlines our data preparation procedure until this point.

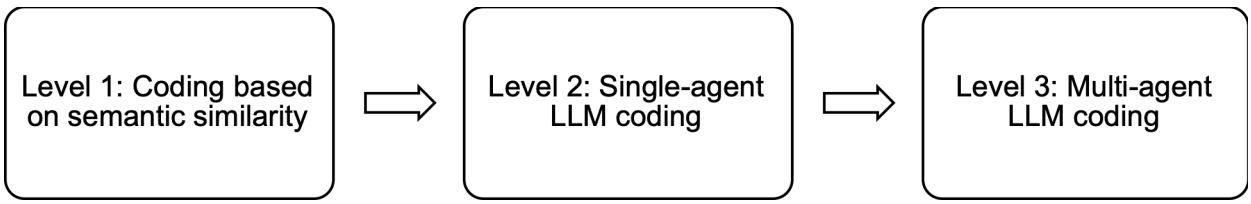
Figure A.1. Data Preparation Steps to Code WIOA Plans



Coding Procedure

We implemented the LLM-based coding procedure across the three sequential levels shown in Figure A.2.

Figure A.2. Three-Level Coding Procedure

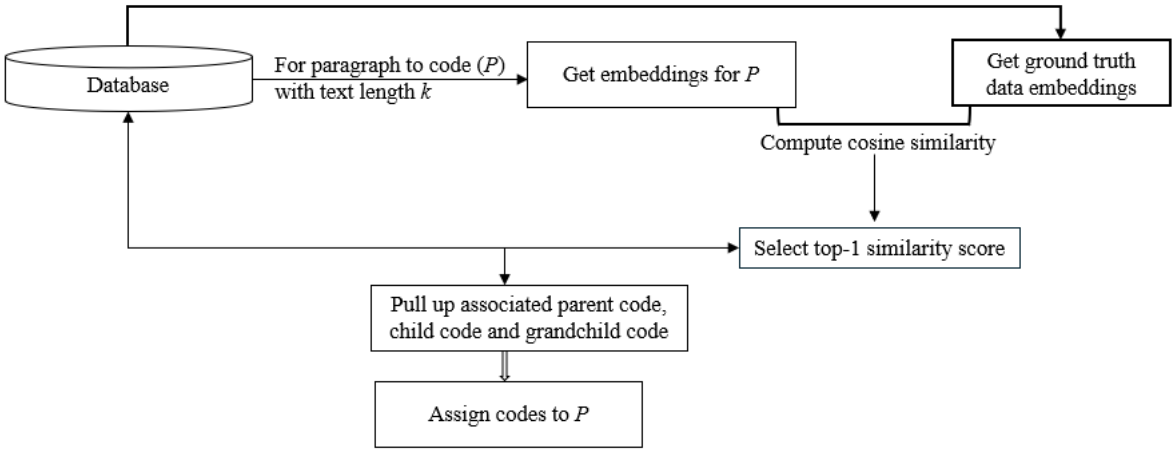


In *Level 1*, we applied similarity-based coding assignments derived from manual annotations—in other words, we sought to mimic human annotators' manual coding assignments from NVivo by assigning the same set of codes to the most similar input paragraph. In *Level 2*, we built upon Level 1 similarity-based coding to provide contextual exemplars for single-agent LLM coding. In *Level 3*, we employed a multi-agent LLM system to evaluate Level 2 results and assign final codes. Through these three levels, we aimed to progressively increase the contextual depth and

reliability of the coding process, moving from similarity-based assignments to expert-guided reasoning and multi-agent validation, while iteratively evaluating results along the way.

In Level 1, for each input paragraph (*P*), we computed cosine similarity scores between the paragraph's embedding and the embedding of manual annotations. We then retained the hierarchical code structure from the most similar annotation (top 1 match) and assigned it to the input paragraph (Figure A.3). We stored these results as *Level 1 codes* in our database as a baseline for subsequent comparison, review, and processing. Manual inspection of the results suggested that the similarity-based approach performed reasonably well for shorter and more-straightforward excerpts, but it was less effective for longer passages, excerpts associated with multiple codes, or text requiring finer semantic interpretation.

Figure A.3. Level 1 Coding Procedure



In Level 2, we recomputed cosine similarity scores between each input paragraph and all manually annotated excerpts, using the same embedding-based method as in Level 1. We selected the five most similar annotated excerpts and retrieved their corresponding hierarchical codes and code descriptions to serve as contextual exemplars for the LLM. We then instructed the LLM to emulate the reasoning process of an expert qualitative researcher through a structured two-part prompt consisting of system and task prompts. The system prompt defined the model's role, and the task prompt provided the paragraph to be coded along with the top five annotated examples and their code definitions, as shown in the "Prompt Used in Level 2" box below.

This structured prompting approach ensured that the LLM-based coding process was both contextually grounded and methodologically consistent with the manual coding framework. We stored these results as *single-agent annotations* in our database for subsequent analysis. Figure A.4 outlines the Level 2 coding procedure.

Prompt Used in Level 2: Single-Agent LLM Coding

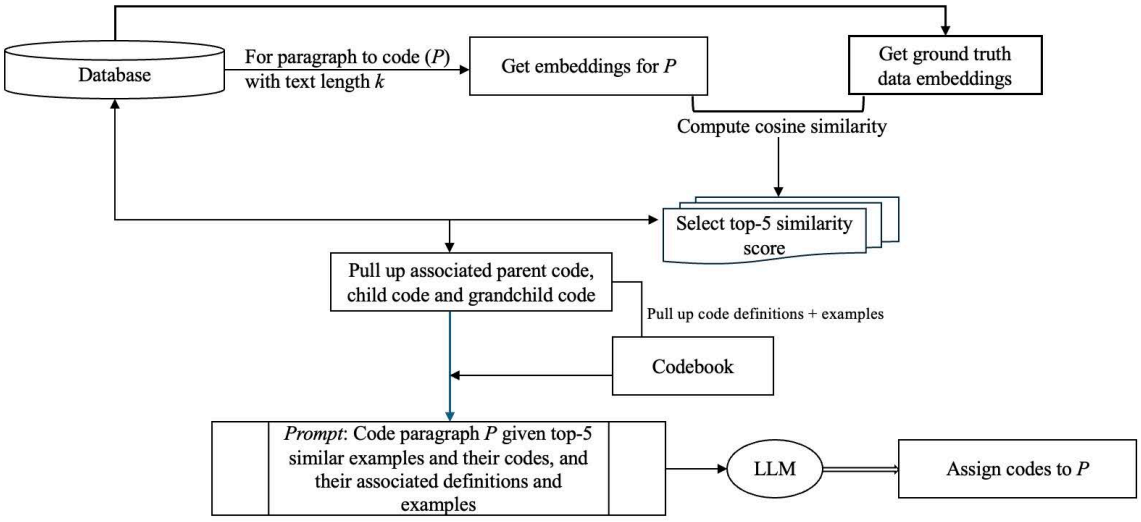
System prompt:

You are an expert qualitative researcher with expertise in inductive and deductive qualitative coding.

Task prompt:

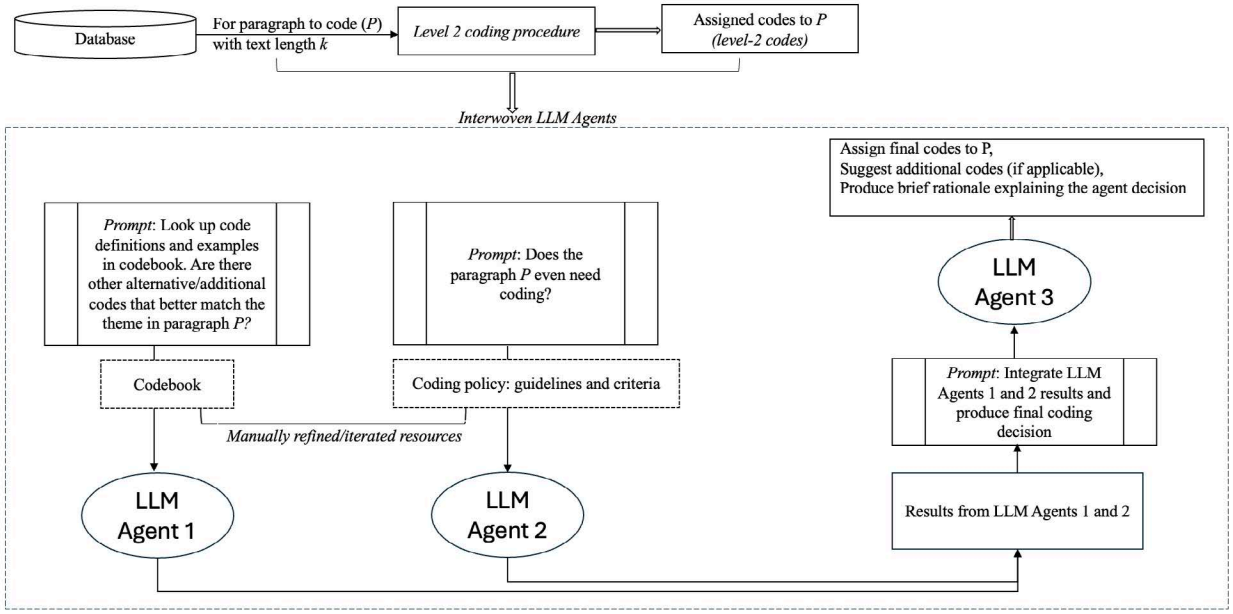
You are an expert qualitative researcher with expertise in qualitative coding. Given the following paragraph: {input_paragraph} and the following annotated examples with respective code definitions: {annotation_examples_with_code_descriptions}, assign the most appropriate hierarchical codes as Parent, Child, and up to five levels of Grandchild codes (if applicable). Do not suggest new themes or codes; use only the codes provided in the examples.

Figure A.4. Level 2 Coding Procedure



In Level 3, we set up a multi-agent system comprising three interwoven LLM agents, each directed to complete different tasks, as shown in Figure A.5. Agent 1 checked whether additional or alternative codes might apply to each input paragraph beyond those assigned during Level 2 coding, operating under the prompt shown in the "Agent 1 Prompt in Level 3" box below.

Figure A.5. Level 3 Coding Procedure



Agent 1 Prompt in Level 3: Multi-Agent Coding

You are an expert qualitative researcher with specialization in inductive and deductive qualitative coding. You will be presented with a paragraph {input_paragraph} and the hierarchical levels of parent, child and grandchild codes {agent_codes} that an agent has coded. Your task is to assess whether there are other hierarchical levels of parent, child, and grandchild codes that would also be appropriate for the given paragraph in addition to the agent_codes provided above. However, these parent, child, and grandchild codes must be the ones that are defined in the code definitions provided in a SQLite database. You must also ensure that the hierarchical levels of parent, child, and grandchild codes follow a logical order, relevance, and consistency. You must also ensure that your parent_code only comes from a parent_code, your child_code comes only from a child_code, and levels of grandchild_codes only come from grandchild_codes in the code definition. These requirements are for all codes that you will return. You are free to create a syntactically correct {dialect} query to pull up codes and their definitions available in table "fuzzy_code_matches" using the provided tool. Note that you must only provide your evaluation based on your assessment of provided codes and codes pulled up from the database. Should you suggest additional codes, please describe your logic and explanation.

NOTE: In this setup, agent_codes represent the level 2 codes previously assigned to the paragraph and fuzzy_code_matches refers to the database containing all available codes and their corresponding definitions. In addition, Agent 1 had access to a query tool that allowed it to retrieve relevant codes and definitions from the database when needed.

Agent 2 evaluated whether the input paragraph required coding at all, based on coding criteria and guidelines as shown in the "Agent 2 Prompts in Level 3" box below.

Agent 2 Prompts in Level 3: Multi-Agent Coding

System prompt:

You are an expert qualitative researcher with the knack of identifying whether or not a given long text requires code or themes.

Task prompt:

You will be presented with a paragraph {input_paragraph}. Your task is to evaluate whether or not the paragraph should be coded. Here are some non-exhaustive general guidelines on when the paragraph does not need to be coded.

(1) Do not code if the paragraph primarily lists labor market statistics in graphs and tables or through other descriptive statistics without any context about what the percentages or numbers are describing. For example, do not code paragraphs with just data or program lists such as “Program Year 2018 • Adult, Program Year 2018 • Dislocated Worker, Program Year 2018 • Youth, Program Year 2018 Program Year 2019: • Wagner Peyser, Program Year 2019 • Adult, Program Year 2019 • Dislocated Worker, Program Year 2019 • Youth, Program Year 2019 Program Year 2020: • Wagner Peyser, Program Year 2020 • Adult, Program Year 2020 • Dislocated Worker, Program Year 2020 • Youth, Program Year 2020 Adult Ed & Literacy Title II Program Program Year 2018: Title II, Adult Ed, Program Year 2018 Program Year 2019: Title II, Adult Ed, Program Year 2019 Program Year 2020: Title II, Adult Ed, Program Year 2020 Title IV Vocational Rehabilitation: Program Year 2018: Title IV, Voc Rehab, Program Year 2018 Program Year 2019: Title IV, Voc Rehab, Program Year 2019 Program Year 2020: Title IV, Voc Rehab, Program Year 2020 D. EVALUATION As a part of providing services, client data including Social Security numbers are collected within the secure production database.” Another example would be “Nearly one-half (44%) of projected net job growth in New Hampshire will require a college degree (associate’s or higher) for entry into the field. TABLE 3: ENTRY-LEVEL Entry-Level 2020-2020-required 144,136 155,426 11,290 7.80% 9,798 13,204 24,139 equivalent 259,052 270,628 11,566 4.46% 11,292 17,833 30,276 non-degree award 47,395 51,830 4,425 9.30% 2,024 2,857 5,325 Some college, no degree 23,558 24,266 698 3% 1,001 1,103 2,173 Associate’s degree 31,730 34,862 3,122 9.90% 935 1,283 2,531 Bachelor’s degree 145,117 161,158 16,031 11% 3,926 8,153 13,681 Master’s degree 14,067 16,255 2,178 15.50% 388 604 1,210 degree 17,529 18,875 1,336 7.70% 407 429 969 Total, All Occupations 675,594 726,549 50,955 7.50% 30,024 45,926 81,045 training have, by far, the greatest number of job openings (although not net job growth). Many of these jobs are in lower skill occupations that have high turnover rates (reflected in the large number and high percentage of occupational transfers among these educational groupings), and they employ a high percentage of younger workers and first-time job holders who move on to higher-skill occupations as they gain experience and/or additional education.”

(2) Do not code a paragraph if it describes discussions of economic growth and decline or trends in unemployment rates without discussing state policies or strategies to address those issues. These paragraphs may only characterize the state of the economy and describe current worker issues but have no mention of state strategies, activities, or policies meant to address those stated problems. For example, “Montana’s economy is struggling to find sufficient workers to fuel the rapid economic growth experienced in recent years. In 2020, the pandemic battered Montana’s economy with heavy job losses and record high unemployment. [1] Then as business restrictions were lifted, consumer demand surged, fueled by higher income levels, economic stimulus, and the release of pent-up demand. In response to Montana’s businesses struggling to hire enough workers to meet customer needs, the governor ended the pandemic-related unemployment insurance programs early to increase work incentives; and by mid-2021, the state exceeded the pre-pandemic employment peak for both output and employment, with rapid growth continuing for the rest of the year.”

For example, the following would NOT require coding:

“Further limited housing availability will limit domestic migration. Because New Hampshire’s labor force will see an increasing number of retirements over the next decade, many industries in the state will have a high level of job openings even as they experience limited net increases in total employment. Other industries will see both increasing retirements as well as net increases in employment. It is these industries that face the greatest potential for labor shortages over the next decade. Thus, the workforce needs of the New

Hampshire economy will be far greater than is apparent by a simple examination of net job growth numbers. According to the Centers for Disease Control and Prevention, New Hampshire has had among the lowest fertility rates among women of childbearing years of any state in the nation—46th in 2019. In 2019, New Hampshire averaged 48.2 births to every 1,000 women ages 15 -44 in the state and 47.7 birth in 2020, the second lowest fertility rate in the nation."

The following would also NOT require coding:

"Only 4% provide other reasons for not being in the labor force, including mental illness, lack of transportation, previous felony or misdemeanor conviction, lack of housing, domestic violence, or lack of economic opportunity. [8] LABOR MARKET TRENDS: More Montanans are working than ever before, more Montanans are in the labor force than ever before, and the unemployment rate has never been this low. Employers in all areas of the state and in every industry and occupation are having difficulty finding sufficient workers, with shortages the most acute in low-wage occupations where recruitment from a lower-wage job is not possible. Given the large labor demands from healthcare and construction, along with the need for medium-term technical and practical training in these careers, workforce training efforts from Montana's workforce and education organizations often focus on training workers for jobs in healthcare and construction. EDUCATION AND SKILL LEVELS OF THE WORKFORCE: Montana's workforce is well educated, having the second highest share of the population with a high school diploma or equivalency among states in 2019. [9] Roughly 65% of Montana's population has some type of post-secondary education."

Return your response as "Requires coding" and "DOES NOT require coding" along with an explanation.

Agent 3 integrated the outputs from Agents 1 and 2 and produced the final coding decision. Agent 3 could retain, correct, or replace the Level 2 codes, suggest additional codes, and provide a brief explanation of the rationale behind each decision, as shown in the "Agent 3 Prompt in Level 3" box below.

We stored results from this multi-agent system—including retained and suggested codes, coding necessity indicators, and LLM explanations—as *multi-agent annotations* for further evaluation.

Agent 3 Prompt in Level 3: Multi-Agent Coding

You are an expert qualitative researcher with specialization in inductive and deductive qualitative coding. You will be presented with a paragraph {input_paragraph} and hierarchical levels of parent, child and grandchild codes {agent_codes} that an agent has coded. These paragraphs and codes were independently evaluated by different evaluators. Here is their evaluation, suggestions or feedback. {evaluation_results} Please make an assessment of these evaluations and make a decision on whether or not it would be appropriate to retain the original agent codes. Should you decide to retain the original agent codes, return the codes as they are. Should you decide to change the agent codes, feel free to change them with an explanation. Please also feel free to suggest other codes that might be useful based on your judgment of evaluator's comments. Provide an explanation of why you suggested these codes.

Additionally, also suggest whether or not the paragraph should be coded at all, along with your explanation.

We ran the LLM-based coding procedure—comprising all three levels of coding—on all paragraphs in the state plan dataset, which yielded 75,639 thematically coded excerpts, each containing no more than 250 words.

Code Evaluation

We evaluated our LLM-based coding procedure results in three rounds.

Round 1: LLM-Based Evaluation of Multi-Agent Results

In the first round, we deployed an independent LLM agent to evaluate the quality and consistency of Level 3 (multi-agent coding) results. Specifically, we prompted the agent to retrieve the parent code assigned to each paragraph, review the corresponding code definition, and assess the quality of each paragraph–parent code association. The agent produced two quantitative metrics—*relevance* and *importance*—as instructed by the "Prompt Used in the First Round of Code Evaluation" box below. This evaluation step served as an indicative quantitative validation of the multi-agent coding results, providing standardized measures of relevance and importance for each paragraph–parent code pair, which we later used in creating the state plan dataset.

Prompt Used in the First Round of Code Evaluation

You are an expert qualitative researcher with expertise on qualitative coding.

Evaluate whether the provided code captures the underlying theme of the provided paragraph and produce two evaluation metrics: Relevance and Importance.

Relevance refers to how well the paragraph aligns with the meaning and definition of the code.

Importance refers to how central or critical this code is to understand the paragraph's core message.

Paragraph to code—Here is the paragraph that was coded: {paragraph}
Here is the Code assigned to the paragraph—Code name: {code}
Here is the Code definition and example paragraph for the code (if available)—Code definition: {code_definition}

Round 2: Human Evaluation of Sequential Coding Procedure

We conducted a quality check on the relevance and performance of Level 3 (multi-agent) thematic coding results relative to the preceding two sequential levels: semantic similarity search (Level 1) and single-agent (Level 2). We assigned the two lead report authors to a pool of 400 randomly selected excerpts each. Each researcher selected up to 20 random excerpts from this pool, evaluated the codes assigned at different levels of the LLM-based coding procedure, and qualitatively indicated whether they agreed or disagreed with the coding results. We also noted potential codebook refinements and whether one coding procedure level outperformed the others. We then convened the research team to evaluate overall coding performance. In general, we found that Level 3 multi-agent annotations (referred to as *final codes*) performed substantially better in terms of code relevance, consistency, and alignment with our research scope than did Level 1 and Level 2 coding results.

Round 3: Additional Human Coding and Assessment

After these early assessments, we initiated a process to examine all final codes developed during the LLM coding procedure—including those that evolved as we refined and iterated on our initial codebook and those generated through the multi-agent coding. Our goal was to examine the spread of excerpts across codes and to identify a set of codes that captured mechanisms within broader topics and that therefore warranted manual coding and deeper examination. We conducted these manual coding and examinations in two stages detailed in the next section.

First-Stage Coding Assessments

In the first stage, we examined every code developed using the LLM agents (regardless of parent or child code hierarchy) and the number of associated excerpts, resulting in a total of 2,913 potential individual codes for deeper review. On closer examination, we found that many of these codes had only one or two identified excerpts and had overlapping topical meaning. We reduced this list to 100 codes by (1) filtering out codes that appeared ten or fewer times, (2) selecting codes relevant to our five domains (e.g., Business Services Teams, In-Demand Training & Alignment), and (3) selecting code excerpts tagged with LLM-assigned importance and relevance scores at 50 or above. From this list, we reassessed the number of excerpts within each code and whether certain codes had overlapping or similar topical relevance (e.g., workforce development strategies vs. economic development strategies). This filtering process yielded 29,038 potential excerpts to analyze.

Because of the extent of textual data, we still needed to reduce our dataset to a manageable size to assign parts among five research team members for second-stage coding and further exploration. To do that, we grouped codes by priority for deeper analysis as follows.

First, we identified a set of larger codes (e.g., Career Pathways, often with 3,000 or more excerpts) that were topically relevant and either needed further manual investigation or could be used directly in the prospective analytic dataset to construct a binary indicator—where the presence of an excerpt in a given state plan and year tagged with that code would receive a 1, and the absence would receive a 0. Second, we identified codes that likely warranted manual coding, had a manageable number of associated excerpts (approximately 2,000 or fewer), and where more-nuanced investigation of a broad topic (e.g., career pathways, job training) could produce useful child-level codes. Finally, we identified topically relevant smaller codes with fewer excerpts (approximately 500 or fewer) that did not need further investigation beyond their original definition and could be converted directly into binary indicators in our analytic dataset.

After assessing this spread, we had 60 potential parent codes for our analytic dataset, split across our five domains. We ultimately deemed 31 codes appropriate to keep as is for creating binary indicators and identified 29 codes for deeper human review and manual coding.

To prepare for manual coding, we drew random stratified samples of excerpts for each of the 29 codes, randomly selecting five excerpts per state plan cycle and removing duplicates. The state and year stratification mirrored the structure of our analytic dataset, which represents the presence or absence of particular strategies within each plan year. Under this design, with 57 U.S. states and territories represented across five different plan cycles (three regular plan cycles and two modification cycles), any given code could potentially have a maximum of 1,425 excerpts to analyze if the strategy appeared in all plan years across all U.S. states and territories. In practice, the number of excerpts among our identified codes ranged from 36 (Short-Term Training) to 1,334 (Leadership & Administration). We discarded seven codes because they revealed little information beyond other existing or emerging child codes, leaving 22 codes reviewed manually by the research team.

Second-Stage Coding Assessments

We divided the 22 codes for further review across five research team members, referred to in this section as *reviewers*. Each reviewer received a spreadsheet for the randomly selected excerpts by state and plan cycle and was directed to determine whether there were additional levels of nuance about an activity, strategy, intervention, or program within those excerpts that warranted developing a child code within that parent code. Reviewers were asked to reflect on the following set of analytic questions: (1) Does there seem to be a pattern for how this activity, program, or policy is designed? (2) Are there similar or different policy intentions on this topic across states? (3) Are some states designing this strategy to target certain groups over others? and (4) Are some states adding unique components or features to their programs that other states are not?

Reviewers were also instructed to explore whether a few new categories or codes could be created based on their observations and to categorize each excerpt as actual, aspirational, or Irrelevant. *Actual* excerpts reflected that a plan discussed a state program or policy that the state or territory was currently implementing. *Aspirational* excerpts discussed future goals or plans to implement a policy or program, with language indicating these functions were not yet established. *Irrelevant* indicated that an excerpt did not fit the expected code content—the statements were unrelated or incomplete and did not sufficiently capture the intent behind the code and its definition. During weekly coding team meetings, reviewers discussed emerging codes and any suggested changes or coding issues. The two lead authors reviewed reviewers' coding schemes and made suggestions on when to collapse or merge codes or where to refine code definitions. Through these reviews and team discussions, we determined that seven of the 29 initial codes—typically smaller ones with 30 to 110 excerpts to review—revealed little to no additional important information beyond what other emerging or existing child codes already covered, so we excluded them from the dataset. In one exception, we collapsed a very large code

(Public WIOA-Supported Job Training) under a related code (Job Training) because the former revealed little to no variation beyond the latter, which we then treated as a parent code.

Table A.2 presents the distribution of the 22 codes reviewed and categorized as actual, aspirational, or irrelevant. Although no objective metric can definitively establish the accuracy of LLM-generated codes, we found that, on average, reviewers classified more than 65 percent of the codes as actual; when combined with those categorized as aspirational, this share increased to approximately 78 percent of all manually reviewed excerpts. We therefore relied on a qualitative interpretation of these evaluation results, together with reviewers' comments, to judge the final multi-agent annotations as sufficiently reliable for subsequent analysis. We do acknowledge, however, that approximately 21 percent of LLM-generated codes were tagged as irrelevant by reviewers, warranting cautious analysis of those codes—particularly, "articulationagreements" and "privatejobtraining," where the combined categories of actual and aspirational fall below the irrelevant category percentage. We did not find systematic evidence of other text *not* being categorized as "articulationagreements" or "privatejobtraining," when it should have been, suggesting that this mismatch is not necessarily upwardly biasing incidence rates of specific codes.

Table A.2. Distribution of Manually Evaluated Codes

LLM-Generated Code	Number of Excerpts	Excerpt Category (%)		
		Actual	Aspirational	Irrelevant
Articulationagreements	486	39.71	2.88	57.41
Career_Pathways	1,183	63.40	24.34	12.26
Competencybased	116	57.76	—	42.24
CTE_Programming	889	74.35	9.90	15.75
Curricular_reform	88	85.23	—	14.77
Eligibletrainingproviderlist	716	60.47	0.56	38.97
Employertargeted	1,231	74.00	15.92	10.07
Incentivesforintermediaries	96	95.83	—	4.17
Industry_sectoral	1,245	58.55	28.59	12.85
Interagencycollaboration	1,297	71.09	2.08	26.83
Jobtraining	1,286	51.79	10.65	37.56
K12districtincentive	48	85.42	8.33	6.25
Leadership_administration	1,334	94.98	—	5.02
Parents_support	85	81.18	—	18.82
Partnerscollab*	90	51.11	33.33	15.56
Privatejobtraining*	143	38.46	4.20	57.34
Regional_administration	847	95.99	—	4.01
Shorttermtraining	36	52.78	—	47.22

LLM-Generated Code	Number of Excerpts	Excerpt Category (%)		
		Actual	Aspirational	Irrelevant
Smallbusinessgrants	160	65.00	14.38	20.63
Stackablecredentials	581	44.06	19.62	36.32
Systemsalignment	183	57.38	17.49	25.14
Workforcedev*	223	60.99	11.66	27.35
Overall	**12,363**	**68.03**	**10.88**	**21.10**

NOTE: The number of random stratified excerpts represents those drawn and manually reviewed for the LLM-generated code across states and plan years. Percentage values represent the share of reviewer-flagged excerpts in each category (actual, aspirational, or irrelevant) out of the total number of excerpts reviewed. An asterisk (*) denotes a code that eventually was merged with similarly defined codes and does not appear with the same label in our codebook. A dash (—) indicates that there were no reviewer-flagged excerpts in that category for that code.

Constructing the Analytic Dataset

Once we completed all manual coding, we developed our analytic panel dataset of WIOA strategies across all plan years. In a first wave, we merged all separate code files into one file identified at the state and year level. The two lead authors and another team member closely reviewed new child codes that had emerged in the manual coding process to identify any newly constructed codes with overlapping definitions. For example, during manual coding, we separately analyzed and generated child codes for System Alignment: Cross-Sector Approaches to Improve Education and Training and a Partnerships and Collaborations code—technically originally a child code of the System Alignment code. These new child codes were inherently similar—both contained a child code and tagged excerpts related to Partnerships for Data sharing, K–12 partnerships, and Community and Technical College Partnership Alignment. These overlaps were not surprising given that the LLM coding procedure was developed on similar definitions between the two codes, and our manual coding confirmed similar underlying topics within each. These analytic decisions also mean that each code in our dataset is not entirely mutually exclusive—there may be some overlap between interrelated variables. Where child codes matched, we combined the binary data from both codes. Within our public dataset (available as a separate annex at www.rand.org/t/RRA4766-2), we flag which final codes resulted from this code homogenization. In addition to unifying similar child codes from our manual coding stage, we also merged in the 31 codes we had earlier deemed suitable as binary indicators without further manual coding. Because these 31 codes had not received additional human review, we included only those excerpts with importance and relevance scores of 80 or above to provide more assurance that they were well matched to that code. Our complete panel dataset after these steps reflects 43 parent codes and 66 child codes across our five domains, along with whether each strategy was present or absent in a given state and plan year (see Table A.3).

Table A.3. Final Codes: Strategies and Related Submechanisms, by Domain

Domain	Strategies (Parent Codes)	Strategy Submechanisms (Child Codes)
Access	Adult Basic Education	—
	Career Counseling	—
	Financial Aid & Subsidies	• Federal/State Work-Study • Targeted Aid for Current K–12 • Targeted Aid for Immediate High School Graduates
	Housing Support Services	—
	Intermediary Services: Co-Enrollment Across Programs	—
	Intermediary Services: One-Stop Center Physical Integration	—
	Older Adults Services	—
	Support Services	• Parental Support
	Target Population Strategy	—
	Transfer Support	—
Connect	Articulation Agreements	• Early College • Non Credit • Specific Course • Specific Program • Statewide • Student Tools
	Career Pathways	• Partnerships • Transfer Focused
	Competency Based Education	• Career Pathways • High School Graduation • Non Degree
	CTE Programming	• CTE Specific • Curriculum Alignment • Funding Mechanism • K–12 Alignment
	Curricular Reforms	• Community College Baccalaureate • Credit for Prior Learning • Dual Enrollment • Employer Driven
	Internships	—
	Job Training	• Career Training • Eligible Training Provider List Skill Training • Transferable Skills
	K–12 District Incentives	• Funding • Partners

Domain	Strategies (Parent Codes)	Strategy Submechanisms (Child Codes)
	On-the-Job Training	—
	Pre-Apprenticeships	—
	Short-Term Training	—
	Stackable Credentials	• Information • Microcredentials
	Training: Registered Apprenticeships	—
	Work-Based Learning	—
	Workforce Development	• Digital Learning • Specific Employer • Web Based
Employer	Business Services & One-Stop Employer Outreach	—
	Employer Funds & Subsidies	• Recruiting & Training Subsidies • Small Business Grants & Tax Incentives
	Employer Targeted Services	• Coordination & Customization • Programs & Grants
	Incentives for Intermediaries	• Grant Building • Performance Target • Seed & Innovate
	Incumbent Worker Training	—
	Industry Sectoral Approach	• Community College Baccalaureate Initiative • Descriptive Roles • State Toolkits
	Rapid Response Services	—
	Training: In-Demand Training & Alignment	—
Governance	Data, Research & Identification	—
	Interagency Collaboration	• Board Composition • Collaborative Committees • Communication Data • Education Involvement
	Leadership & Administration	• Advisory Panel • Centralized • Education Centric • Evaluation Compliance • Funding • Regional Local • Strategic • WIOA Specific
	Regional Administration	• Economic Zones • Equity • Industry Focus

Domain	Strategies (Parent Codes)	Strategy Submechanisms (Child Codes)
	System Alignment	• Cross-Sector Community College Alignment • Cross-Sector Industry Partners • Cross-Sector Organization Management Changes • Cross-Sector Regional Coordination • Cross-Sector Career Development
Information	Communications: Career Planning, Tools, Advising & PD	—
	Communications: Centralized Job Search Tool	—
	Communications: Labor Exchange System	—
	Communications: Public Awareness Campaign	—
	Eligible Training Providers	• Easier Access • Reciprocal ETPL

NOTE: Admin = administration; PD = professional development.

Conducting Descriptive Analyses with the State Plan Dataset

To build our panel dataset, we assumed that a strategy mentioned in each plan held consistent across plan years. For instance, if a state discussed job search tools in its PY 2016–2019 plan, we counted that strategy for years 2016, 2017, 2018, and 2019. In cases in which the PY 2018–2019 or PY 2022–2023 modified WIOA plans overlapped with original plan years, we counted the information from the more recent plan—with one caveat: Modification years record changes to the base plans rather than fully new policy mandates. We therefore assumed that policies in the base plans remained in place during modified plan years (i.e., the presence indicator, 1, carries over) but allowed modified plans to present evidence of new policy emphasis.

We note the possibility that, because of a lack of available PY 2026–2027 modified plans at the time of this analysis, we may be undercounting the number of identified strategies in recent years compared with prior plan years that include both a base plan and a modification. However, we consider that all states, U.S. territories, and the District of Columbia have the same probability of having undercounted strategies and so treat them consistently despite these limitations. Additionally, excerpts may have held information relevant to multiple codes, reducing the chance of undercounting any one particular strategy—its presence may have been caught in analyzing other codes.

This report builds on a descriptive analysis of the average mentions of strategies across all plan years from PY 2016 through PY 2027. At times, we include the peak emphasis or mention rate of a certain strategy, as well as the percent change over time observed among these strategies. Where appropriate, we also discuss differences in strategies mentioned in Unified and Combined Plans, as well as between states with Democratic versus Republican gubernatorial leadership. We accounted for changes in gubernatorial leadership across plan years and found that 18 U.S. states or territories switched between Democrat- and Republican-led governorship in

some plan cycles (see Table A.4). Differences presented in this report based on the political party of state leadership only change slightly in magnitude and do not change the overall analytical interpretation, even with gubernatorial leadership held constant in a plan cycle. For access to the full panel dataset, data dictionary, and documentation, please see the annex available at www.rand.org/t/RRA4766-2.

Table A.4. States That Changed Gubernatorial Political Party in Plan Cycles

U.S. State or Territory	Plan Cycle	Year of Change
Arizona	2020–2023	2023
Guam	2016–2019	2019
Illinois	2016–2019	2019
Kansas	2016–2019	2019
Maine	2016–2019	2019
Maryland	2020–2023	2023
Massachusetts	2020–2023	2023
Michigan	2016–2019	2019
Missouri	2016–2019	2017
Montana	2020–2023	2021
Nevada (cycle 1)	2016–2019	2019
Nevada (cycle 2)	2020–2023	2023
New Hampshire	2016–2019	2017
New Jersey	2016–2019	2018
New Mexico	2016–2019	2019
North Carolina	2016–2019	2017
Virginia (cycle 1)	2020–2023	2022
Virginia (cycle 2)	2024–2027	2026
West Virginia	2016–2019	2018
Wisconsin	2016–2019	2019

We conducted statistical tests when comparing emphasized strategies across state characteristics. Specifically, we regressed strategy usage on an indicator of interest (e.g., plan type) and a year-fixed effect with standard errors clustered at the state level; this yields a t-statistic while accounting for observational dependence and national shocks. We augmented these tests with non-parametric analyses. We do not present these results in this report for two reasons: (1) The number of tests heightened the likelihood of finding significance purely by

chance, and (2) we observed the full universe of observations, making statistical significance less useful than understanding practical descriptive differences. Our statistical significance tests are available upon request.

Abbreviations

ABE	adult basic education
CBE	competency-based education
CCB	community college baccalaureate
CTE	career and technical education
DOL	U.S. Department of Labor
ED	U.S. Department of Education
ETP	eligible training provider
ETPL	eligible training provider list
K–12	kindergarten through 12th grade
LLM	large language model
Perkins V	Strengthening Career and Technical Education for the 21st Century Act
PY	program year
RESEA	Reemployment Services and Eligibility Assessment Program
TANF	Temporary Assistance for Needy Families
WIOA	Workforce Innovation and Opportunity Act

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